

1. OVERVIEW

The Empirical Domain. Temporal Adverbial Constructions (TACs) have full clausal forms (1) and phrasal forms (2):

- (1) Sue left [after Joe left]. (2) Sue left [after Joe].

TAC-Stripping. At least some phrasal TACs have a clausal source involving movement of the remnant and ellipsis of a vP.

- (3) Kim met Sue [afterP after [FocP Tom1 <vP Kim meet xT >]]

Embedding Constraints. Along with an articulated syntax-semantics for TACs, this provides an account for a surprising but familiar puzzle:

- (4) No Asymmetric Embedding. A phrasal TAC and its antecedent must be at the same level of embedding.

Rebinding and Parallelism. Binding of temporal operators by and within TACs disrupt ellipsis-licensing (cf. Takahashi 2008).

2. TAC-STRIPPING

Basic Ingredients. TAC-Stripping is:

- Low-adjunction of a TAC with an extended vP (e.g., Pancheva 2009).
- A-Movement of a single remnant and subsequent vP-ellipsis.

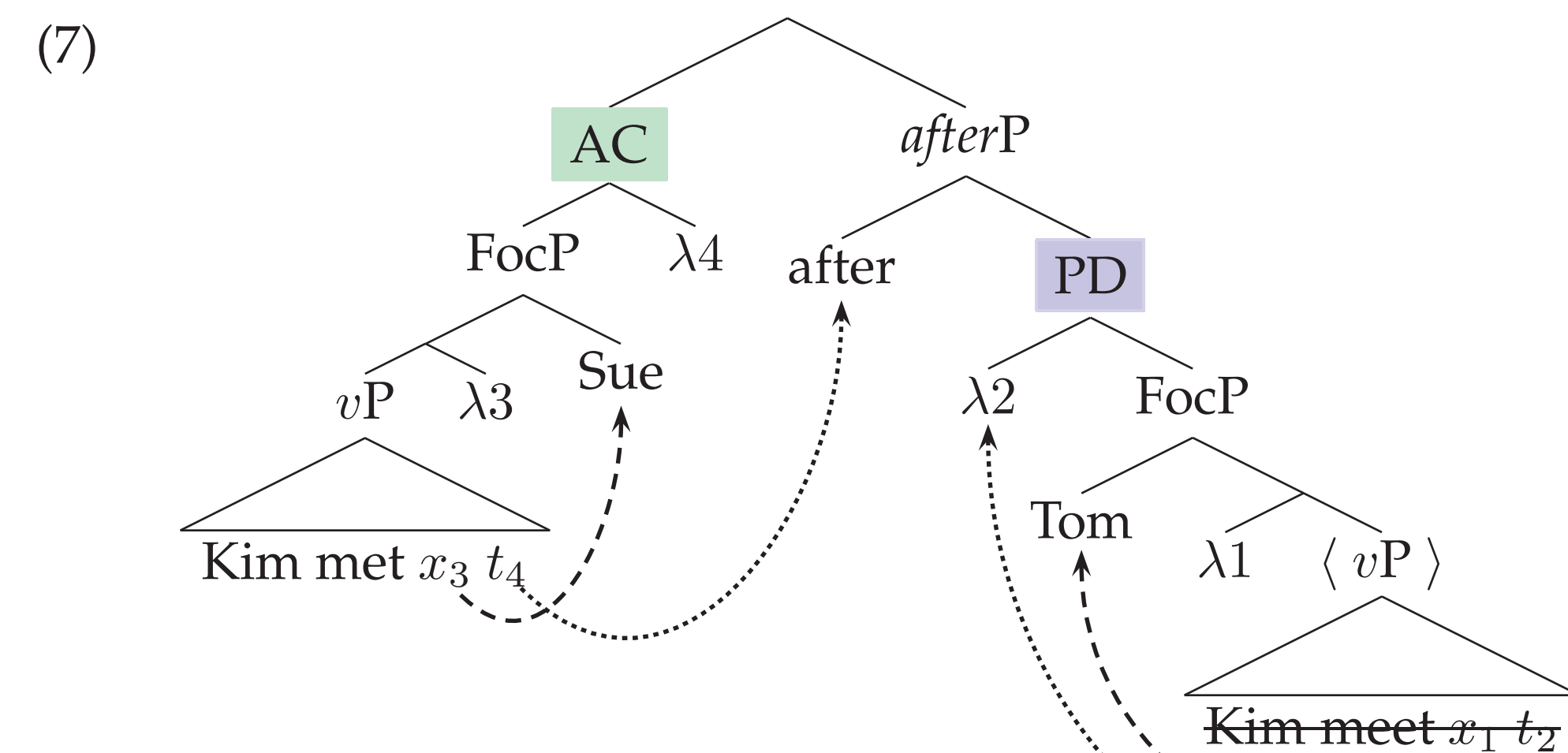
Operator Movement. Geis (1970) proposed movement of temporal operators (tn) in TACs.

