COUNTERFACTUALITY IN A TENSELESS LANGUAGE

BEYOND THE TENSE–MOOD CONFOUND

II Tenselessness,
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OUTLINE

▸ Meet the tense-mood confound

▸ Counterfactuals to the rescue?

▸ The Yucatec data I: background

▸ The Yucatec data II: counterfactuals

▸ Back to the future

▸ Implications

MEET THE TENSE–MOOD CONFOUND

▸ adjusting Matthewson's (2006) notion
of 'superficial tenselessness'

Superficially tenseless languages (**STL**s): Languages that lack overt morphology whose primary meaning is tense. STLs may be **profoundly tenseless languages** (**PTL**s) or may express tense through morphologically unmarked forms / zero morphemes or by conflating tense meanings in aspect or mood markers (etc.).

▸ the issue: the grammars of many STLs constrain **future-time reference** (FTR)

▸ such constrains may be explained through

  ▸ covert expressions of past/non-future tense

    ▸ e.g., Matthewson (2006, St'át'imcets); Hayashi (2011, Inuktitut); Jóhannsdóttir & Matthewson (2008, Gitxsan)

  ▸ FTR excluding realis/factual moods

    ▸ e.g., Bittner (2005, 2013, ms, Kalaallisut); Bohnemeyer (2002, 2009, Yucatec), Tonhauser (2011, Paraguayan Guaraní)

  ▸ pragmatics

    ▸ Mucha (2013, Hausa)

▸ the central question of this talk

   ▸ how do we distinguish factual/realis moods
      such as invoked by Bittner's proposal

      ▸ from covert past/non-future tenses
         such as invoked by Matthewson's?

   ▸ after all, the sets of data accounted for by the two
      are largely coextensive

      ▸ assuming 'currently verifiable facts' (Bittner)
         cannot populate the future

▸ proposals

    ▸ counterfactual conditionals as a type of diagnostic context

        ▸ covert past/non-future tenses should be fine
          in counter-factual conditionals

            ▸ whereas factual/realis moods should be excluded

    ▸ a more parsimonious alternative to Bohnemeyer's (2002, 2009) 'Modal Commitment Constraint' analysis for Yucatec

        ▸ the Yucatec perfective aspect markers
          conflate realis mood

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COUNTERFACTUALS TO THE RESCUE?

▸ a typology of conditionals

Type of conditional	Example	Implicature
Speech act	If you're hungry, there's bread and cheese in the fridge	N/A
Premise/factual	If you're so clever, why don't you do this problem on your own?	N/A
Indicative Epistemic (past/present-oriented)	If Sally decided to become a drummer, she's happy If Sally is happy, she decided to become a drummer	Uncertainty regarding whether Sally decided to become a drummer/is happy
Hypothetical (future-oriented)	If Sally decides to become a drummer, she'll be happy	Uncertainty regarding Sally's decision
Counterfactual PastCF	If Sally had decided to become a drummer, she would be happy	Sally decided not to become a drummer (and is not happy)
PresentCF	If Sally were happy, she would go out more	Sally is not happy (and doesn't go out much)
Future less vivid (FLV)	If Sally would decide to become a drummer, she would quit semantics	It's unlikely that Sally will decide to become a drummer

Table 1.1. *Classification of conditionals based on von Fintel (2009) and Iatridou (2000)*

▸ Iatridou's (2000) account of the semantic and morphological makeup of Indo-European counterfactuals (CFs)

　▸ English and Modern Greek (MG) CFs involve two kinds of temporal/modal morphology: past and future

(2.1) An **iχ̩e**　　　pari　to　siropi **θa**　**iχ̩e**　　　　γ̩ini　　kala
MG　if　**PLUPERF** taken　the　syrup　**FUT PLUPERF** become better
　　'If he **had** taken the syrup, he **would have** gotten better'
　　(Iatridou 2000: 233)

　　▸ Iatridou assumes
　　　that *would* conflates Abusch's (1988) *woll* future w/ past

▸ Iatridou's account (cont.)

   ▸ this holds for FLV conditionals
     as well as for PastCFs and PresCFs

(2.1) An **eperne**   afto to   siropi **θa** ɣˌ**inotan**   kala
MG   if take.**PST**.IMPV this the syrup **FUT** become.**PST**.IMPV better
      'If he **took** this syrup, he **would** get better'
      (Iatridou 2000: 234)

▸ Iatridou's account (cont.)

