Some structural disanalogies between pronouns and tenses

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Introduction and Background

A classic view: tenses are like pronouns

Partee (1973)
Some structural analogies between pronouns and tenses in English.

> *"I will try to show that there are uses of the tenses parallel to
> each of the uses of the pronouns, suggesting that the best
> representation of the English tenses should be structurally
> similar to the representation of pronouns (leaving open for the
> time being what form that representation should take)." (602)*

Kratzer (1998)
More structural analogies between pronouns and tenses.

Reasons to re-evaluate this view:

- More sophisticated views of **pronouns**

  (e.g. Déchaine and Wiltschko 2002)

  - Proposed complex internal structure for pronouns.
  - No equivalent for tense: structurally simple T/Infl.

- More sophisticated views of **tense**, particularly its interaction with **modality** and **aspect**.

  - these interactions complicate several of the parallels with pronouns.

A broader question:

What does it mean to say that tense is or is not a pronoun?

a **syntactic** pronoun vs. a **semantic** variable.

Some terminological preliminaries

What do we mean when we talk about "tense"?

Morphological tense
A morphological form in a language's inflectional system.

Syntactic tense
A functional head, or possibly a feature on a functional head, in syntactic representations.

Semantic tense
The relationship between an anchoring time / time of utterance and the time we are talking about ("reference time").

Morphological past without **semantic** past: Counterfactuals

Semantic past without **morphological** past: French

Proposed analogies

Where did the pronominal tense hypothesis come from?

- Partee (1973): 4 analogies, and one "shared non-property"

  1. Referential uses of tense
  2. Anaphoric uses of tense
  3. Bound variable uses of tense
  4. Scope interactions for tense
  +1. Both distinct from "nonpronominal term phrases" (=R-expressions)

- Kratzer (1998):

  5. A further analogy involving Feature Transmission and uninterpreted φ / tense features.
  6. Nonpronominal tense in English vs. pronominal tense in German.

1. Tense as Referential

(1)　　He shouldn't be in here.

(2)　　I didn't turn off the stove.

- Partee: (2) doesn't mean what we might expect it to.

  (if tense were an operator, as in Prior 1967)

  - **X** PAST>NEG: → there is **some** past time at which I didn't turn off the stove.
  - **X** NEG>PAST: → there is **no** past time at which I have turned off a stove.

- Instead, refers to some **particular** time in the contextually-relevant past, at which I failed to turn off the stove.

1. Tense as Referential

- Further, Partee observes that the present tense, like the pronouns *I* and *you*, is **indexical**.
  It (usually) refers to NOW, whenever the NOW of the utterance happens to be.

(3)   I am here (now).

2. Tense as Anaphoric

- In (4), the pronoun *it* in the second clause corefers with the *the car* in the first.

- Similarly, according to Partee, in (5) the tense of the second clause refers to the same time as the tense in the first clause.

(4)   Sam took the car yesterday and Sheila took it today.

(5)   a.   Sheila had a party last Friday and Sam got drunk.
      b.   When Susan walked in, Peter left.

- In examples like (5b) it is not clear whether the best analysis is in terms of coreference or binding (on analogy to e.g. free relatives)—we turn next to more clearly bound variable uses of tenses.

3. Tense as a Bound Variable

Partee: *will* in (6) is a **present tense modal**, calculated from NOW.

(6)   I will stop talking immediately.

But in (7), *will* is **not** calculated from NOW, but from the time of the temporal adjunct clause:

(7)   When my time is up, I will stop talking immediately.

Partee's analysis: we account naturally for (7) if the present tense of *will* is **bound** by the tense in the *when*-clause.

3. Tense as a Bound Variable

Similar analysis of quantificational adverbs like *never* or *always*:

(8) a.   My brother never answers when I call his phone.
     b.   No one could tell what they were being tested for.

(9) a.   My least favourite professor always gave assignments that
          were due the next day.
     b.   Everyone knows their own mind best.

4. Scope Interactions

(10)   If my friend had gotten a Game Boy Advance, they would have
        had everything they wanted.

