Lecture 10: Auxiliaries.

Andrei Antonenko

LIN 311: Syntax

September 27, 2018

Outline

1. Auxiliaries
   - Tense and Aspect
   - Properties of Auxiliaries
   - Structure of Auxiliaries
   - Subcategorization
   - Negation
2. Affix-hopping

Auxiliaries

Elements in T

- T stands for Tense.
- We have seen already that modals and auxiliaries occupy T.
- What happens if there are several auxiliaries or modals?

(1) Shakespeare should have been writing more.

Tense

- Tense: Relation between the Event time (E) and the Speech time (S).

Tenses

Past: E<S

(2) a. They left yesterday.
b. ____ E ____ S ____

Future: E>S

(3) a. She will swim tomorrow.
b. ____ S ____ E ____

Present: E=S

(4) a. Dan knows Indonesian.
b. ____ S, E ____

Tense

Remark on the present tense in English

- The present tense **in English** is a little more complicated than just assuming E=S.

(5) a. Dan knows Indonesian.
b. John goes to the bar every week.
c. John is going to the bar now.
d. ____ S, E ____

- (5-d) is only true in English for some verbs, (5-a) (stative verbs).
- (5-b) has a habitual meaning.
- (5-c) has added feature that the event has a certain duration.

Marking tense

Marking tense in English

Present: Unmarked, or *-s* for he/she/it.

(6) John knows.

Past: Marked by *-ed* on verb.

(7) John danced.

Future: Marked by will, be going to, gonna.

(8) John will dance.

Aspect

- Aspect: Refers to how a speaker thinks of the event.
- Expresses how the event takes place, not when.

Aspect

- Perfective aspect: defines an event with respect to Reference time (R).
- Perfective aspect indicates that E<R

Past: (9)
a. I had finished it by 5pm.
b. ___ E ___ R (5pm) ___ S ___

Future: (10)
a. She will have finished it by tomorrow.
b. ___ S ___ E ___ R (tomorrow) ___

Present: (11)
a. Dan has seen that movie (by now).
b. ____ E ____ S, R (now) ____

Aspect

- Progressive aspect: Indicates the duration of the event.

Past:	(12)	a.	She was singing.
		b.	__ ~~~~ E~~~~ ____ S ____
Future:	(13)	a.	She will be singing.
		b.	____ S ____ ~~~~ E~~~~ __
Present:	(14)	a.	I am singing right now.
		b.	__ ~~~~ S, E~~~~ __

Aspect

Remark on the present tense in English

(15) a. John goes to the bar every week.
b. John is going to the bar now.

- We saw problems with the present tense in English.
- Sentences above actually have aspect: habitual and progressive!

Marking aspect

Perfective aspect

- Participle: *eaten*, *danced*, *written*
  - It is often called Past Participle, but it is not necessarily "past":

(16) John will have danced.

- Auxiliary *have*:

(17)
a. John has eaten. — present perfective
b. John had eaten. — past perfective
c. John will have eaten. — future perfective

Marking aspect

Progressive aspect

- *-ing* form of the verb: *eating*, *dancing*, *writing*
  - It is often called Present Participle or Gerund.
- Auxiliary *be*:

(18)	a.	John is eating.	present progressive
	b.	John was eating.	past progressive
	c.	John will be eating.	future progressive

Combining aspects

Aspects can be combined

- Perfective and Progressive aspects can be combined.
  - Participle of the verb *to be* — *been*;
  - *-ing* form of the main verb.

(19) a. John has been eating.
b. John had been eating.
c. John will have been eating.

Fixed order

The order is always fixed: Perf > Prog.

(20) a. *John is having eaten.
b. *John was having eaten.
c. *John will be having eaten.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Morphology: Verbal property

- Auxiliaries have verbal morphology:
  - Subject agreement
  - Tense

(21) a. John has finished his novel.
b. John was writing a novel.

(22) John drinks beer.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Order: Verbal property

- Auxiliaries can cooccur with modals and always follow them:

(23) a. Bill must have booked this hotel.
b. Anna should be sleeping now.

(24) John should visit Spain.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Negation: Verbal property

- Auxiliaries can appear after negation:

(25) a. Katy could not have done that.
b. Don should not have paid to his lawyer.

(26) John should not eat sushi.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Negation: Modal property

- Auxiliaries can appear before negation:

(27) a. Ming is not working there anymore.
b. Mike has not told the truth.

