Petr Kusliy, UMass Amherst

Simultaneous under Past: New facts about embedded Present tense in English

Introduction. It is commonly believed that Present tense morphology in English can only have an *absolutive* (indexical) interpretation (i.e. indicates a time that overlaps the utterance time (UT) (Kratzer, 1998; Ogihara, 1989; von Stechow, 2003)). I present new data from VP-fronted constructions in English that suggest that English Present tense also allows a relative interpretation, under which it indicates a time that is simultaneous with the time indicated by the matrix tense, and not necessarily the UT.

In order to capture the new data, I propose a theory of tense that assumes the existence of a relative Present in English, but also predicts that a pure relative interpretation of Present will not be possible in canonical Present-under-Past sentences (Abusch, 1997).

Data. The sentence in (1) has long been observed to admit a 'simultaneous interpretation', according to which, at a given time in the past, John said "Mary is smoking a cigar", and there is no implication that Mary's smoking a cigar continues at present.

(1) John said that Mary was smoking a cigar.

Interestingly, the interactions between the simultaneous reading and VP-fronting and CP-fronting have never before been examined. Consider, for example, the sentences in (2) and (3) below:

(2) That Mary is smoking a cigar, John said.

(3) Say that Mary is smoking a cigar, John did.

Native speakers of English report that sentence (3) with VP-fronting can receive the 'simultaneous' interpretation of sentence (1), while sentence (2) with CP-fronting cannot. Sentence (2) is instead reported to have the double access reading of sentence (4) below:

(4) John said that Mary is smoking a cigar.

Under this reading, sentences (2) and (4) entail that, according to what John said, Mary was smoking at the time that he spoke, and is also smoking now (Abusch, 1994). Finally, speakers report that sentence (3) can also receive the double access reading of (2) and (4).

Discussion. Due to the inability for (4) to get a simultaneous reading, many current theories of English tense state that the time indicated by the Present tense has to overlap the UT (absolutive interpretation). However, these theories also tend to posit a so-called "zero-tense", which has the following properties: (i) it allows for simultaneous readings, (ii) it can be used only in embedded CPs, (iii) it must be bound by a temporal (lambda) operator within the embedded CP, (iv) it lacks its own morphology (Ogihara, 1989), (v) it borrows its surface morphology from the closest c-commanding tense via a mechanism of feature transmission at PF (Kratzer, 1998).

Simultaneity with a Past-under-Past in (1) and a Present-under-Future in (5) is explained in terms of the presence of a "zero"-tense in the embedded clause.

(5) John will say that Mary is smoking a cigar.

In (1), the "zero"-tense surfaces with the Past tense morphology borrowed from the matrix tense. In (5), the "zero"-tense bears the Present tense morphology also borrowed from the matrix clause (assuming that *will* decomposes into Present and a verb stem *woll* (Heim, 1994; Ogihara, 1989)). Thus, in (1) and (5) the embedded tense morphology is not interpreted and, therefore, is not semantic.

Despite all the correct predictions that such theories make, the novel data presented here does not seem to be captured by them. Such theories cannot predict the simultaneity in (3). The embedded Present in (3) can be neither absolutive nor a "zero"-tense with borrowed morphology. It cannot be absolutive because, in that case, (3) will have a double-access and not a simultaneous reading. It cannot be a "zero"-tense with borrowed Present tense morphology because there is no c-commanding Present from which the morphology could be borrowed.

The contrast between (2) and (3) is also challenging. If we assume that a relative tense in a complement CP is bound within that CP, it is not clear why the Present tense in (3) can have a relative interpretation and the Present tense in (2) cannot (in both cases the CP is fronted).

Another important contrast is between (3) and (1) and between (3) and (4). Because (3) and (1) can get the simultaneous reading, it seems that they can share the same LF, despite the difference in the embedded tenses. Under the assumption that fronted VPs reconstruct (Huang, 1993), we should expect

(3) and (4) to share the same LF too. However, (4), unlike (3), does not have a simultaneous reading and cannot be have the same LF structure as sentence (1).

The above discussion seems to show that: (i) the relative (semantic) Present exists in English (demonstrated by (3)); (ii) if relative tenses in complement CPs are bound, then their binder is CP-external (supported by the contrast between (2) and (3)); (iii) if (3) and (1) can have the same LF, then the contrast between them is at PF.