- (5) I saw Kim [after Op1 she said t1 [she would leave t1]].
- a. 'I saw Kim after the time of saying that she would leave.'
- b. 'I saw Kim after the reported time of leaving.'

Temporal Re-binding. The resulting re-binding in ellipses is resolved via Quantifier Raising of the TAC (ACD; Takahashi 2008).

- (6) a. Sue left after Joe did <leave>.
- b. [afterP after λ1 Joe did <leave t1 >] λ2 Sue [vP left t2]

Ellipsis Parallelism. Ellipsis is licensed according to Rooth 1992b.



- (8) a. [[AC]]° = ∃t. Kim met Sue at t
- b. [[PD]]f = { p : ∃t. Kim met x at t | x ∈ De }
- c. [[AC]]° ∈ [[PD]]f for any g, ellipsis is licensed

3. MOVEMENT AND ELLIPSIS

Focus Parallelism. Pitch accent in the matrix clause disambiguates the remnant (Rooth 1992a).

- (9) [AC KIM met Sue] after [PD TOM1 <xT met Sue >]
- [[AC]]f = [[PD]]f = { p : x met Sue | x ∈ De }
- (10) [AC Kim met SUE] after [PD TOM1 <Kim met xT >]
- [[AC]]f = [[PD]]f = { p : Kim met x | x ∈ De }

Binding Connectivity. The remnant shows binding connectivity effects (Lechner 2004, Bhatt & Takahashi 2011).

- (11) I took him1 to Sue before
- a. Joe1's boss2 <x2 take him1 to Sue >
- b. *Joe1's boss2 <I take him1 to x2 >
- (12) I took Joe1 to Sue before
- a. his1 boss2 <x2 take him1 to Sue >
- b. his1 boss2 <I take him1 to x2 >

Islands. The remnant's sensitivity to islands is consistent with movement (Merchant 2004).

- (13) Complex-NP Constraint
- I met [DP someone who knows Dutch] before
- a. [DP someone who knows Russian]1 <I meet xT >
- b. *Russian1 <I meet [DP someone who knows xT] >

- (14) Left-Branch Extraction
- Tom read Kim's book after
- a. [DP Ann's book]1 <Tom read xT >
- b. *Ann1 <Tom read [DP xT's book] >

4. RESTRUCTURING AND LOW-ADJUNCTION

Restructured Complements. Phrasal TACs permit restructured complements.

- (15) You should cook the dumplings before eating them.
- (16) The dumplings were eaten after being cooked.

Scope of Negation. Negation cannot be interpreted inside a phrasal TAC (e.g., Oehrle 1987).

- (17) Tom didn't leave after his boss.
- a. ≠ 'Tom left, but not after his boss didn't leave.'
- b. = 'Tom left, but not after his boss left.'

And phrasal TACs necessarily take scope below root negation.

- (18) Tom didn't leave after his boss.
- a. ->after: 'Tom left, but not after his boss left.'
- b. *after> -: 'After his boss left, Tom didn't leave.'

Scope of Modals. Epistemic modals resist being interpreted inside a phrasal TAC (cf. Siegel 1987).

- (19) *Kim might leave after Joe <might leave >.

Quantifier-Variable Binding. A quantificational DP in subject position can bind a pronoun in a phrasal TAC (e.g., McCawley 1993).

- (20) No employee1 [left [after his1 boss]].

5. THE ELIMINATIVE PUZZLE OF PHRASAL TACS

Embedding Constraints. Phrasal TACs show the constraints against embedding the ellipsis site and antecedent observed with Gapping (Hankamer 1979) and other bare argument ellipses (e.g., Rooth 1992), but not necessarily with VP-Ellipsis (VPE).

- (21) Embedded Adjunction; Matrix Antecedent
- a. Kim heard [that Sue had left]
- after Joe heard that she had left].
- b. *Kim heard [that Sue had left]
- after Joe (did) <hear that Sue had left >
- 'Kim heard that, after Joe heard Sue had left, Sue had left.'
- (22) Matrix Adjunction; Embedded Antecedent
- a. Kim heard [that Sue had left] after Joe had left.
- b. Kim heard [(that) Sue had left] after Joe *(had) <left >.
- 'After Joe left, Kim heard that Sue had left.'

Table with 4 columns: adjunction, antecedent, TAC, VPE. Rows show embedded matrix and matrix embedded cases with asterisks indicating unacceptability.

Table 1: Possible source of antecedent as a function of adjunction site.