(28) John can not swim.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Order: Modal property

- Auxiliaries must cooccur with verbs and must precede them:

(29) a. She is writing a report for NYT.
b. Mike has lied to FBI.

(30) George must plead guilty.

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Questions: Modal property

- Auxiliaries must move to the front of the sentence in questions:

(31) a. Is the world coming to an end?
b. Has she ever talked to you?

(32) Can this tiger attack me?

Properties of auxiliaries *have* and *be*

Verbal and modal properties

Auxiliaries share some properties with verbs and some with modals.

Not a part of VP: Modal property

- Auxiliaries are not a part of VP:

(33) I planned to have played the piano and played the piano I have.

Properties of auxiliaries *have* and *be*

Summary

Verbal properties	Modal properties
Cooccur with and follow modals	Cooccur with and precede verbs
Appear after negation	Appear before negation
Morphology and agreement	—
—	Front in questions
—	Outside of VP

Auxiliary properties
Denote aspect and tense (*will*)
Can be completely meaningless (*do*)
Can cooccur with each other
Occur in fixed order have > be

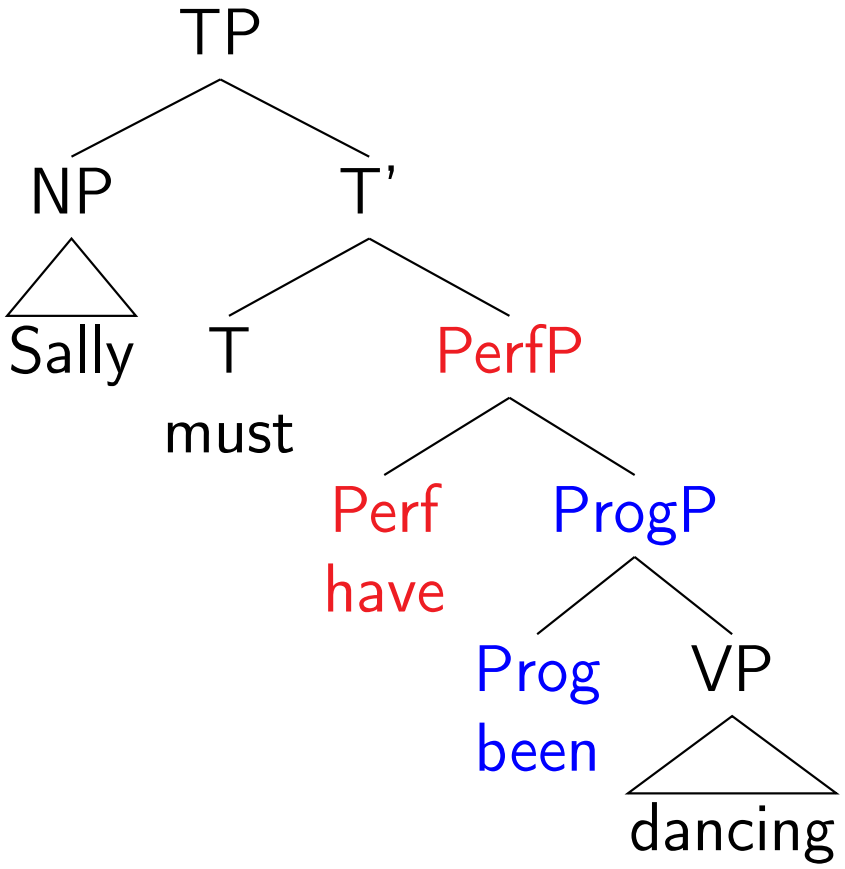
Position of auxiliaries

Auxiliary projections

- Each auxiliary is a head of its own aspectual phrase (projection):
  - have is a head of PerfP.
  - be is a head of ProgP.
  - PerfP > ProgP

