

24.904

Language Acquisition

Class 11: Syntax: Root Infinitives, continued

Last class

- Children’s “telegraphic” speech:
 - ▶ children systematically omit functional elements (determiners, inflectional endings) in their early productions
- We saw some evidence, however, that this might not imply lack of knowledge of the omitted elements:
 - ▶ selective omission: omit *the* but not a made-up function word (*ko*) in same position
 - ▶ knowledge of sophisticated aspects of agreement in comprehension

Today

- Come to a better understanding of why, given all their knowledge, they omit subject-verb agreement markers and other inflectional endings in their productions

One hypothesis

- Omission is rational: children simply don't produce what is communicatively "unnecessary"
 - ▶ assumption: content words have meaning, functional/ grammatical elements don't (or have less), so prioritize expressing the former
- Need to understand a bit more about how exactly the relevant inflectional endings work to rule this out, but...

A quick excursion

- *do*-support in English
 - (1) Mary *(does) not like syntax
 - (2) *(Does) Mary like syntax?
 - (3) Mary likes syntax and Sue *(does) too.
 - (4) Mary thought she would like syntax, and like syntax she *(does).

A quick excursion

- *do*-support in English

(1) Mary (*does) like syntax.

(2) (*Does) Mary be liking syntax?

(3) Mary (*does) not can draw decent trees.

A quick excursion

- **Analysis:** *do* is a “dummy” element that appears when there’s an affix needing a host word.

A quick excursion

- (1) a. A witch did look like it has slippers
 - b. Who did take this off?
 - c. I did wear Bea's helmet (Tim, 2;11, Roeper corpus)

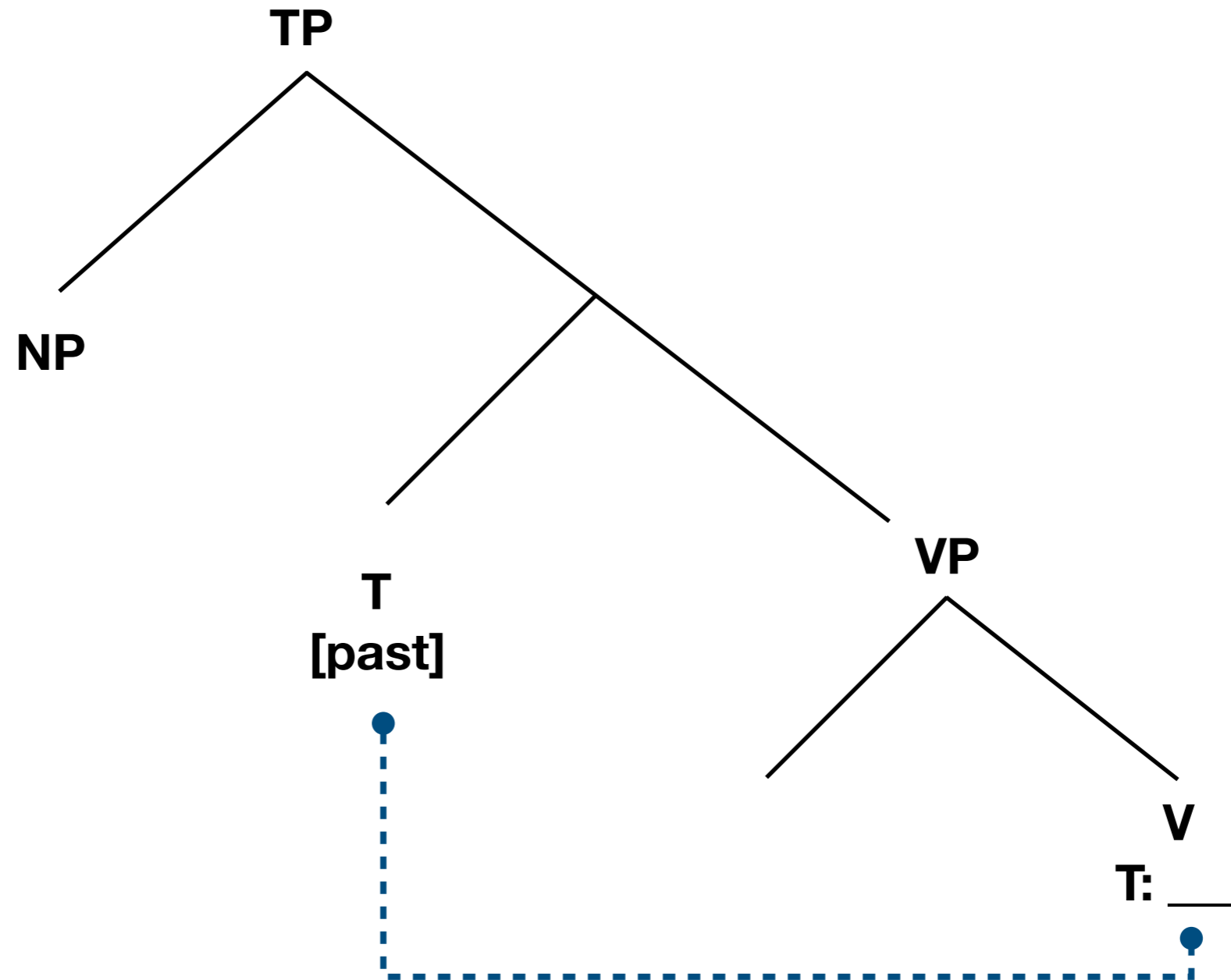
- (2) a. Only Georgia does eat goldfish.
 - b. Mommy does like corn. (Georgia, 2;3, Thornton 2010)

