Non-future Tense vs. Two null Tenses: A Reconsideration of Plural Eventualities in Different Temporal Locations

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NELS 51, 6 -8 Nov 2020, UQAM

Introduction

- Many superficially tenseless languages are analyzed to possess covert semantic tense(s).
  - PRES and PAST: Blackfoot (Reis Silva & Matthewson 2007)
  - NONFUT: St'át'imcets (Matthewson 2006), Gitksan (Jóhannsdóttir & Matthewson 2007), Paraguayan Guaraní (Tonhauser 2011a), Mbyá Guaraní (Thomas 2014), Mandarin (Sun 2014), Tlingit (Cable 2017)
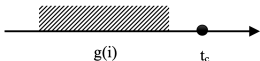
(1) $[\![\text{NONFUT}_i]\!]^{g,c}$ is only defined if no part of $g(i)$ is after t_c.
     If defined, $[\![\text{NONFUT}_i]\!]^{g,c} = g(i)$.
                          (Matthewson 2006, name of the tense changed)

(2) Four possibilities of reference time given NONFUT

a.

$g(i) = t_c$

b.

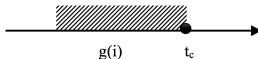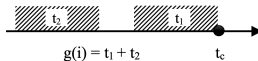$g(i)$ t_c

c.

$g(i)$ t_c

d.

$g(i) = t_1 + t_2$ t_c
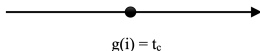
- ▶ The evidence favoring the NONFUT rather than PRES & PAST in superficially tenseless languages includes the plural eventualities in different temporal locations (PEDT henceforth).

    (3) Context: *Last year, John didn't go fishing, so he had no dried salmon last winter. Then summer came, and he went fishing. He got a lot of dried salmon. Fred didn't go fishing, so Fred has no dried salmon now.*

    (wa7) zúqw-cen s-John   múta7 s-Fred
    (IMPF) die-foot NOM-John and   NOM-Fred
    'John and Fred were/are starving.' (not at the same time).
                                              (St'át'imcets, Matthewson 2006: 682)

- ▶ NONFUT can provide a large-enough interval to fit in the present state and the past state.

- Constructions with coordinating subjects and a stative predicate to describe plural eventualities: Subject Plural Eventualities (Subject PE).

- ▶ Sun (2014): PEDT is also observable in Mandarin, argues for a non-future tense analysis for the language.

  (4) | Huojin he Yang Zhenning | dou dui wuli ganxingqu.
      Hawking and Yang Zhenning DOU to physics interest
      'Hawking and Zhenning Yang were/are interested in physics.
      (not at the same time)'

           (Adapted from Sun 2014, the original subject is 'Newton and
      Hawking', the translation is added by us.)

- ▶ Pattern: Subject (deceased + alive) + individual-level predicate
    - ▶ Assumption 1: The sentence contains only one tense
    - ▶ Assumption 2: A state with a deceased experiencer was in the past

(5) a. | Huojin he Yang Zhenning | dou dui wuli ganxingqu.

      Hawking and Yang Zhenning DOU to physics interest

      'Hawking and Zhenning Yang were/are interested in physics.

      (not at the same time)'

   b. | Huojin he Yang Zhenning | dou hen lei.

      Hawking and Yang Zhenning DOU very tired

      'Hawking and Zhenning Yang were/ #are tired (now).'

      '#Hawking was tired and Zhenning Yang is tired.'

Context: *Last year, John didn't go fishing, so he had no dried salmon last winter. Then summer came, and he went fishing. He got a lot of dried salmon. Fred didn't go fishing, so Fred has no dried salmon now.*

(6) a. (wa7) zúqw-cen s-John   múta7 s-Fred
    (IMPF) die-foot NOM-John and   NOM-Fred
    'John and Fred were/are starving.' (not at the same time).
                              (St'át'imcets, Matthewson 2006: 682)

   b. # John he Fred dou hen e.
    John and Fred DOU very hungry
    '#John was very hungry and Fred is very hungry (now).'

▶ A non-future tense in principle should predict PEDT in (5b) and (6b), in contrast to facts.

▶ Subject PE in Mandarin demonstrates a mixed pattern: PEDT is observable with individual-level statives but is blocked with stage-level statives.

The PEDT blocking effect of stage-level predicates

- ▶ Assumption 1: Stative sentences with a stage-level predicate possess a covert imperfective aspect IPFV. (Lin 2006)

- ▶ Assumption 2: The distributive reading of the plural eventualities comes from a distributive operator *Dist* (see Liu 2018, Xiang 2020).