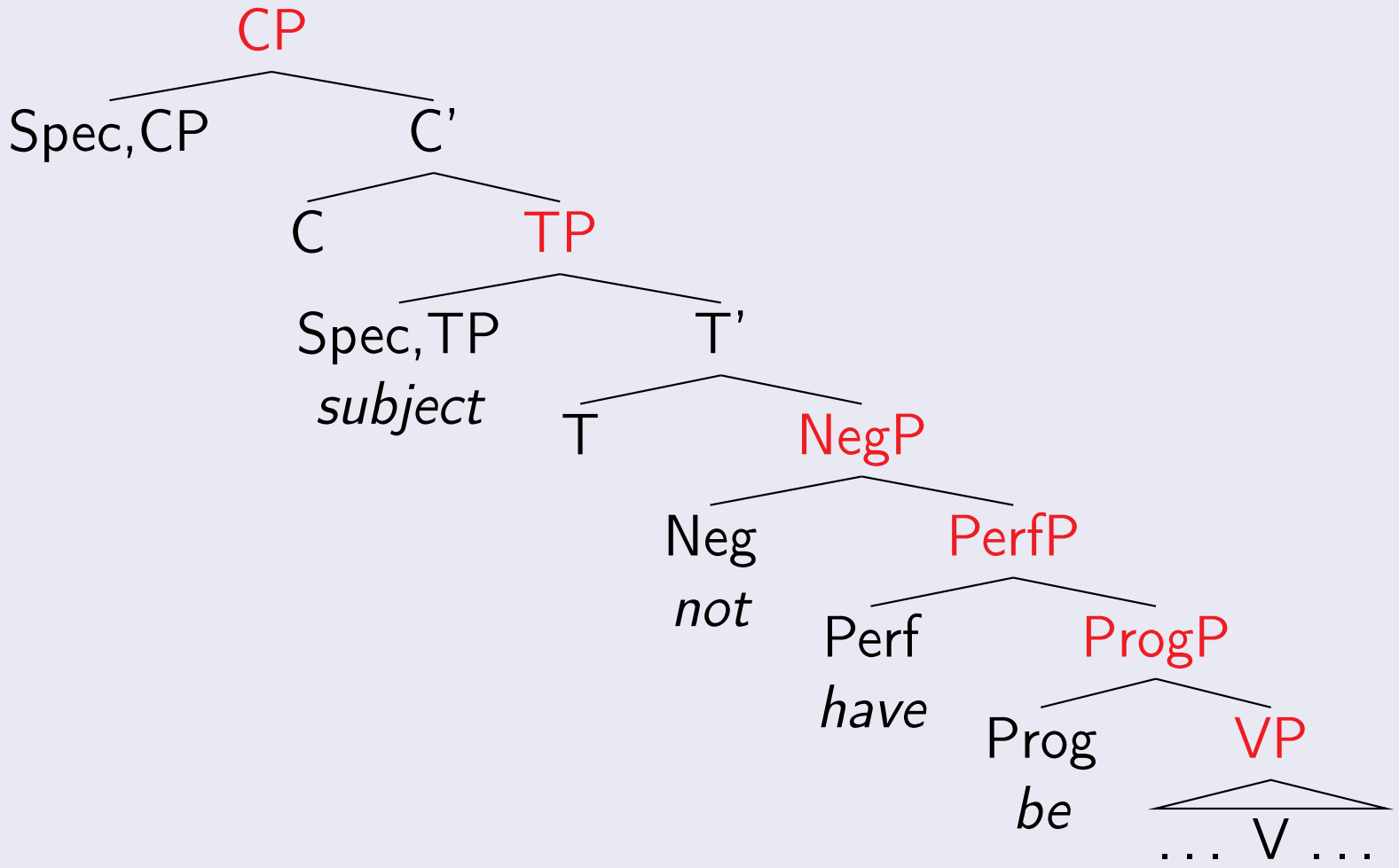
Universal hierarchy

TP > PerfP > ProgP > VP



Universal order of projections

- We have shown that there is a universal order of projections:



Selection

(34) CP > TP > NegP > PerfP > ProgP > VP

- Some of these projections are optional:
  - NegP, PerfP, ProgP: we only use them if we have negation, or perfective or progressive aspect.
- C "cares about" what comes after it. TP is mandatory, so C cares about the type of T (finite or non-finite or ...).
- T "cares about" what comes after it – can be NegP, PerfP, ProgP, or VP.
- Neg "cares about" what comes after it – can be PerfP, ProgP, or VP.
- Perf "cares about" what comes after it – can be ProgP or VP.
- Prog "cares about" what comes after it – and it can only be VP.

Selection

The idea that the head of the projection "cares about" what comes next is formalized as selection or subcategorization.
We say, for example:

- C subcategorizes for T, and
- certain types of C select certain types of T.

Selection

Example

(35) a. Mary arranged for Sue to read the book
b. *Mary arranged for Sue will read the book.

- Complementizer *for* selects non-finite T.
- Complementizer *for* never selects finite T.

Selection

Selection by verbs

But this is not all. Verbs can also select different types of embedded clauses.