Proposal. I propose a relative semantics for the Present tense as defined in (6):

(6) $\|\text{Pres}^{i}_{j}\|^{g,t,c}$ = g(j), defined iff g(i) = t and g(i) ⊆ g(j)

In matrix sentences, the upper index is free and so the Present tense anchors to a time that is equal to the temporal parameter (which is identical to the UT). In embedded clauses, the upper index can be bound or free. When it is bound, the Present tense anchors to the time indicated by the binder of its upper index.

In (2), the Present tense cannot be relative. This means that in a fronted CP construction the Present tense cannot be bound. In other words, in fronted CP constructions, the binder is unavailable. In (3), which is a fronted-VP construction and has a relative reading, the binder is available.

I propose that the binder of a relative tense is an operator (λt_k) that is CP-external and can optionally be merged between the attitude verb and the CP as schematized in (7).

(7) $[_{TP}\ T^0\ [_{VP}\ V^0\ [\ \boldsymbol{\lambda t_k}\ [_{CP}\ \ldots]]]]$

I follow (Moulton, 2013) and treat fronted CPs as base-generated in the high position. In a fronted CP-construction, I assume no such operator to be available above the fronted CP (otherwise, a simultaneous reading will be predicted for (2)). With these assumptions, the LF for (2) is predicted to be as in (8), whereas the LF for (3) as schematized in (9).

(8) $[_{TP}\ [_{CP}$ That Pres^2_3 Mary be smoking a cigar] λP $[_{TP}\ \text{Past}^0_1\ [_{VP}$ John $[_{VP}$ say P]]]]

(9) $[_{TP}\ \text{Past}^0_1\ [_{VP}$ John $[_{VP}$ say $[\ \boldsymbol{\lambda t_2}\ [_{CP}$ that Mary Pres^2_3 Mary be smoking a cigar]]]]]

In (9), the VP reconstructs. In (8), it is the operator λP moves from the object position and takes the CP as its argument (Moulton, 2013). The contrast between (2) and (3) is, thus, predicted.

It is crucially important that $\lambda t'$ be merged in the indicated position above the CP but below the attitude verb. We want only complements of attitude verbs to be able to have a tense with a bound anchor. Consequently, only attitude verbs should be able to optionally saturate the extra time argument slot in their complement. Merging the operator higher than the verb makes this saturation independent of attitude verbs and their complements and we then predict availability of a simultaneous reading in (10), contrary to fact:

(10) Meet a girl who is smoking a cigar, John did.

I account for the contrast between (3) and (1) in terms of PF-operations. The PFs of (3) and (1) are different. A PF process of *feature transmission under binding* (FTUB), when the Past tense feature gets transmitted from the matrix T^0 to the embedded T^0, is possible in (1) but not in (3) because, at PF, the embedded T^0 in (3) is not c-commanded by the matrix T^0 (see the PF structure of (3) in (11)):

(11) $[_{TP}\ [_{VP}$ Say $\boldsymbol{\lambda t_2}$ that Mary Pres^2_3 Mary be smoking a cigar] 5 $[_{TP}\ \text{Past}^0_1\ [_{VP}$ John $[_{VP}$ did $t_5]]]]$

This affects the choice of morphology for the lower T^0 in (3) and (1). In (11), only the Present tense feature is available, so the embedded T^0 surfaces with the Present tense morphology.

In case of (1), PF operations that transmit the Past tense feature from the matrix T^0 to the embedded T^0 apply to (9). In order to formalize this idea, I assume the mechanism of feature transmission as proposed in (Kratzer, 1998, 2008). The relevant rules are: *Tense Lowering*, *Predication*, and *FTUB*.

When (9) is at PF, the Past tense feature is transmitted to the matrix verb *say* from the matrix T^0 by Tense Lowering. Then it is transmitted to the operator λt_2 by Predication. Finally, it is transmitted to the embedded T^0 by FTUB. Past and Present features get stacked at the embedded T^0. I assume that, in English, the Past tense feature is marked. For this reason, it wins over the Present tense feature and determines the choice of morphology at PF.

The contrast between (3) and (4) also follows from the feature passing rules from (Kratzer, 2008). The embedded Present in (4) has to be absolutive because, if it were relative feature transmission would have applied and turned (4) into (1).