Adnominal Tenses Redux:
Thomas (2014) "Nominal Tense and Temporal Implicatures"

1.   Tense and Nominal Tense in Mbya: A Challenge for Tonhauser (2007)

Mbya is a Guarani language of Brazil, Argentina, and Paraguay. Like the 'Paraguayan Guarani' discussed by Tonhauser (2007), it has the nominal tense markers *kue* and *ra*.

(1)   **Nominal Tenses in Mbya**

a.	Aecha	mburuvicha-**kue**	b.	Kuee,	a-jogua che-ro-**ra**
	1-see	leader-**PAST**		yesterday	1-buy 1-house-**FUT**
	I saw the ex-leader.			*Yesterday, I bought my future house.*	

Like Paraguayan Guarni, the adnominal marker *kue* seems to have the 'change-of-state' and 'existence' properties noted by Tonhauser (2007).
   • (Thomas (2014) limits his attention to *kue*, leaving *ra* in Mbya to future work…)

(2)   '**Change-of-State' and 'Existence' Properties of Adnominal *Kue***

   a.   <u>Change-of-State Property</u>
           # Agy, Juan   mburuvicha-**kue**   ha'e   mburuvicha   teri
             now Juan   leader-**PAST**   and   leader   still
           Juan is an ex-leader and is still a leader.

   b.   <u>Existence Property</u>
           Opygua-**kue**   omano   kuee
           priest-**PAST** 3-die   yesterday
           The ex-priest died yesterday.
           <u>Judgment:</u>   The person was no longer a priest when the died.

> <u>Side-Note:</u>   Notice how the word for 'yesterday' looks a lot like the past marker? Hmm…

Unlike Paraguayan Guarani, however, Mbya also uses the markers *kue* and *ra* in main clauses, where they encliticize onto 'dummy' relative markers.

(3)   **Main Clauses Bearing *Kue* and *Ra* in Mbya**

   a.   Juan   omba'eapo   va'e-**kue**   vaipa.
           Juan   3-work   REL-**PAST**   much
           Juan worked / was working / had worked / had been working a lot.

   b.   Juan   ijayvu va'e-**ra**   ava   reve   Maria ojurupyta   va'e-**kue**
           Juan   3-talk REL-**PAST**   man   with   Maria 3-kiss   REL-**PAST**
           Juan will talk to the man that Maria kissed / was kissing / had kissed …

When it's marking a matrix verb, the marker *kue* no longer has the 'change-of-state' or 'existence' properties!

(4)   **Lack of 'Change-of-State' and 'Existence' Properties with Matrix *Kue***

      a.   <u>No 'Change-of-State' Property:</u>

Juan	mburuvicha	oiko	va'e-**kue**,	ha'e	agy	mburuvicha	teri
Juan	leader	3-be	REL-**PAST**	and	now	leader	still

          Juan was a leader, and he is still a leader now.

      b.   <u>No 'Existence' Property:</u>

Juan	mburuvicha	oiko	va'e-**kue**
Juan	leader	3-be	REL-**PAST**

          Juan was a leader.
          <u>Judgment:</u>   The person may have died as a leader.

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(5)   **Obvious Question:**   What is going on here? Why the contrast between (2) and (4)??

(6)   **Some Obvious Possibilities**

      a.   *Kue* and *ra* are lexically ambiguous in Mbya.

         • Adnominal *kue* and *ra* have the semantics proposed by Tonhauser (2007)
         • Matrix *kue* and *ra* are simple PAST and FUTURE tenses.

      b.   *Kue* (and *ra*) have the semantics proposed by Tonhauser (2007), where 'change-of-state' and 'existence' are built into the semantics of *ra*.

         • Perhaps some independent factors serve to obliterate these entailments when *kue* marks a matrix verb?

      c.   Contrary to Tonhauser (2007), *kue* does not have 'change-of-state' and 'existence' as part of its lexical meaning. Rather, it just has the semantics of a PAST tense…

         • Perhaps some independent factors serve to *introduce* the 'change-of-state' and 'existence' entailments when *kue* modifies an NP?