Example

(36) a. *Mary believes for Sue to read the book.
b. Mary believes that Sue can read the book.

- Verb *believe* can select CP with complementizer *that* (CP headed by *that*).
- Verb *believe* never selects CP with complementizer *for* (CP headed by *for*).

Selection

Example

(37) a. Mary arranged for Sue to read the book.
b. *Mary arranged that Sue can read the book.

- Verb *arrange* can select CP with complementizer *for* (CP headed by *for*).
- Verb *arrange* never selects CP with complementizer *that* (CP headed by *that*).

Selection

Example

(38) a. Mary wondered if Sue likes beer.
b. *Mary wondered that Sue likes beer.
c. *Mary wondered for Sue to like beer.

- Verb *wonder* can select CP with complementizer *if* (CP headed by *if*).
- Verb *wonder* never selects CP with complementizer *that* (CP headed by *that*).
- Verb *wonder* never selects CP with complementizer *for* (CP headed by *for*).

Selection

Example

(39) a. *Mary eats for Sue to read the book.
b. *Mary eats that Sue can read the book.

- Verb *eat* cannot select any CP: it does not subcategorize for CP.
- Verb *eat* subcategorizes for NP.

Position of negation

Negation

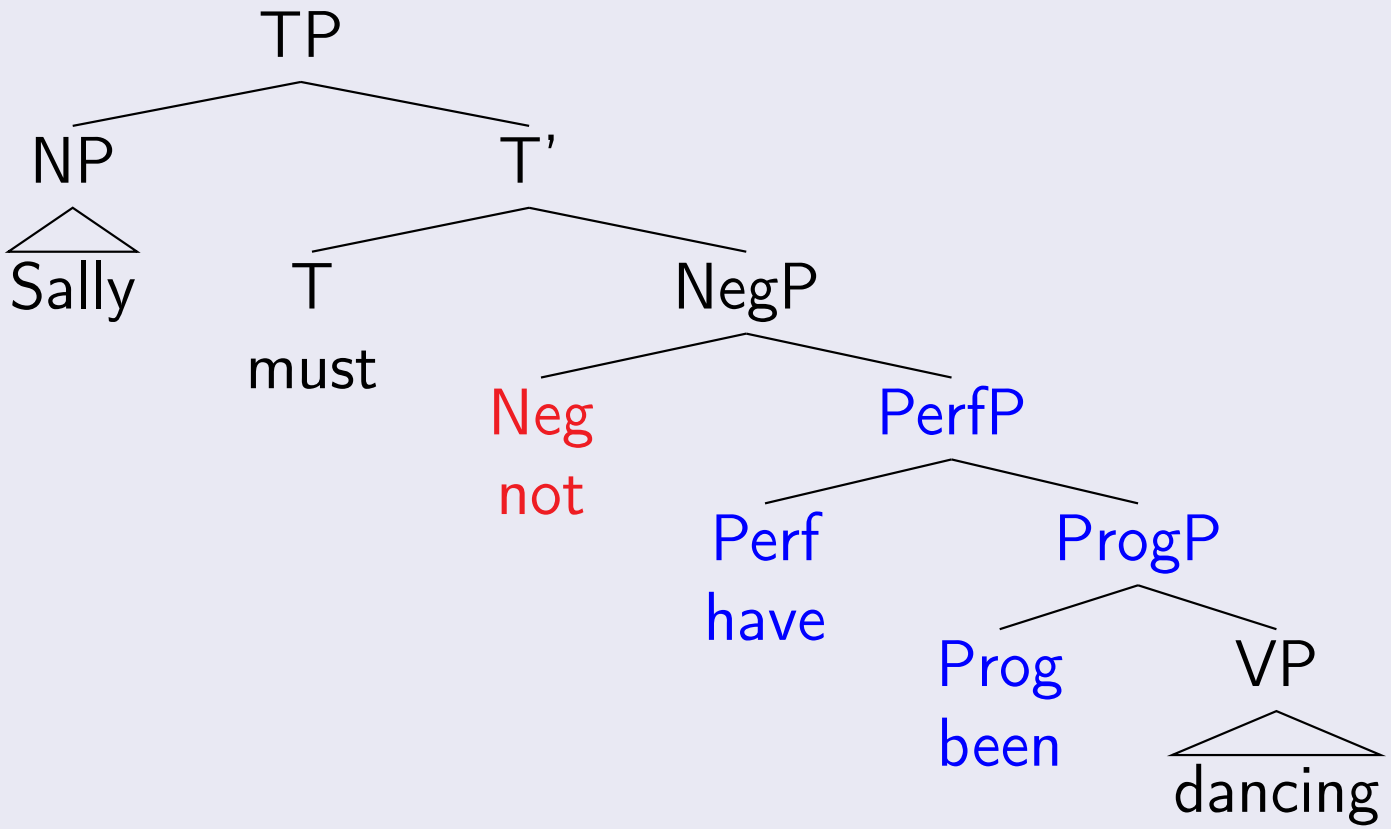
(40)
a. Sally must not have been dancing.
b. Sally has not ___ been dancing.
c. *Sally has been not ___ ____ dancing.
d. *Sally been not has ____ dancing.