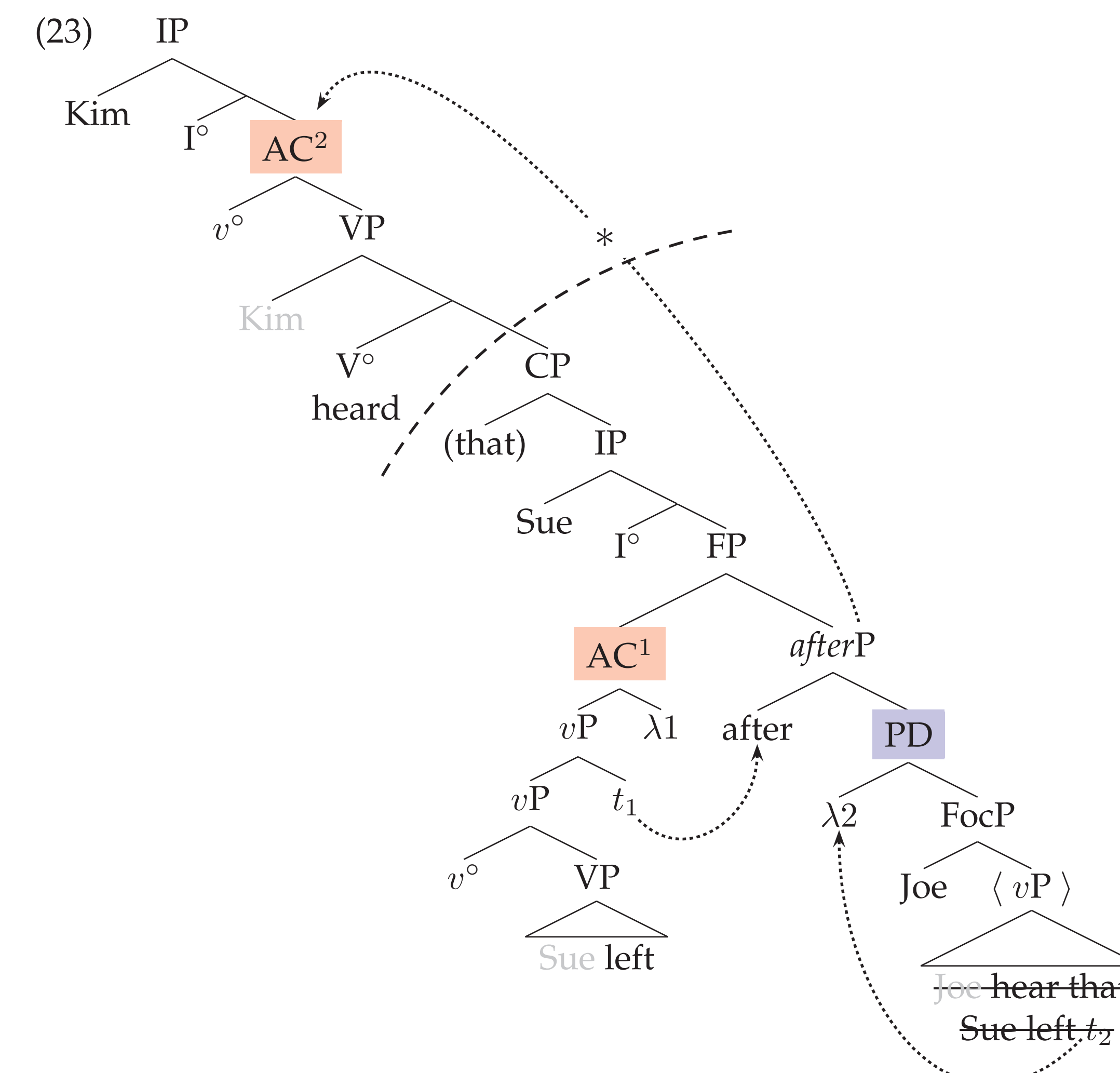
Not ATB-Movement (Johnson 2009). ATB-movement is restricted to coordinations (Postal 1993, but cf. Munn 1992).

Not vP-Parallelism (Toosarvandani 2016). Weakening vP-Parallelism to include TACs weakens it beyond utility.

Not Complementizers (Wurmbrand 2017). The presence of a complementizer (i) does not affect the status of an embedded ellipsis site and (ii) is not relevant for an embedded antecedent site.

6. RE-BINDING AND PARALLELISM

Blocking TAC-Stripping. Embedding results in irreparable Antecedent-Containment (23) or non-Parallel binding (25).



- (24) a. [[AC1]]° = ∃t. Sue left at t
- b. [[PD]]f = { p : ∃t. x hear Sue leave at t | x ∈ De }
- c. [[AC1]]° ∉ [[PD]]f for any g, ellipsis is not licensed
- (26) a. [[AC1]]° = Sue left
- b. [[PD]]f = { p : ∃t. x leave at t | x ∈ De }
- c. [[AC1]]° ∉ [[PD]]f for any g, ellipsis is not licensed

Why Is VPE Not Eliminative? VPE elides a smaller constituent than TAC-Stripping, thus, does not induce re-binding effects. See the handout.

- (27) The photos must be found before the police1 *(do) <xT find them >.

- (28) The recycling should be emptied before the trash1 { should be / *being } <emptied xT >.

Why Can VPE Not Target Phrasal TACs? Focus movement induces re-binding that triggers a MAXELIDE-type effect (e.g., Merchant 2008).