Thomas (2014) explores possibility (6c), though he doesn't explicitly argue against possibilities (6a) or (6b)…

2. Semantics of *Kue* and the 'Precedence Property'

(7) **Existential Past Analysis of *Kue***

$$[[\ kue\ ]]^{w,t,g} \quad = \quad [\ \lambda P_{<it>} : [\ \lambda t' : \exists t'' . t'' < t'\ \&\ P(t'')\ ]\ ]$$

- We've already seen how this semantics will predict the facts in (3)-(4)
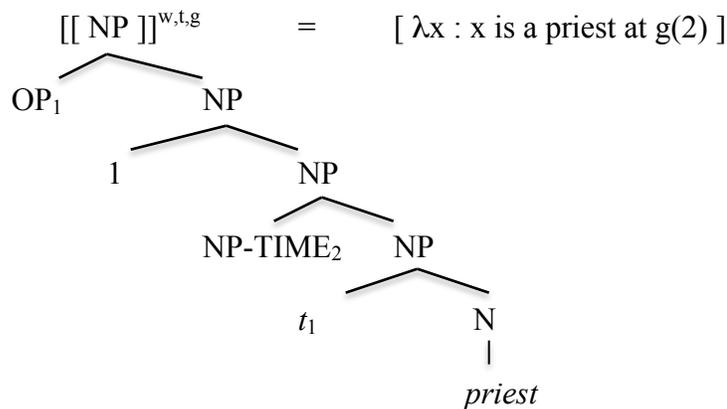
(8) **Analysis of *Kue* in NPs**

a. Part 1: The Analysis of the Temporal Interpretation of Plain NPs

(i) $[[\ priest\ ]]^{w,t,g} \quad = \quad [\ \lambda x : [\ \lambda t' : x \text{ is a priest at } t'\ ]\ ]$

(ii) All NPs are modified by a free temporal pronoun NP-TIME

$$[[\ \text{NP-TIME}_i\ ]]^{w,t,g} \quad = \quad g(i) \text{ [if } g(i) \text{ is a time]}$$

(ii) Every NP takes a kind of relative operator as its internal argument

$$[[\ \text{NP}\ ]]^{w,t,g} \quad = \quad [\ \lambda x : x \text{ is a priest at } g(2)\ ]$$

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        NP
       /  \
     OP₁   NP
          /  \
         1    NP
             /   \
      NP-TIME₂    NP
         |         |
         t₁        N
                   |
                 priest
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Note:
- Musan (1995) and Kusumoto (2005) explicitly argue against a 'free temporal pronoun' semantics for NPs exactly like this.
- However, as far as I can tell, Thomas's (2014) main ideas can also be couched into the kind of system argued for by Musan and Kusumoto…

b. Part 2: The Contribution of *Kue*

(i) *Structure of Kue-Marked NP:*
[OP₁ [1 [NP-TIME₂ [**KUE** [t_1 priest] …]

(ii) *Predicted Meaning* $[\ \lambda x : \exists t' . t' < g(2)\ \&\ x \text{ is a priest at } t''\ ]$
'there is a time t' before the NP-time when x is a priest'

3.   Capturing the 'Change-of-State Property'

Thomas analyzes the 'change-of-state' property as a kind of obligatory scalar implicature in NPs.

- The model of scalar implicature that he assumes is the 'grammatical approach' developed and defended by Chierchia, Fox, Spector, and others…

- I won't review this in detail here, but one of the reasons this model is chosen is to capture the 'change-of-state' property when tensed NPs function as arguments…
    - o The 'grammatical approach' allows us to model it as an embedded implicature

(9)   **The Grammatical Theory of Scalar Implicatures (Chierchia, Fox, Spector, *et alia*)**

    a.   There exists a phonologically null version of *only*, EXH, that can be freely adjoined to structures of propositional type. It's meaning is roughly the following:

$$[[\text{ EXH XP }]]^{c} = T \quad \textit{iff}$$

$$[[XP]]^{c} = T \ \& \ \forall q. \ q \in ALT(XP) \ \& \ RELEVANT_{c} \ (q) \ \& \ \neg([[XP]] \subseteq q) \rightarrow \neg q$$

        '*XP is true, and all of the **contextually relevant alternatives** to XP that are not entailed by XP are false*'

    b.   The set ALT(XP) are the propositions denoted by structures obtained from XP by lexical replacement (as well as a few other limited syntactic operations)

    c. $RELEVANT_{c}$ holds of the propositions that are 'relevant' in context c
- This notion of 'relevant alternative' was introduced by Magri (2009), but Thomas (2014) doesn't elaborate.