 ▸ Iatridou does not discuss the role of the future morphology

  ▸ which is optional in some of the languages in her sample

 ▸ my hypothesis: future marking in CF conditionals
   may be linked to a speech act of/akin to *prediction*

  ▸ though in the case of present/past CFs,
    this would amount to a kind of prediction about the past

  ▸ in any case, I'll follow Iatridou's model
    and ignore the contribution of the future here

▸ Iatridou's account (cont.)

   ▸ evidence that counterfactuality (the ¬p inference) is an implicature

(2.3) If the patient had the measles, he would have exactly the symptoms he has now. We conclude, therefore, that the patient has the measles.

(2.4) If the butler had done it, we would have found blood on the kitchen knife. The knife was clean; therefore, the butler did not do it. (conclusion is not redundant) (Iatridou 2000: 232)

▸ Iatridou's account (cont.)

  ▸ Iatridou argues that the past morphology in CF conditionals has two functions

    ▸ in PastCFs, it indicates
      that the **topic time** t_{TOP} precedes the utterance time

    ▸ in addition, in all types of CFs,
      it expresses the **exclusion feature** (**ExclF**)

      ▸ it indicates that the set of **topic worlds** under consideration excludes the **utterance world w_u**

        ▸ thereby triggering an implicature to the effect that w_u does not contain the described situation

▸ implications and questions

 ▸ if FTR constrains in Language *L* are the result of covertly tense-marked forms, such forms should also occur in *L*'s CFs

  ▸ exclusion of zero-marked forms from *L*'s CFs suggests that such forms express realis/factual mood

 ▸ if profoundly tenseless languages exist, how do they express ExclF?

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THE YUCATEC DATA I: BACKGROUND

▸ FTR constraints: the (complex) basic facts

Table 3.1. *Finite clauses and future topic times in Yucatec*

Syntactic environment Clause type	Matrix clauses	Conditional antecedetents Indicative	Counterfactual	Other finite subordinate clauses
Perfectives	Not with FTR	Unconstrained	Excluded	Not with FTR
All other	Unconstrained			

TODAY'S TALK

▸ testing for deictic tense: is a clause formed with a given marker compatible with present, past, and future topic times?

  ▸ e.g., the perfect-like 'terminative' aspect marker *ts'o'k*

    ▸ with a past topic time, like a pluperfect:

(3.1)   *K-u=k'uch-ul-o'b=e',*
      IMPF-A.3=arrive-INC=TOP

      ts'o'k   *u=kim-il*   *le=chàampal=e'.*
      TERM   A.3=die-INC   DEF=small:child=D3

      '(By the time) they arrived, the baby **had** already died.'

▸ with a future topic time, like a future perfect:

(3.2)   *Sáamal*   *óok-a'n+k'ìin=e'*
        tomorrow   enter-RES+sun=TOP

        ts'o'k   *u=bèet-ik*   *le=túus+bèel=o'*
        TERM   A.3=do-INC(B.3.S)   DEF=send+way:REL=D2

        'By tomorrow at dusk (the boy) **will have done** the errand.'
        (Andrade 1955: 135-136)

▸ all Yucatec clauses are freely compatible with topic times in the past, present, and future of utterance time

    ▸ with one exception: the perfective aspect marker *t-/h-*

▸ perfective aspect excludes FTR in matrix clauses

(3.5) #**T-**in=ts'on-ah   le=kèeh   sáamal=o',
    PRV-A1SG=shoot-CMP(B3SG) DEF=deer   tomorrow=D2
      intended: 'I will shoot the deer tomorrow'

    ▸ it does, however, occur w/ FTR
      in hypothetical conditional antecedents

(3.6) Wáah **t-**in=ts'on-ah   le=kèeh   sáamal=o',
    ALT   **PRV-**A1SG=shoot-CMP(B3SG) DEF=deer   tomorrow=D2

    he'   in=tàas-ik=e'!
    ASS   A1SG=come:CAUS-INC(B3SG)=D3

    'If I shoot the deer tomorrow, I agree to bring it!'