- Meaning 1: past tense in *everything (that) they wanted* is
  interpreted **referentially** (as a specific time in the past)
- Meaning 2: past tense in *everything (that) they wanted* is
  interpreted **anaphorically** (to the time of wanting).

Partee points out that this is parallel to the usual ambiguity of sentences
with potentially coreferential pronouns: also in (10), *they* can similarly be
interpreted as referring either to *my friend* or to some other third person.

+1. The shared disanalogy

Partee identifies **time adverbials**, as in (11) as the temporal equivalent of R-expressions ("full term phrases")

(11)   We climbed Mt. Baker **three weeks ago.**

She observes that unlike pronouns, however, tenses co-occur with such definite time descriptions—at least in languages like English—which weakens the analogy.

She mentions that the situation may differ in other languages—no specific language is mentioned, but "optional tense" languages might fit this description.

5. Uninterpreted tense and pronominal features

Kratzer (1998): a further parallel with **uninterpreted** features.

- Heim (2008) (and previous unpublished work): φ-features on some bound variable pronouns are not interpreted:

(12)   Only I did my homework.
        Meaning 1: Nobody else did my homework.
        Meaning 2: Nobody else did **their** homework.

- Idea: On Meaning 2, *my* is a **bound variable**, and receives φ-features via **Feature Transmission**.

Kratzer (1998): if tense is a pronoun, we can say the same thing about **embedded tense**:

(13)   They **said** that they **were** doing their homework.
        What they said: "We **are** doing our homework."

6. Strictly pronominal tense in German

Kratzer: *unlike* pronouns, English past is possible "out of the blue".

(14)   Who built this Church? Borromini built this church.

Maybe surprising if the past tense in (14) is a **pronoun**!

But in Standard German (and in Romance languages) the simple past is **infelicitous** in exactly cases like this:

(15)   *Wer baute diese Kirche. Borromini baute diese Kirche.
          Who built this church? Borromini built this church.

(16)   Wer hat diese Kirche gebaut? Borromini hat diese Kirche gebaut.
          Who has this church built? Borromini has this church built.

Second thoughts

At one point there were growing *syntactic* parallels between pronouns and tenses:

- Abney (1987): parallels between DP and TP

  (and earlier, Postal 1966)

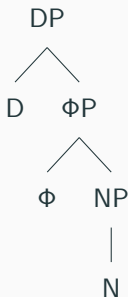 Pronoun = D   Tense = T

  So far so good!

Syntactic differences

But more recently: growing structure **inside** pronouns.

Déchaine and Wiltschko (2002):

Referential:

```
      DP
     /  \
    D    ΦP
        /  \
       Φ    NP
             |
             N
```
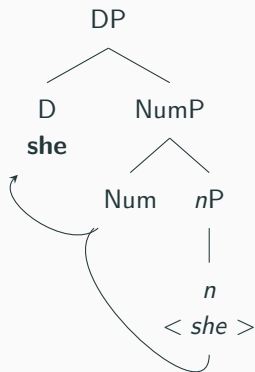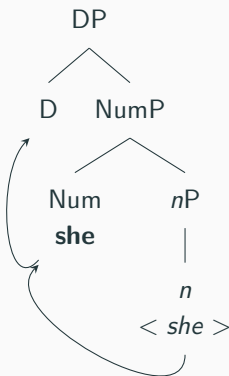
Variable:

```
      ΦP
     /  \
    Φ    NP
          |
          N
```

Predicate:

```
    NP
    |
    N
```

Syntactic differences

Conrod (2019) (simplified):

Referential:

```
          DP
         /  \
        D    NumP
      she    /  \
           Num   nP
                 |
                 n
              < she >
```

Variable:

```
          DP
         /  \
        D    NumP
            /  \
          Num   nP
          she   |
                n
             < she >
```

Predicative:

```
          DP
         /  \
        D    NumP
            /  \
          Num   nP
                |
                n
               she
```
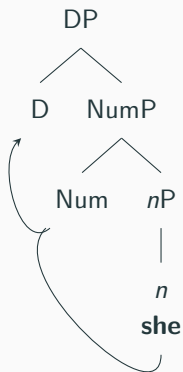
Syntactic differences