(10)   **Illustration with Classic Scalar Implicature**

    a.   (i)   *Sentence:*   Dave has three sisters.
        (ii)   *Implicates:*   Dave does not have more than three sisters.

    b.   <u>LF of Sentence (10ai):</u>   [EXH [Dave has three sisters]]

    c.   <u>Predicted Truth-Conditions:</u>
        Dave has three sisters and $\forall q. \ q \in ALT$(Dave has three sisters) &
        $RELEVANT_{c}$ (q) & $\neg$([[Dave has three sisters]] $\subseteq$ q) $\rightarrow \neg q$

- In a context where numbers other than three are 'relevant', this will entail that Dave does *not* have four sisters.
- In a context where only the number *three* is relevant, we won't get the inference.

(11)   **Towards 'Change-of-State': Cessation Implicatures with Past**

In many contexts, a past tense sentence *defeasibly implicates* that the present tense variant is false.

   a.   Dialog:
          (i)   So, tell me about this friend Dave of yours.
          (ii)   Well, he **was** a priest.

   b.   Observed Implicature: Dave is not presently a priest.

   c.   Defeating Cessation Implicature:
          Dave **was** a priest back when I knew him, and he **is still** a priest today.

(12)   **Analyzing the Cessation Implicature of PAST as a Scalar Implicature**

   a.   LF: [EXH [PAST [Dave be a priest]]]

   b.   Alternatives to the Prejacent:
          [[[PRES Dave be a priest]]] $\in$ ALT([PAST Dave be a priest])

   c.   Predicted Truth-Conditions

          $\exists t'$. $t' < c(time)$ & Dave is a priest at t' &
                $\forall q$. $q \in$ ALT([PAST Dave be a priest]) & RELEVANT$_c$ (q) &
                     $\neg$([[[PAST Dave be a priest]]] $\subseteq$ q) $\rightarrow$ $\neg q$

   d.   Key Result:
          • In contexts where PRES is relevant, (12a) will entail that Dave is not currently a priest.
          • In contexts where PRES is irrelevant, (12a) will *not* entail that Dave isn't currently a priest.

(13)   **Key Stipulation (Thomas 2014)**

In all contexts where '[*kue* NP]' is used, NP is a contextually relevant alternative.

• Thomas (2014) doesn't present this as a stipulation, but instead aims to derive it from an assumed principal that the 'lexical content' of an NP is always 'at issue' and so is always relevant.

• I myself, though, cannot quite follow the argumentation here. Thomas (2014) doesn't elaborate much on what he means by 'at issue' or why this assumption wouldn't equally well extend to VPs (predicting incorrectly that the implicature in (11b) cannot be cancelled either)…

(14)   **Predicting the 'Change-of-State Property'**

    a.   <u>Sentence:</u>   Juan   mburuvicha-**kue**
                            Juan   leader-**PAST**
                            Juan is an ex-leader.

    b.   <u>LF:</u>   [EXH [Juan [OP_1 [1 [NP-TIME$_2$ [**KUE** [t_1 leader] …]

    c.   <u>Predicted Truth-Conditions:</u>

        $\exists$t' . t' < g(2) & Juan is a leader at t' &
                $\forall$q. q $\in$ ALT((14b)) & RELEVANT$_c$ (q) & ¬([[(14b)]] $\subseteq$ q) $\rightarrow$ ¬q

        There is a time t' before the NP-time g(2) such that Juan is a leader at t' and
                All the non-weaker contextually relevant alternatives to (14b) are false

    d.   <u>Result:</u>
        • By the principal in (13), one of the non-weaker contextually relevant alternatives to (14b) will always be the following:

        (i)   [Juan [OP_1 [1 [NP-TIME$_2$ [t_1 leader] …]

        • This alternative states that Juan is a leader at the NP-time g(2)

        • **Therefore, (14a) will always end up entailing that Juan is *not* a leader at the NP-time, the *change-of-state* property reported by Tonhauser (2007).**

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4.   **Capturing the 'Existence Property'**

(15)   **Initial Observation**

    a.   # Albert Einstein **is** a physicist.
    b.   Albert Einstein **was** a physicist.