▸ the use of the perfective in conditional antecedents does not convey counterfactuality

   ▸ one approach to expressing counterfactuality is by using subjunctive 'status' - others will be unveiled shortly…

(3.7) [I'm not allowed to vote in the upcoming local election, since I'm not a Mexican Citizen.]

Pero wáah káa   bèey-**lak**   in=bóotare',
but   ALT   SR   like.this-INCH.**SUBJ**(B3SG)   A1SG=vote

hi'n=bóotar-t-ik   Pablo=e'.
ASS:A1SG=vote-APP-INC(B3SG)   Pablo=D3

'But if I were able to vote, I'd definitely vote (for) Pablo.'

▸ future topic times freely occur outside perfective clauses

   ▸ so Bittner's (2005) Prospectivity Thesis
     is untenable for Yucatec

(3.8)   *Sáamal*   *óok-a'n+k'ìin=e'*
       tomorrow   enter-RES+sun=TOP

       ts'o'k *u=bèet-ik*   *le=túus+bèel=o'*
       TERM   A3=do-INC(B.3.S) DEF=send+way:REL=D2

       'By tomorrow at dusk (the boy) **will have done** the errand.'
        (Andrade 1955: 135-136)

‣ unlike in Hausa (Mucha 2013),
FTR constraints are not lifted by suitable discourse contexts

(3.9)   [QUESTION: What your brother DO if you don't go to
         see him today, do you think? ANSWER:]

    a. **Yan** u=túuxt-ik   tèen hun-p'éel kàarta
       OBL A3=send-INC(B3SG) me   one-CL.IN letter
       'He'll send me a letter'

    b. #**T-**u=túuxt-ah   tèen hun-p'éel kàarta
       PRV-A3=send-CMB(B3SG) me   one-CL.IN letter
       intended: 'He'll send me a letter'

▸ Bohnemeyer's (1998, 2002, 2009) mood-based account of Yucatec FTR constraints

Modal Commitment Constraint: The realization of events in the (deictic or anaphoric) future cannot be asserted, denied, questioned, or presupposed as fact. Assertions and questions regarding the future realization of events require specification of a modal attitude on the part of the speaker.

Event Realization: A predicate P is realized by event e at topic time t_{TOP}, or equivalently, e is realized under P at t_{TOP}, if and only if at least the run time of a subevent e' of e that also falls in the denotation of P is included in t_{TOP}:

$$\forall P, t_{TOP}, e \in E \ [REAL_E(P, t_{TOP}, e) \leftrightarrow \exists e'[P(e') \ \& \ e' \ll_E e \ \& \ \tau(e') \leq_T t_{TOP}]]$$

(Bohnemeyer & Swift 2004: 286)

▸ Bohnemeyer's (1998, 2002, 2009) MCC (cont.)

   ▸ Problem I: statives and imperfectives of atelic predicates generally entail realization at t_{TOP}

      ▸ yet are not subject to FTR constraints

   ▸ Problem II: perfect-like markers such as *ts'o'k* presuppose realization, but are not subject to FTR constraints either

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THE YUCATEC DATA II: COUNTERFACTUALS

▸ the study

  ▸ stimuli: 22 scenarios

    ▸ 10 PastCF; 4 PresCF; 3 FLV; 3 hypothetical; 2 epistemic

    ▸ varied in terms of

      ▸ the presence of overt negation
        in the protasis, apodosis, both, or neither

      ▸ the lexical-aspectual type of the predications

      ▸ the temporal relation between the described situations

  ▸ participants: 4 Yucatec speakers 40-71 years old (all male)

▸ the study (cont.)

   ▸ method: for each scenario

      ▸ construct a Yucatec rendition with one speaker

      ▸ have all four renarrate in their own words (in separate sessions), encouraging them to improve the wording

      ▸ if perfective aspect is disused in the protasis, apodosis, or both, try and substitute it

         ▸ and elicit the speakers' judgments and interpretations of the resulting sentences

▸ the study (cont.)

    ▸ example

(3.1) Pedro=e' Estados Unidos kah-akbal.
    Pedro=TOP United States   live-DIS(B3SG)
    'Pedro, he lives in the U.S.'