Generalizations

- Auxiliaries can precede negation only if there is no modal.
- In this case, only the very first auxiliary precedes negation.
- Otherwise, they follow the negation.

Position of negation

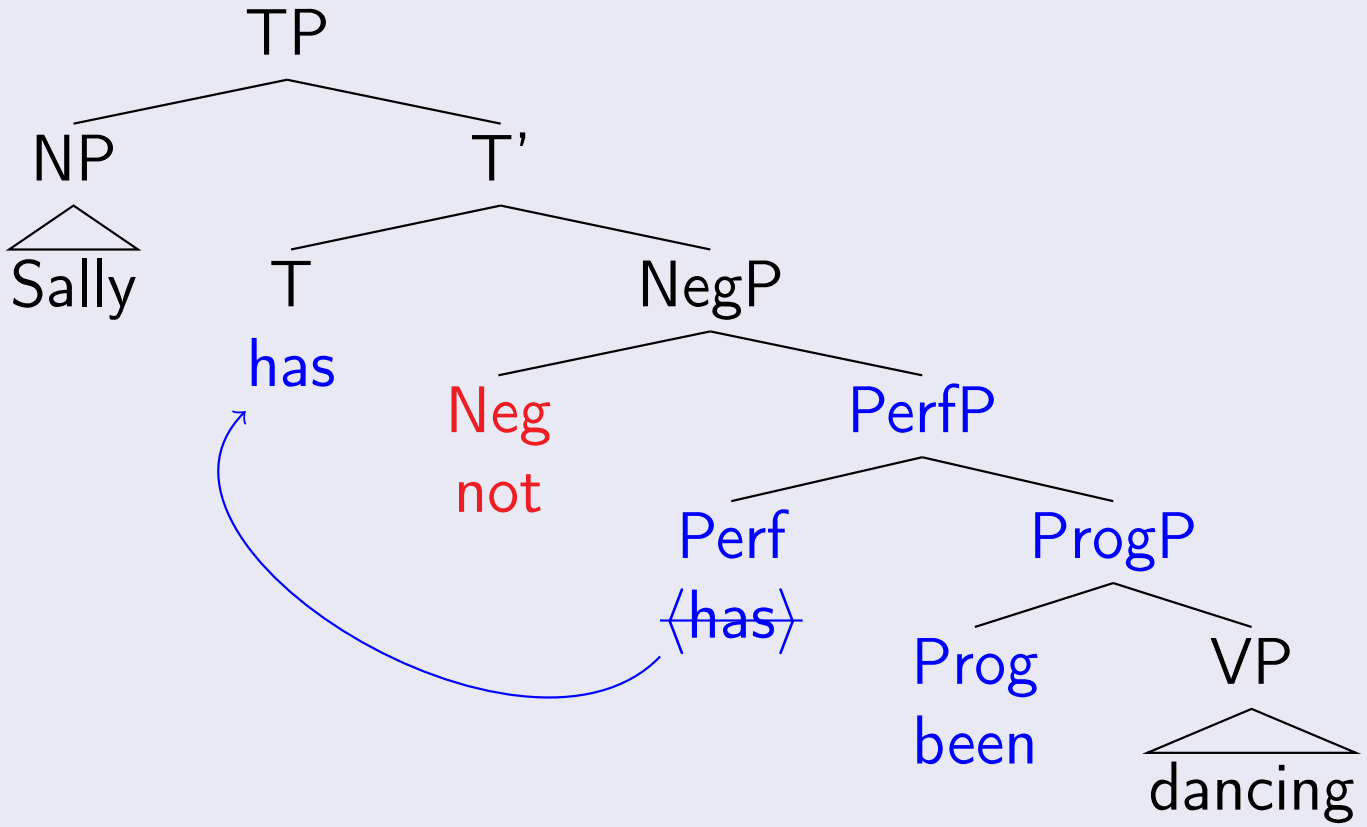
(41) Sally must not have been dancing.