(16)   **Thomas's Proposal: NPs are Restricted to Extant Entities**

    [[physicist]] =   [λx : [λt' : **T(x) overlaps t'** . x is a physicist at t']]

    • NPs like *physicist* are only defined for entity-time pairs <x,t'> such that the existence of x overlaps t'.

(18)   **Special Pragmatic Assumption:**   When NPs are predicates, NP-TIME = Topic Time

(18)   **Analysis of the Initial Observation**

   a.   Infelicity of Sentence (15a)
        (i)   *LF for (15a):* [PRES [A.E. be [NP-TIME$_1$ physicist] …]

        (ii)   *Predicted Truth-Conditions:* A.E. is a physicist at g(1) [=c(time)]

        (iii) *Predicted Presupposition:*   T(A.E.) overlaps g(1) [=c(time)]

   b.   Felicity of Sentence (15b)
        (i)   *LF for (15b):* [PAST [A.E. be [NP-TIME$_1$ physicist] …]

        (ii)   *Predicted Truth-Conditions:*
               $\exists t'$. $t' < c(time)$ & A.E. is a physicist at t'

        (iii) *Predicted Presupposition:*   T(A.E.) overlaps (past time) t'

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(19)   **Predicting the 'Existence Property'**

   a.   Sentence: Juan   mburuvicha-**kue**
                      Juan   leader-**PAST**
                      Juan is an ex-leader.

   b.   LF: [EXH [Juan [OP$_1$ [1   [NP-TIME$_2$ [**KUE**   [t_1 leader] …]

   c.   Predicted Truth-Conditions:

        $\exists t'$. $t' < g(2)$ & Juan is a leader at t' &
                $\forall q$. $q \in$ ALT((14b)) & RELEVANT$_c$ (q) & $\neg([[(14b)]] \subseteq q) \rightarrow \neg q$

        There is a time t' before the NP-time g(2) such that Juan is a leader at t' and
                *All the non-weaker contextually relevant alternatives to (19b) **are false***

   d.   Result:
        • By the principal in (13), one of the non-weaker contextually relevant
           alternatives to (19b) will always be the following:

        (i)   [Juan [OP$_1$ [1   [NP-TIME$_2$ [t_1 leader] …]

        • Therefore, (19a) entails that 'Juan is a leader' is **false.**

        • But this in turn means that 'Juan is a leader' is **defined.**

        • **And this, in turn, means that Juan must exist at the NP-TIME…**

5.   Adnominal Tenses Again

- Thomas (2014) puts forth a system where the 'existence property' and the 'change-of-state' property are not part of the lexical semantics of *kue*

- Rather, they ultimately follow from a quirky difference between NPs and VPs: *bare* NPs are always contextually relevant alternatives to tensed NPs

     o (However, as we've seen, PRES-marked VPs are assumed to sometimes *not* be contextually relevant alternatives to PAST-marked VPs…)

- This raises anew the question of whether *kue* really is an adnominal tense.
     o Tonhauser's (2007) arguments based on the 'existence' and 'change-of-state' properties would no longer go through.

(20)   **Tonhauser's Remaining Arguments that *Kue* and *Ra* are not Tenses**

   a.   They can co-occur.

   b.   They don't relate the NP-TIME to UT or to any other time.

   c.   They do not behave like temporal anaphors.

(21)   **Thomas's (2014) Response to These Arguments**

   a.   Regarding (20a), one could concede that *ra* is not a tense (like English *woll*), while *kue* is…

   b.   Regarding (20b), this takes for granted that the correlate to 'Topic Time' in the nominal domain should be 'NP-TIME', rather than 'NOM-TIME'.

        ▪ It's not obvious that we should grant this assumption.

        ▪ Note, in particular, that Thomas (2014) indeed develops a unified semantics for *kue*, where it locates the 'NOM-TIME' when adnominal…

   c.   Regarding (20c), Thomas critically discusses Tonhauser's actual evidence in detail, and comes to the conclusion that the evidence doesn't yet show that *kue* **can't** be anaphorically restricted