    Ti'   septyembre=e' ti'=yàan   Mexico iknal   u=suku'n
    PREP September=TOP PREP=EXIST(B3SG) Mexico   at   A3=older.brother
    'In September, there he is in Mexico at his brother's'

    túun   xíimbat-ik.
    PROG:A3 walk:APP-INC(B3SG)
    'visiting him.'

▸ **example (cont.)**

Káa=t-y=a'l-ah=o'   túun   tukul-ik-o'b=e'

CON=PRV-A3=say-CMP(B3SG)=D2 PROG:A3 think-INC-PL=TOP

'At the time, they were thinking'

yan u=yàan-tal   ma'+lóob kosèecha.

OBL A3=EXIST-INCH.INC   NEG+bad   harvest

'there would be a good harvest.'

Káa=h-sùunah   Pedro t-u=nah-il.

CON=PRV-turn\ATP:CMP(B3SG) Pedro   PREP-A3=house-REL

'(And then) Pedro returned home.'

▸ **example (cont.)**

Te=novyèembre   túun=o' káa=h-t'àan-nah   telèefono

PREP:DEF=November then=D2   CON=PRV-speak\ATP-CMP(B3SG) telephone

'Then, in November, he spoke on the phone'

y=éetel u=suku'n.   Káa=t-u=k'áat+chi'-t-ah

A3=COM A3=older.brother   CON=PRV-A3=ask+mouth-APP-CMP(B3SG)

'with his brother. (And) he asked him'

bix   h-úuch   u=hóok-ol le=kosèecha=o'.

how(B3SG) PRV-happen(B3SG) A3=exit-INC DEF=harvest=D2

'how the harvest had turned out.'

▶ **example (cont.)**

Káa=h-a'l-a'b　　　　　　　　　ti'　　　　tuméen u=suku'n=e'

CON=PRV-say-PASS.CMP(B3SG) PREP(B3SG) CAUSE　　A3=older.brother=TOP

'(And) he was told by his brother'

láah=k'àas-kun-t-a'b　　　　　　　le=nal

UNIV=bad-CAUS-APP-PASS.CMP(B3SG)　DEF=maize

'the corn was completely destroyed'

tuméen hun-p'éel chak+íik'-al.

CAUSE　　one-CL.IN　　rain+wind-REL

'by a storm.'

‣ **example (cont.)**

Káa=t-uy-a'l-ah   u=suku'n

CON=PRV-say-CMP(B3SG) A3=older.brother

'(And then) his brother said'

"Wáah ma'   tuméen òok'-ik   le=chak+íik'-al=o'

ALT   NEG(B3SG) CAUSE   enter-EXTRAFOC(B3SG) DEF=rain+wind-REL=D2

'"If it wasn't because the storm entered '

(**béeh**) **ts'o'k** u=hach=yàan-tal   (**ka'ch**)   le=nal=o'.

now   TERM A3=really=EXIST-INCH.INC   formerly DEF=maize=D2

'the corn would have turned out really well.'

▸ example (cont.)

  ▸ alternative continuation I

… ??Wáah ma'   **h-**òok'   (ka'ch)   lete=chak+íik'-al=o'…
  ALT   NEG(B3SG) **PRV-**enter(B3SG) (formerly) it:DEF=rain+wind-INC=D2
intended: 'If the storm hadn't entered…'

  ▸ speaker comment:

 Ma'   hach=uts-il,   mu'n   hach=na't-a'l.
 NEG(B3SG) really=good-REL(B3SG) NEG:A3 really=divine-PASS.INC
'Not very good, hard to understand.'

‣ **example (cont.)**

  ‣ **alternative continuation II**

… Wáah ma'   tuméen h-úuch   uy=òok'-ol

   ALT   NEG(B3SG) CAUSE   PRV-happen(B3SG) A3=enter-INC

'"If it wasn't because it entered '

le=chak+íik'-al=o'
DEF=rain+wind-REL=D2
'the storm,'

##**h-**hach=yàan-chah   (**ka'ch**)   le=nal=o'.
PRV-really=EXIST-INCH.CMP(B3SG) formerly   DEF=maize=D2

 intended: 'the corn would have turned out really well.'