Finiteness

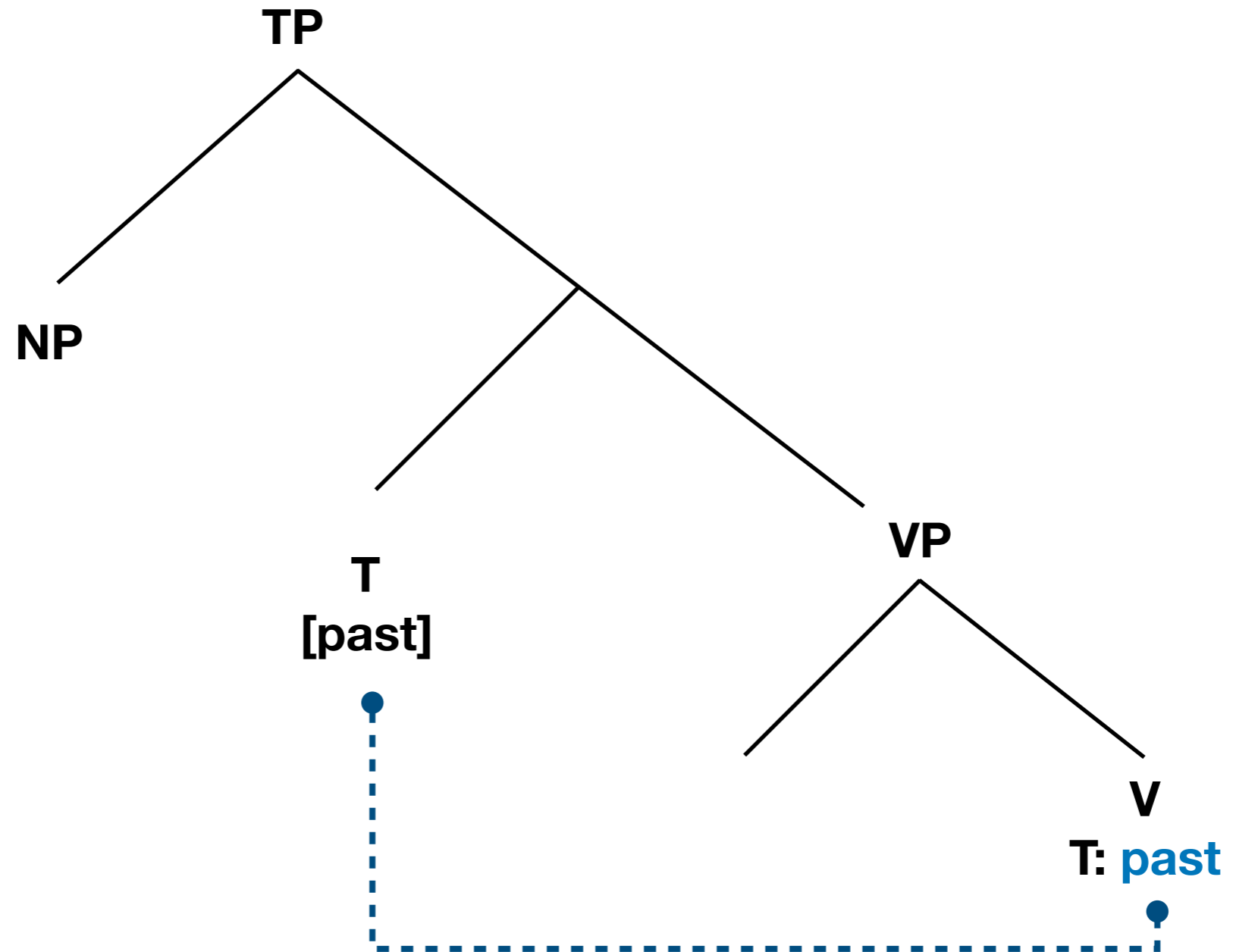
- Property of a clause that has ramifications for the form and behavior of its main verb
- Finite clauses have a positively specified tense (past, present, future)
- A correlate of finiteness: inflectional morphology
 - ▶ Finite verbs express tense features via inflection

