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

Yuyin He

Harvard University

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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. 
\[ g(i) \quad t_c \]

c. 
\[ g(i) \quad t_c \]

d. 
\[ g(i) = t_1 + t_2 \quad t_c \]
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 $\text{IPFV}$. (Lin 2006)
- Assumption 2: The distributive reading of the plural eventualities comes from a distributive operator $\text{Dist}$ (see Liu 2018, Xiang 2020).
- The semantics for $\text{Dist}$ and $\text{IPFV}$

\[
\begin{align*}
\text{[Dist]} &= \lambda P \lambda x \forall y [(y \sqsubseteq x \land \text{Atom}(y)) \rightarrow P(y)] \\
&\text{(Schwarzschild 1996)} \\
\text{[IPFV]} &= \lambda P_{\langle v, st \rangle} \lambda t \lambda w \exists e [P(e)(w) \land t \subseteq \tau(e)]
\end{align*}
\]
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 $\text{TENSE}$.

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

\[(10) \quad \begin{align*}
    &a. \quad [\text{PRES}_7]^{g,c} = g(7), \text{ iff } g(7) = t_c. \\
    &b. \quad [\text{PAST}_7]^{g,c} = g(7), \text{ iff } g(7) < t_c. \\
    &c. \quad [\text{NONFUT}_7]^{g,c} = g(7), \text{ iff } g(7) \leq t_c.
\end{align*}\]
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. 

```
  FocP
     dou π
        John ⊕ Fred
        DistP
           Dist α
              λx
                  TP
                     TENSE₇
                        AspP
                           IPFV
                              AdjP
                                 t₁ very hungry
```
(12) \[ \forall x[(x \sqsubseteq j \oplus f \land \text{Atom}(x)) \rightarrow \exists s[\text{hungry}(s, x, w) \land g(7) \subseteq \tau(s)]] \], iff Q holds for g(7).

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

- \( g(7) \subseteq \tau(s) \) for both states \( \rightarrow \) the two states overlap \( \rightarrow \) 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: $Split$

$\lambda P \lambda x \exists y [y \sqsubseteq x \land Part_{c,x}(y) \land P(y)]$

$Part_{c,x}(y)$ means that $y$ is a context-divided part of $x$.

(18) a. [Diagram]

S

John $\oplus$ Fred_i DistP

Dist $\pi$

$\lambda x$ TP

NONTFUT7 SplitP

Split AspP

IPFV vP

wa7 t_i be starving
(19) a. \( \forall y[y \sqsubseteq j \oplus f \land \text{Atom}(y) \rightarrow \exists t \exists s[t \sqsubseteq g(7) \land \text{Part}_{c,g(7)}(t) \land \text{be starving}(s,y,w) \land t \sqsubseteq \tau(s)], \text{iff } g(7) \leq t_c. \)

b. PEDT is thus available.

- Assuming the \textit{Split} operator is one possible way to capture the St’át’ímcets PEDT with a standard imperfective aspect.
- I admit that it is not the only way to achieve the goal.
- Further investigation about St’át’ímcets 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 drought very tired
    ‘Hawking and Zhenning Yang were/ #are tired.’
    ‘#Hawking was tired and Zhenning Yang is tired.’

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

c. $\exists s[\text{tired}(s, h, w) \land g(7) \subseteq \tau(s)] \land \exists s[\text{tired}(s, y, w) \land g(7) \subseteq \tau(s)],$ 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)

▶ Wa7 is optional.

▶ Predicates not overtly marked by wa7 is assumed to possess the morphologically null perfective aspect (Matthewson 2006).

(22) a. $\llbracket$PFV$\rrbracket = \lambda P \lambda t \lambda w \exists e[P(e)(w) \land \tau(e) \subseteq t]$

b. $\llbracket$NONFUT7$\rrbracket^{c,g} = g(7), \text{ iff } g(7) \leq t_c$. 
(23) a.

\[
\text{CP} \\
\text{John } \oplus \text{ Fred}_i \quad \text{DistP} \\
\text{Dist} \quad \alpha \\
\lambda x \quad \text{TP} \\
\text{NONTFUT}_7 \quad \text{AspP} \\
\text{PFV} \quad \text{AdjP} \\
t_i \text{ be starving}
\]

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

c.

a.

b.