Position of negation

(42) Sally has not been dancing.

Aux-raising: When no modal in T, the highest Aux raises to T.



Affix-hopping

Marking tense and aspect

How do we ensure that all verbs and auxiliaries appear in correct forms?

- have followed by a participle (*-en* form, *eaten*, *danced*);
- be followed by a gerund (*-ing* form, *eating*, *dancing*);
- T[past] followed by a past form (*-ed* form, *ate*, *danced*);
- ...

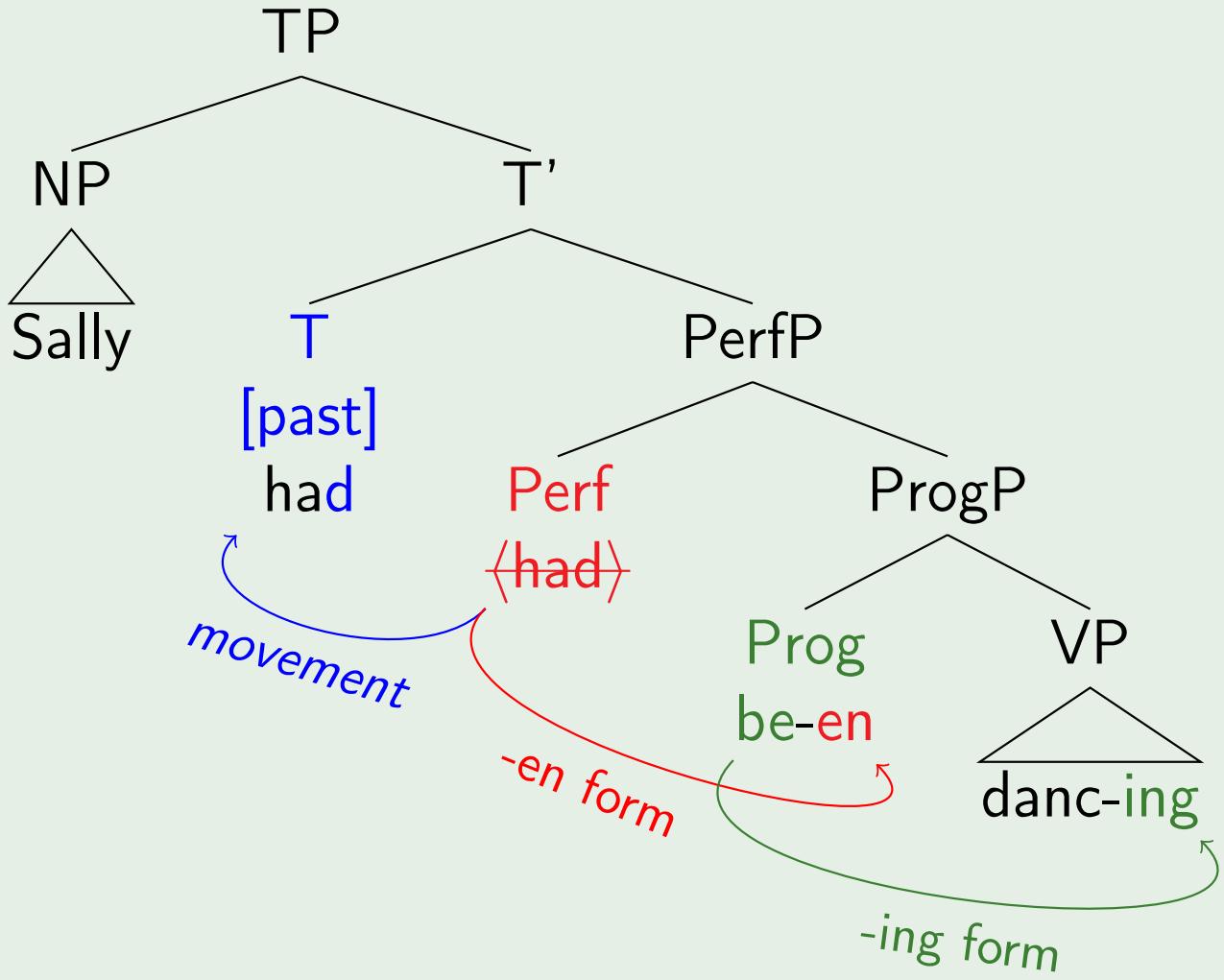
Verbal affixes

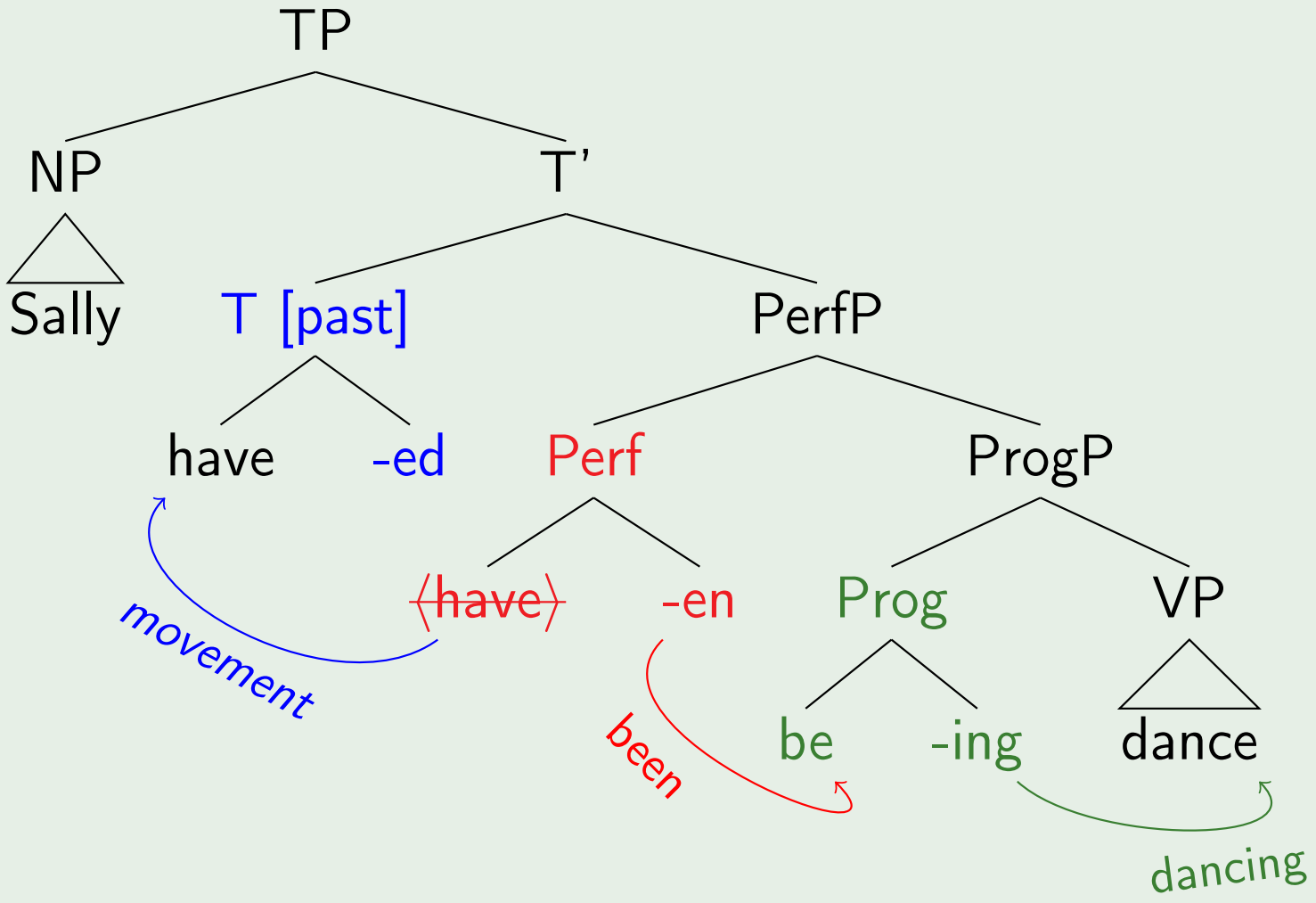
(43) Sally T[past] ha-d be-en danc-ing.

This is known as Affix-hopping: affix belonging to the auxiliary shows up on the verb/aux to its right.

Affix-hopping

(44) Sally had been dancing.



Affix-hopping

(45) Sally had been dancing.