- ▶ The semantics for *Dist* and IPFV

(7) $[\![\text{Dist}]\!] = \lambda P \lambda x \forall y [(y \sqsubseteq x \wedge \text{Atom}(y)) \rightarrow P(y)]$

(Schwarzschild 1996)

(8) $[\![\text{IPFV}]\!] = \lambda P_{\langle v,st \rangle} \lambda t \lambda w \exists e [P(e)(w) \wedge t \subseteq \tau(e)]$

- ▶ Assumption 3: *Dou* is a focus particle whose contribution is irrelevant here.
    - ▶ I simply follow Liu (2018), Xiang (2020) and assume it to be an exhaustification operator.
    - ▶ I will omit the semantic contribution of *dou* in the derivation.
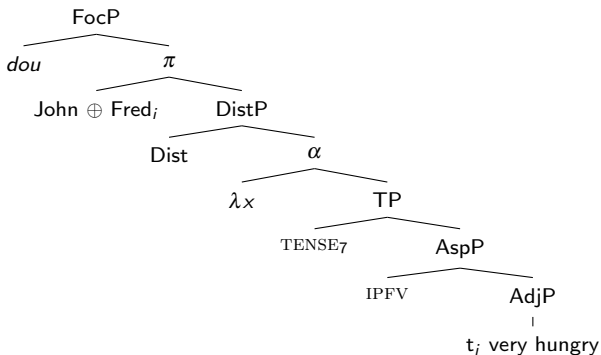- ▶ Assumption 4: Subject PE contains only one tense TENSE.

    (9) $[\![\text{TENSE}_7]\!]^{g,c} = g(7)$, iff Q holds. Q stands for the presupposition on the tense operator.

    (10) a. $[\![\text{PRES}_7]\!]^{g,c} = g(7)$, iff $g(7) = t_c$.

    b. $[\![\text{PAST}_7]\!]^{g,c} = g(7)$, iff $g(7) < t_c$.

    c. $[\![\text{NONFUT}_7]\!]^{g,c} = g(7)$, iff $g(7) \leq t_c$.

- The syntactic structure for Subject PE with stage-level statives

    (11) a. John he Fred dou hen e.
         John and Fred DOU very hungry
         'John and Fred are/were very hungry.'

    b.

(12) $\forall x[(x \sqsubseteq j \oplus f \wedge \mathsf{Atom}(x)) \rightarrow \exists s[\mathsf{hungry}(s, x, w) \wedge g(7) \subseteq \tau(s)]]$, iff Q
      holds for g(7).

(13) $\exists s[\mathsf{hungry}(s, j, w) \wedge g(7) \subseteq \tau(s)] \wedge \exists s[\mathsf{hungry}(s, f, w) \wedge g(7) \subseteq \tau(s)]$, iff
      Q holds for g(7).

- ▶ $g(7) \subseteq \tau(s)$ for both states → the two states overlap →
  PEDT is excluded.
- ▶ Whether $g(7)$ is offered by a NONFUT, PRES or PAST is
  irrelevant.

- Even Subject PE with individual-level statives allows PEDT, it is not committed to a non-future tense either.

  PEDT: Subject (deceased + alive) + individual-level predicate

- ▶ PEDT with individual-level predicates may contain an English-style present tense.
  - ▶ A statement about a dead individual does not necessarily require a past tense.

    (14) a. Mammoths first appeared in Africa 3 million to 4 million years ago, and are believed to be cousins, rather than ancestors, of modern elephants. But while they **have** 58 chromosomes and elephants 56, research has shown only a 5 percent genetic difference between the species.

      (Mittwoch 2008: 168 footnote 1)

      b. Dinosaurs **are** a group of reptiles that dominated the land for over 140 million years (more than 160 million years in some parts of the world).
      (https://www.nhm.ac.uk/discover/what-are-dinosaurs.html)

▶ English 'Historical Present' also allows present tense to refer to a past time in the context of narration.

(15) I couldn't believe it! Just as we arrived, up comes Ben and slaps me on the back as if we're life-long friends. "Come on, old pal," he says, "Let me buy you a drink!" I'am telling you, I nearly fainted on the spot.

(Quirk et al., 1985: 181)

Some implications for Mandarin temporal reference

- The Mandarin-style PEDT is not a strong argument for the non-future tense (*pace* Sun 2014)
- In fact, it is compatible with a null version of English-style tense system.

How to account for the different performance of PEDT with stage-level statives in Mandarin and St'át'imcets?

(16) (wa7) zúqw-cen s-John   múta7 s-Fred
     (IMPF) die-foot   NOM-John and   NOM-Fred
     'John and Fred were/are starving.' (not at the same time).
                                          (Matthewson 2006: 682)

► *Wa₇* is optional.

► If we assume a standard denotation for the imperfective
  aspect marker *wa₇*, we would predict that like Mandarin,
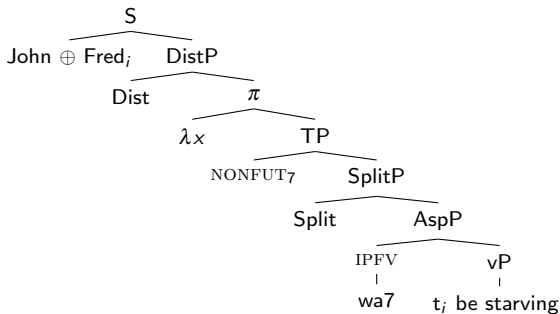 PEDT is blocked in St'át'imcets, in contrast to facts.