(28) a. Martin climbed/will-climb tall mountains.
b. Martin wants to (*will) climb(*ed) tall mountains

The idea



The idea



More correlates of finiteness

- **Verb positioning**

- ▶ Recall:

- (29) a. Marie does **not speak** French
b. Marie ne **parle pas** français

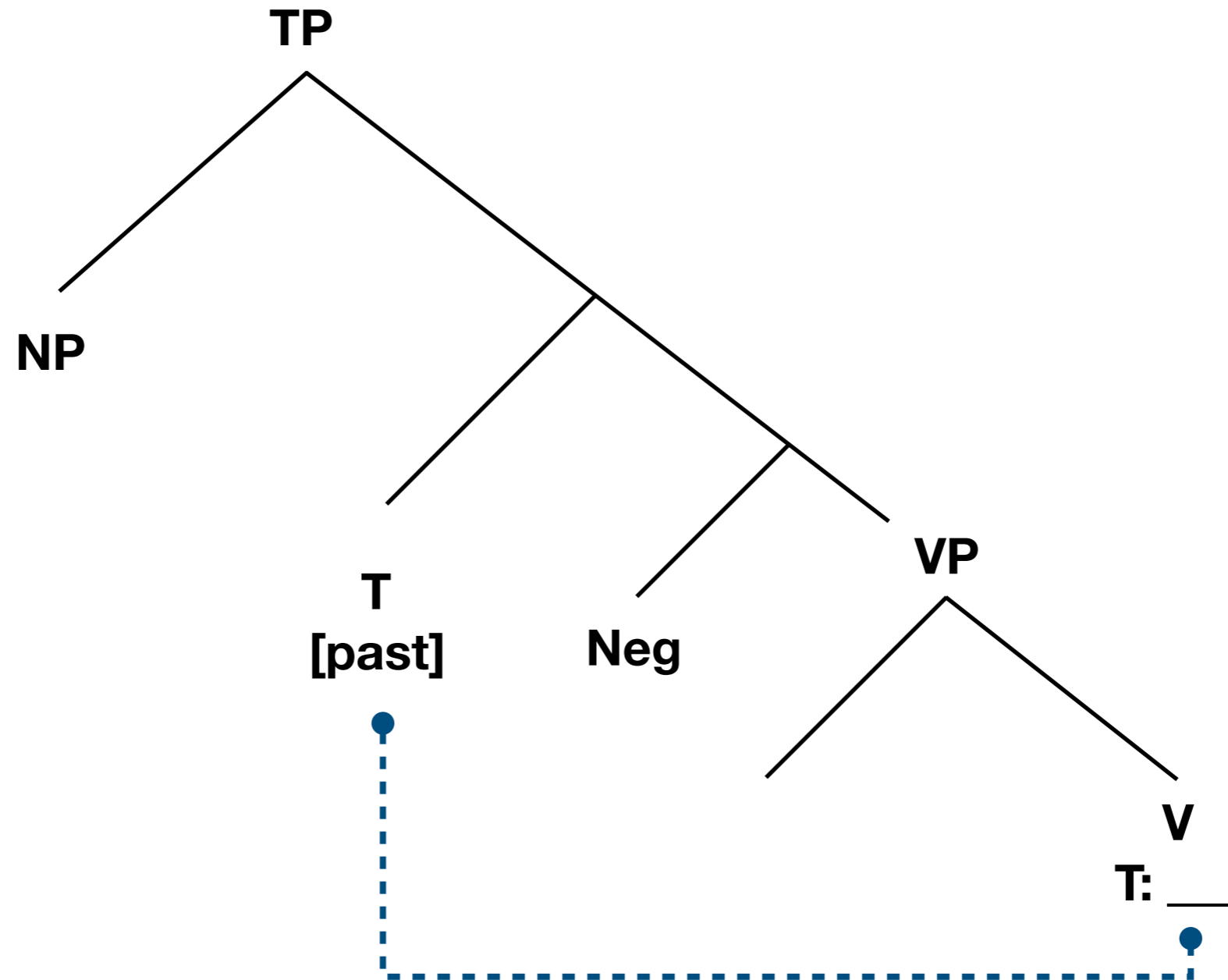
Neg V DO in English
V Neg DO in French

- ▶ But...