▸ results I: the perfective

Table 4.1. *Distribution of perfective aspect markers across conditional types*

Type of conditional	Perfective in the antecedent?	Perfective in the consequent?
Indicative		
Epistemic (past/present-oriented)	Yes	??? (Not tested)
Hypothetical (future-oriented)	Yes	No (modals used instead)
Counterfactual PastCF	No (subjunctive used instead)	No ('terminative' aspect used instead)
PresentCF	N/A (semantically inappropriate)	No ('terminative' aspect used instead)
Future less vivid (FLV)	No (subjunctive used instead)	No (modals used instead)

‣ results I: the perfective (cont.)

  ‣ intriguingly, in PastCF scenarios

    ‣ attempted substitutions of perfectives in the antecedent yielded reinterpretations of the scenario as hypothetical

(3.2) [Context: as in (3.1)] Attempted substitution:

Wáah ma'   **h-**òok'   lete=chak+íik'-al=o'…

ALT   NEG(B3SG) **PRV-**enter(B3SG)   it:DEF=rain+wind-INC=D2

intended: 'If the storm hadn't entered…'

Elicited continuation:

…yan u=yàan-tal   le=nal=o'.

OBL   A3=EXIST-INCH.INC DEF=maize=D2

'…the corn will turn out (well).'

 Speaker comment: *Futuro* ('future')!

▸ results I: the perfective (cont.)

    ▸ note the contrast b/w FLV and hypothetical scenarios

(3.3) [Context: similar to (3.1), but Pedro calls before the harvest]

   a. FLV

    Wáah káa tàal-**ak**   hun-p'éel chak+íik'-al=o'

    ALT   SR   come-**SUBJ**(B3SG)   one-CL.IN   rain+wind-INC=D2

    'If a storm had come / were to come'

    yan u=k'àas-kun-t-ik   le=kosèecha=o'.

    OBL A3=bad-CAUS-APP-INC(B3SG) DEF=harvest=D2

    'it would destroy the harvest.'

    Speaker comment: no evidence of a storm in the area
    at utterance time.

▸ FLV-hypothetical contrast (cont.)

(3.3) [Context: similar to (3.1), but Pedro calls before the harvest]

b. Hypothetical

Wáah **h-**tàal   hun-p'éel chak+íik'-al=o'

ALT   **PRV-**come(B3SG)   one-CL.IN   rain+wind-INC=D2

'If a storm comes'

yan u=k'àas-kun-t-ik   le=kosèecha=o'.

OBL A3=bad-CAUS-APP-INC(B3SG) DEF=harvest=D2

'it will destroy the harvest.'

Speaker comment: a storm is already approaching;
chakíik'al 'storm' should actually be definite here!

▸ however, for some speakers, the subjunctive antecedent
can be used with the hypothetical interpretation as well

▸ results II: the exclusion feature (ExclF)

  ▸ ExclF is expressed by means of the deictic temporal adverbs *ka'ch* 'formerly' and *béeh* 'now'

      ▸ (and, independently, by subjunctive status)

  ▸ one or both may be used in the antecedent and/or the consequent

  ▸ their use is optional

  ▸ however, if neither is used in either clause, it becomes harder to recover the CF sense

      ▸ although this is in principle still possible in context

‣ results II: the exclusion feature (ExclF) (cont.)

  ‣ that *ka'ch* 'formerly' expresses ExclF rather than anteriority (Iatridou: 'fake past') is evident from its use in PresCFs

(3.4) [Context: Pedro and Juan are taking a walk in the cemetery. Night has fallen. Suddenly they hear a terrible scream. Says Juan: "Thank God I don't believe in ghosts!…]

Wáah tíin	krèer-t-ik	ha's-ah+òol	**ka'ch**-il=e',
ALT	PROG:1SG believe-APP-INC(B3SG)	shake:CAUS-ATP+life.force	**formerly**-REL=TOP

béeh	sahak-en	be'òora=a'!"
now	afraid-B1SG	now=D1

'If I believed in ghosts, I'd be scared now!'"

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BACK TO THE FUTURE

▸ how to make sense of the distribution of perfectives in conditionals?