One possible solution
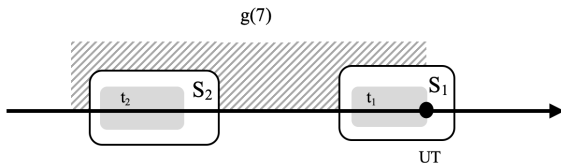
- A covert partition operator: *Split*

    (17) $[\![\text{Split}]\!]^c = \lambda P \lambda x \exists y [y \sqsubseteq x \wedge \text{Part}_{c,x}(y) \wedge P(y)]$

    $\text{Part}_{c,x}(y)$ means that y is a context-divided part of x.

    (18) a.

(19) a. $\forall y [y \sqsubseteq j \oplus f \wedge \mathsf{Atom}(y) \rightarrow$
$\exists t \exists s [t \sqsubseteq g(7) \wedge \mathsf{Part}_{c,g(7)}(t) \wedge \mathsf{be\ starving}(s, y, w) \wedge t \subseteq \tau(s)]]$, iff
$g(7) \leq t_c$.

b.

- ▶ PEDT is thus available.
- ▶ Assuming the *Split* operator is one possible way to capture the St'át'imcets PEDT with a standard imperfective aspect.
- ▶ I admit that it is not the only way to achieve the goal.
- ▶ Further investigation about St'át'imcets is necessary.

Main claims

- A distributive operator and the imperfective aspect together block PEDT.
- The Mandarin-type PEDT phenomenon calls for scrutiny: it does not necessarily favor a non-future tense. The data are also compatible with a two-null-tense approach.
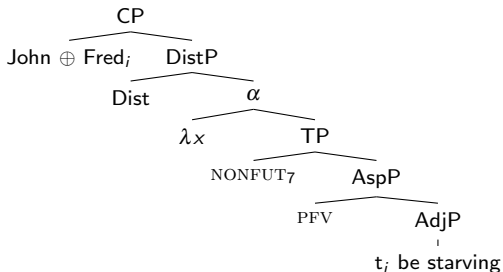
Appendix

(20)   a. Huojin   he Yang Zhenning dou hen lei.
            Hawking and Yang Zhenning DOU very tired
            'Hawking and Zhenning Yang were/ #are tired.'
            '#Hawking was tired and Zhenning Yang is tired.'

      b. $\forall x[(x \sqsubseteq h \oplus y \wedge \mathrm{Atom}(x)) \rightarrow \exists s[\mathrm{tired}(s,x,w) \wedge g(7) \subseteq \tau(s)]]$

      c. $\exists s[\mathrm{tired}(s,h,w) \wedge g(7) \subseteq \tau(s)] \wedge \exists s[\mathrm{tired}(s,y,w) \wedge g(7) \subseteq \tau(s)]$, iff
           Q holds for $g(7)$.

- ► Subject (deceased + alive) + stage-level stative
- ► Stage-level predicates like 'hungry' and 'tired' presuppose that the experiencer is alive if the state holds (Musan 1997, Magri 2009).
- ► A dead individual cannot be tired. Hence the present reading is blocked and only the past reading is available.

(21) (wa7) zúqw-cen s-John múta7 s-Fred
      (IMPF) die-foot NOM-John and NOM-Fred
      'John and Fred were/are starving.' (not at the same time).
                                              (Matthewson 2006: 682)

- Wa_7 is optional.
- Predicates not overtly marked by wa_7 is assumed to possess the morphologically null perfective aspect (Matthewson 2006).

  (22) a. $[\![\text{PFV}]\!] = \lambda P \lambda t \lambda w \exists e [P(e)(w) \wedge \tau(e) \subseteq t]$
        b. $[\![\text{NONFUT}_7]\!]^{c,g} = g(7)$, iff $g(7) \leq t_c$.

(23) a.

$$
\begin{array}{c}
\text{CP} \\
\text{John} \oplus \text{Fred}_i \quad \text{DistP} \\
\text{Dist} \quad \alpha \\
\lambda x \quad \text{TP} \\
\text{NONFUT}_7 \quad \text{AspP} \\
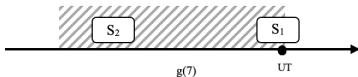\text{PFV} \quad \text{AdjP} \\
\text{t}_i \text{ be starving}
\end{array}
$$

b. $\forall y[(y \sqsubseteq j \oplus f \wedge \text{Atom}(y)) \rightarrow \exists s[\text{be starving}(s, y, w) \wedge \tau(s) \subseteq g(7)]]$,
   iff $g(7) \leq t_c$

c.

a.

b.