Parallel in "expanded Infl"?

```
        CP
       /  \
      C   FinP
          /  \
        Fin   TP
             /  \
            T   AspP
               /  \
             Asp  . . .
```
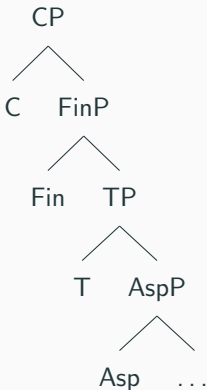
No: *tense* isn't distributed across this domain, *temporal interpretation* is.

Unlike pronouns, tense **never** occurs without a lexical predicate (even if elided)

So is pushing this analogy really worthwhile?

Re-evaluating the parallels

Re-evaluating the analogies

Another option: tense **isn't** actually very much like a pronoun.

The analogies identified by Partee and Kratzer must then be attributable to other sources.

Remainder of this section: working backwards through the analogies.

1. Referential uses of tense
2. Anaphoric uses of tense
3. Bound variable uses of tense
4. Scope interactions for tense
+1. Both distinct from "nonpronominal term phrases" (=R-expressions)
5. A further analogy involving Feature Transmission and uninterpreted φ / tense features.
6. Nonpronominal tense in English vs. pronominal tense in German.

6. Referential tense in Standard German

(17)   Who built this Church? Borromini built this church.

(18)   *Wer baute diese Kirche. Borromini baute diese Kirche.
        Who built this church? Borromini built this church.
        (cf. perfect "hat gebaut")

No direct response to this analogy—past tense in Standard German does appear to be strictly referential.

However: potentially relevant that German is in the middle of a change—already complete in French—where the simple past is being replaced by (what used to be) the present perfect.

  $\rightarrow$ Interesting to ask if strictly referential past tense is found in languages *without* that change—or without a perfect.

5. Uninterpreted features under semantic binding

Kratzer: tenses are like pronouns in that when they're bound, their features are potentially uninterpreted.

(12)   Only I did my homework.

(13)   They said they were doing their homework.

Bjorkman (2019): Whatever is going on in Sequence of Tense environments, it can't be a morphosyntactic feature dependency.

- $\rightarrow$ Non-local: across a finite clause boundary, and against potential intervenors.
- $\rightarrow$ Possible in the absence of any syntactic licensor.

5. Uninterpreted features under semantic binding

(19)   *Kira was an odd child, with fixed opinions about her future. When she was six she decided that she would one day own a cat that looked like her. She's now changed her mind. Still...*
Kira's childhood desire to own a cat who **resembled** her remains odd.

Feature Transmission called into question even for pronouns: alternative that **presuppositions** are uninterpreted in calculating **focus alternatives**.

(12)   Only I did my homework.

Further issue from **typology**:

- lots of languages have bound pronouns as in (12).
- only a subset of Germanic and Romance languages seem to have Sequence of Tense.

4. Scope Interactions

Recall the example illustrating scope interaction for tense:

(10)   If my friend had gotten a Game Boy Advance, they would have
        had everything they wanted.

1. At some contextually salient past time t, for everything x that my
   friend actually wanted at t, they would have had x in the
   counterfactual world where they got a Game Boy Advance.
2. If my friend had gotten a Game Boy Advance, then at some time in
   that counterfactual world they would have had everything they
   wanted in that counterfactual timeline (maybe right then, maybe
   earlier, maybe eventually).

But is this about a bound variable tense?

4. Scope Interactions

> (10) If my friend had gotten a Game Boy Advance, they would have had everything they wanted.

Difference between the two readings reduces to the interaction of **counterfactual (CF) past** with the **Sequence of Tense** interpretation for tense in the relative clause.

- Reading 1: Past on *wanted* is **CF**, situates the situation in a world where the antecedent obtains.
- Reading 2: Past on *wanted* is **deictic**, situates the situation in the past of the actual world.