    ▸ hypothesis: the perfective aspect markers of Yucatec, unlike other aspects, conflate *realis mood*

        ▸ which I take to be a *speech act* meaning representing the inclusion of the topic worlds in the utterance world

(4.1) $[\![\mathrm{PRV}]\!]^c = \lambda w. \lambda s. \lambda P. P(s) \wedge \tau(s) \subseteq t_{TOP}(c)$ - aspectual meaning

               $w \in W_{TOP}(c) \longrightarrow w \ll w_U(c)$ - speech act meaning

               $W_{TOP}(c)$ - the set of topic worlds at context c

               $\ll$ - non-proper part-of relation

▸ accounting for the data I: FTR and counterfactuality in matrix

  ▸ the realis meaning component explains straightforwardly

    ▸ why the perfective markers are incompatible with FTR in matrix clauses

      ▸ while avoiding the overgeneralization of the Modal Commitment Constraint of Bohnemeyer (1998)

        ▸ which makes incorrect predictions for a number of clause types

  ▸ in the same way, it correctly predicts that perfectives are unavailable in counterfactual consequents

▸ accounting for the data II: indicative conditional protases

　　▸ conditional protases block illocutionary meanings

　　　　▸ as subordinate clauses commonly do

　　　　▸ e.g., (4.2) does not make a promise

(4.2) *If I promise you to consider your evidence,
　　　 you'll promise me to consider mine.*

　　　　▸ this accounts for why perfectives are fine
　　　　　in epistemic and hypothetical antecedents

‣ accounting for the data III: counterfactual (CF) protases

   ‣ but why then are perfectives excluded in CF protases?

      ‣ because the realis constraint on the topic worlds, while no longer effective at the speech act level

         ‣ is still semantically incompatible with ExclF and thus blocks the counterfactual implicature

         ‣ *inside the protasis*

▸ accounting for the data IV: why should only the perfective aspect markers conflate realis mood?

   ▸ the first argument comes from the unique association of perfective aspect with completive 'status'

      ▸ status being a morphological mood category in Mayan

Table 5.1. *Distribution of status categories across predication types*

Status category	Distribution		
	Matrix clauses	Finite subordinate clauses	Nonfinite verbal projections
Completive	Perfective aspect		N/A
Incompletive	Imperfective aspect	Imperfective aspect; purpose clauses	Gerunds; complements of predicates expressing aspectual, causal, modal, and event perception meanings; intensional complements of intransitive predicates of fear, desire, attempt; intransitive complements in the motion-cum-purpose construction
Subjunctive	'Insubordinate' (Evans 2007) jussives	Irrealis clauses; counterfactual conditional antecedents	Intensional complements of transitive predicates of fear, desire, attempt; transitive complements in the motion-cum-purpose construction; complements with projective and counterfactual contents
Imperative	Imperative sentences	N/A	N/A
Extra-focal	N/A	Background clause in manner focus constructions w/ perfective aspect	N/A

▸ accounting for the data IV: (cont.)

  ▸ perfectives are the only aspect/mood markers that occur with completive status suffixes

    ▸ and the completive is the sole status category that is restricted to finite clauses

      ▸ thus it seems plausible

        ▸ that the perfectives would inherit realis mood from the completive status suffix

▸ in addition, perfective aspect has a unique role
in discourse

   ▸ in that it is the sole aspect for introducing new temporal
reference points (Bohnemeyer 2009)

      ▸ thus, perfective clauses serve as "pillars" supporting
the discourse representation and common ground

         ▸ so pairing them with realis mood might facilitate
the cognitive "bookkeeping" of discourse

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IMPLICATIONS

‣ Yucatec disallows perfectives in counterfactuals

   ‣ just as it disallows them in matrix clauses with FTR

   ‣ suggesting strongly
   that Yucatec perfectives do not conflate past tense

      ‣ and thus that Yucatec is profoundly tenseless

▸ a tenseless recipe for cooking up counterfactuals

   ▸ use temporal adverbs to express the exclusion feature triggering the counterfactual implicature

      ▸ that this is possible lends impressive support to Iatridou's (2000) theory of counterfactuals

▸ counterfactuals appear to be a diagnostic context for differentiating past tenses from realis moods

  ▸ thus, hypothesized covert past/non-future tenses can and should be tested in this environment

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　　▸ you guys!!!

"THE FUTURE'S NOT CERTAIN AND THE END IS ALWAYS NEAR."
— THE DOORS, ROADHOUSE BLUES

APPENDIX

▸ much of the debate on tenselessness hinges on the status of various constraints on **future time reference** (FTR)

  ▸ Matthewson (2006) on St'át'imcets

    ▸ matrix clauses that contain no overt tense marker are incompatible with FTR

(1.1)   Táyt-kan   lhkúnsa / # natcw   / # zánucwem
        hungry-1SG.SUB now   one.day.away   next.year
        'I am hungry now'; not 'I will be hungry tomorrow/next year'

(1.2)   K'ác-an'-lhkan   i-nátcw-as
        dry-DIR-1SG.SUB when.PAST-one.day.away-3CONJ

        / # natcw   / # zánucwem
        one.day.away   next.year

        'I dried it yesterday'; not 'I will dry it tomorrow/next year'
        (Matthewson 2006: 677)

APPENDIX (CONT.)

▸ Matthewson (2006) on St'át'imcets (cont.)

  ▸ however, as in Yucatec (and to some extent in English), conditional antecedents can have FTR w/o marking

(1.3)   Lh-7áts'x-en-acw   s-Laura
         HYP-see-DIR-2SG.CONJ NOM-Laura

         tsun   xwem-ás   kw s-nas-ts   úxwal'
         say(DIR) fast-3CONJ   DET NOM-go-3POSS   go.home

    'If you see Laura, tell her to hurry up and go home' (Matthewson 2006: 678)

▸ Matthewson (2006) on St'át'imcets (cont.)

   ▸ there is a variety of options for expressing FTR

      ▸ including the prospective aspect marker *cuz'*
        and the future marker *kelh*

         ▸ which Matthewson treats as a temporal ordering modal
           expressing Abusch's (1988) *woll*

(1.4)   **Cuz'**   qwatsáts   ta   naplít-a
         PROSP leave   DET   priest-DET
         'The priest is going to leave' (Matthewson 2006: 678)

      ▸ the most common marker w/ FTR is *kelh*

(1.5)   Táyt-kan   **kelh**
         hungry-1SG.SUB   FUT
         'I will be hungry' (not: 'I am/was hungry') (Matthewson 2006: 677)

▸ Matthewson (2006) on St'át'imcets (cont.)

　　▸ Matthewson's (2006) analysis

　　　　▸ St'át'imcets has an unpronounced non-future tense marker

　　　　　　▸ in matrix clauses, *kelh* and *cuz'* pick up non-future reference times from this non-future marker

　　　　　　　　▸ returning either absolute future or future-in-the-past interpretations

　　　　▸ adopted e.g. by Hayashi (2011) for Inuktitut; Jóhannsdóttir & Matthewson (2008) for Gitxsan (Tsimshianic)

▸ Matthewson (2006) on St'át'imcets (cont.)

  ▸ in the following, I use the terms

    ▸ **covert past/non-future** for zero-morphemes assumed to express past/non-future tense

    ▸ **cryptopast** for aspectual/modal morphemes assumed to conflate past/non-future tense

▸ a profoundly tenseless alternative to covert/cryptopasts: mood-based analyses

  ▸ Bittner (2005; 2013; ms) on Kalaallisut (West Greenlandic)

    ▸ Kalaallisut is a mood-centered language

(1.7) a. *Ole {ullumi/#aqagu) aallar-**pu**-q.*
       Ole today/tomorrow leave-**DEC**$_{iv}$ -3S$_{(T)}$
       'Ole left {today/#tomorrow}.'

      b. *Ole {ullumi/#aqagu) aallar-**p(i)**-a?*
         Ole today/tomorrow leave-**QUE** -3S$_{(T)}$
         'Did Ole leave {today/#tomorrow}?'

c. *Aallar-**li**-Ø!*
   leave-**OPT** -3S$_!$
   'Let him leave!'

d. *Aallar-**(g)i**-t!*
   leave-**IMP** -2S$_!$
   'Leave!'

"Fact-oriented moods assert that (DEC , FCT), or inquire whether (QUE), the eventuality of the verb is a **currently verifiable fact** –i.e. an event that has already happened (see [(4.2a-b)]), or a state that has at least begun […], in the same world as the speech act." (Bittner 2013: 36; emphasis *JB*)

▸ mood-based analyses (cont.)