We already saw that there's a CF interpretation for past tense in relative clauses, even when there's no potential binder:

> (19) Kira's childhood desire to own a cat who **resembled** her remains odd.

3. Tense as a Bound Variable

Recall examples with a **bound** interpretation for tense:

(6)   When my time is up, I will stop talking (immediately).

According to Partee, *will* is interpreted relative to the time identified in the *when* clause.

Looking more closely, however:

- Subsequence between events results not from *will* but from **perfective aspect.**
- If main clause is **progressive**: now *will* clause is interpreted as **ongoing** during the *when*-clause:

(20)   When my time is up, I will (still) be speaking.

3. Tense as a Bound Variable

Perfective aspect also orders events event without a modal!

(21)   When my time was up, I gathered up my notes.

The "bound" readings are the cases where present tense is **not indexical**—these are **habitual**

The puzzle of the habitual is that the event does not have to hold NOW:

(22)   My colleague smokes.

- Much the same can be said about the examples with *never/always*:

(8a)   My brother never answers when I call his phone.

(9a)   My least favourite professor always gave assignments that were due the next day.

2. Tense as Anaphoric

Partee gives examples like (5) to argue that tense has anaphoric uses:

(5)   a.   Sheila had a party last Friday and Sam got drunk.
        b.   When Susan walked in, Peter left.

Already dealt with examples like (5b):

- Not simultaneous—events are *ordered*, due to perfective aspect.

What about (5a)?

- Not about **tense**—about **and**.
- Unlike the logical connective, natural language *and* is **asymmetric** (Bjorkman, 2013). (23) does not mean the same thing as (5a).

(23)   Sam got drunk last Friday and Sheila had a party.

1. Tense as Referential

Finally, consider again the initial example of referential tense:

(24)   I didn't turn off the stove.

This does seem to show that tense is interpreted as being about a contextually salient time!

But does this mean tense refers to a time **in the same way** a pronoun refers to an individual?

Consider the range of examples in (25) ((25a) repeated from (1)):

(25)   a.   He shouldn't be in here.
         b.   The dog shouldn't be in here.
         c.   The last person to arrive shouldn't be in here.

The subjects in (25) all pick out a contextually-defined individual, but they do so **in different ways.**

Where does this leave us?

Summing up

Tenses aren't **syntactically** or **structurally** like pronouns.

Not obvious that they're much **semantically** like pronouns either.

But what a semanticist means by a "pronoun" is frequently just a **variable**.

Does tense involve temporal variables?

$\rightarrow$ **semantically? probably**

$\rightarrow$ **syntactically? not obviously**

So what's going on with tense?

A semantics for tense

Standard view of tense semantics involves **three times**:

(Reichenbach, 1947; Klein, 1992, 1994)

- Event Time
- Topic Time
- Anchoring Time (aka Utterance Time)

. . . but none of these are *necessarily* projected in the syntax.

A semantics for tense

Event Time:

corresponds to the runtime of the *v*P event, itself often introduced quantificationally.

Anchoring Time:

in matrix clauses corresponds to NOW, potentially introduced contextually.

Topic Time:

if tenses are pronouns, then the pronouns refer to the Topic Time.

But Topic Time can also be introduced **quantificationally**, if tense simply takes a predicate of times (composed by viewpoint aspect) and yields *another* predicate of times.

Conclusions

What a semanticist means by "pronoun": a **variable**.

- If by "are tenses like pronouns?" we mean "are tenses obviously subject to the range of binding phenomena typical of pronouns?" the answer seems to be "no."

- And if by "are tenses like pronouns?" we mean "does tense have the same syntactic representation as pronouns do?" the answer is *definitely* no.

- But if by "are tenses like pronouns?" we mean "are there times in our semantic ontology?" then yes, it is reasonable to say that tenses are like pronouns—but not clear that even for pronouns we would have individual variables *in the syntax*.

So what?

In the end...
Why should we *care* if tense is syntactically or semantically like a
pronoun?

- Typological variation in clausal semantics
- Formal semantics for clauses and for modality
- ...and general curiosity about language!

Thanks!

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