  ▸ as a consequence, reference to the future
    is apparently exclusively indirect in Kalaallisut

    ▸ via non-future topic times

"PROSPECTIVITY THESIS
Kalaallisut translations of future auxiliaries comprise three related classes:
    A. prospective statives evoking (current) attitude states to de se prospects,
    B. prospective inchoatives evoking (realized) starts of expected processes,
    C. prospective matrix moods marking the speech act as a request or wish."
(Bittner 2005: 354)

  ▸ Tonhauser adopts Bittner's Prospectivity Thesis
    for Paraguayan Guaraní

    ▸ but does not address the role of mood

▸ a third option?

  ▸ Mucha (2013) argues that FTR constraints in Hausa are pragmatic in nature

    ▸ and do not arise in appropriate discourse contexts

      ▸ I argue below that FTR constraints in Yucatec also involve a pragmatic component

        ▸ but they are not sensitive to the discourse context

          ▸ but exclusively to the syntactic context

▸ today's test case: Yucatec Maya

▸ preview

▸ revisit the facts of FTR constraints in this language first drawn attention to in Bohnemeyer (1998)

▸ bring new data to bear concerning the behavior of perfective aspect markers in counterfactuals

▸ develop a revised mood-based account as a result

▸ Yucatec preverbal aspectual-modal (AM) markers

   ▸ every finite verb clause must contain exactly one of these

      ▸ part I: aspectual markers

Table 3.1. *Yucatec preverbal aspect markers*

Category	Form	Meaning		Compatible with past topic times in matrix S	Compatible with future topic times in matrix S	At-issue commitment to realization
Perfective	t- / h-	Perfective	$\tau(e) \subseteq t_{top}$	Yes	No	Yes
Imperfective	k-	Generic/ habitual/ imperfective	$\exists s.\textbf{habitual}(e,s)$ & $t_{top} \subset \tau(s)$	Yes	Yes	No
Progressive	táan	Imperfective	$t_{top} \subset \tau(e)$	Yes	Yes	No
Terminative	ts'o'k	Perfect	$\exists s.\textbf{cause}(e,s)$ & $t_{top} \subset \tau(s)$	Yes	Yes	No
Prospective	mukah	Prospective	$\exists s.\textbf{inertial.cause}(s,e)$ & $t_{top} \subset \tau(s)$	Yes	Yes	No

▸ Yucatec preverbal aspectual-modal (AM) markers (cont.)

  ▸ every finite verb clause must contain exactly one of these

    ▸ part II: degree-of-remoteness markers

Category	Form	Presupposition	At-issue content	Compatible with past topic times in matrix S	Compatible with future topic times in matrix S	At-issue commitment to realization
Remote future	*bíin*	$t_{top} < \tau(e)$	$D(t_{top}, \tau(e))$ contextually large	Yes	Yes	No
Immediate future	*ta'itak*	$t_{top} < \tau(e)$	$D(t_{top}, \tau(e))$ contextually small	Yes	Yes	No
Immediate past	*táantik ...=e'*	$\tau(e) < t_{top}$	$D(t_{top}, \tau(e))$ contextually very small	Yes	Yes	No
Recent past	*sáam*	$\tau(e) < t_{top}$	$D(t_{top}, \tau(e))$ contextually small	Yes	Yes	No
Remote past	*úuch*	$\tau(e) < t_{top}$	$D(t_{top}, \tau(e))$ contextually large	Yes	Yes	No

Table 3.2. *Yucatec preverbal degree-of-remoteness markers*

▸ Yucatec preverbal aspectual-modal (AM) markers (cont.)

  ▸ every finite verb clause must contain exactly one of these

    ▸ part III: modal markers

Table 3.3. *Yucatec preverbal modal markers*

Category	Form	Meaning			Compatible with past topic times in matrix S	Compatible with future topic times in matrix S	At-issue commitment to realization
		Force	Modal base	Ordering source			
Obligative	*yan*	"Weak" U	Circum-stantial	Stereotypical	Yes	Yes	No
Necessitive	*k'a'náan/ k'abéet*	"Strong" U		Teleological	Yes	Yes	No
Desiderative	*táak*	U		Bouletic	Yes	Yes	No
Assurative	*he' …=e'*	U	Circum-stantial/ Epistemic	Stereotypical	Yes	Yes	Yes
Counter-factual	*óolak*	E	Empty	Realistic	Yes	Yes	No