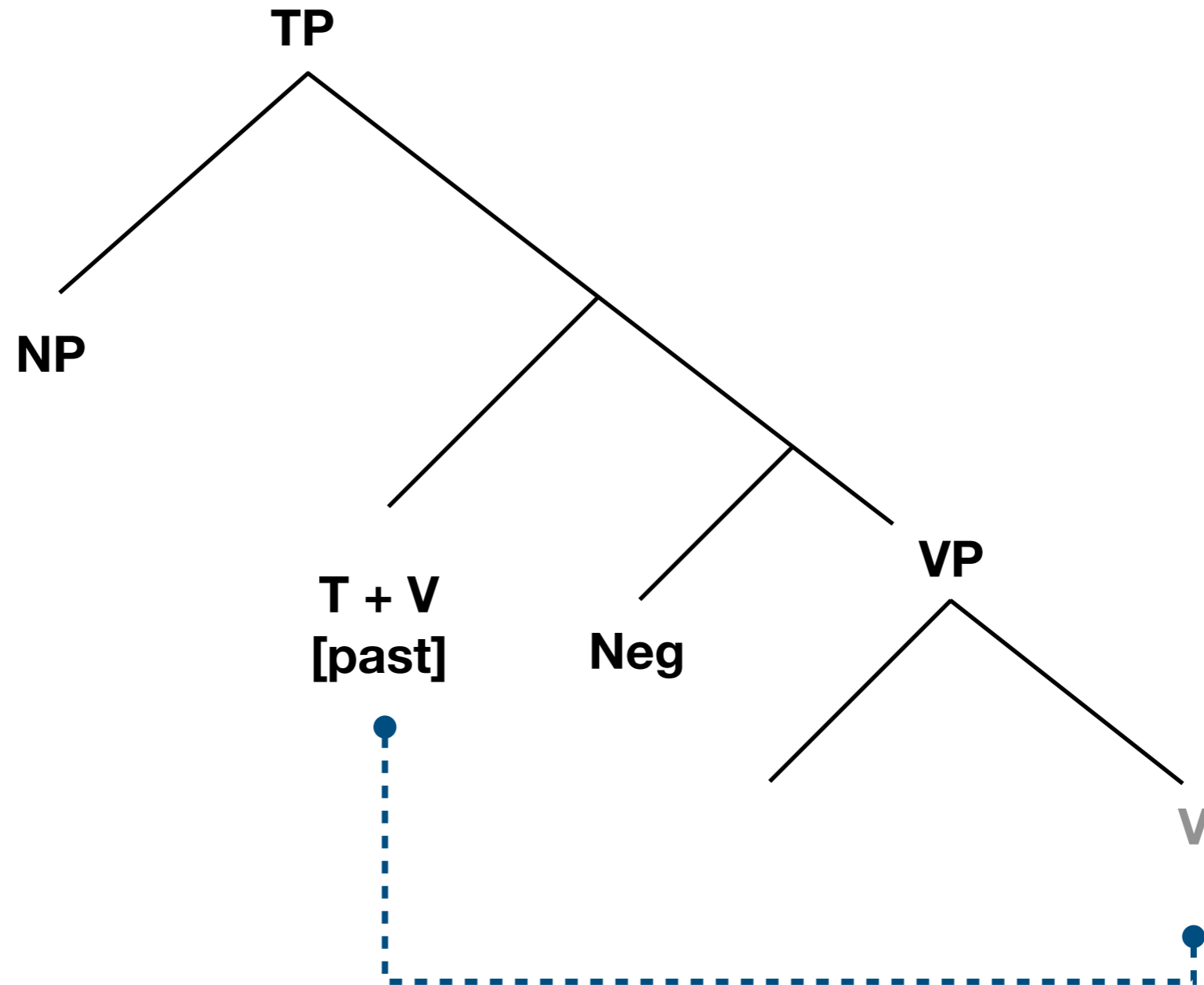
- (30) a. ... to **not speak** French
b. ...ne **pas parler** français

Neg V DO in English
Neg V DO in French

The idea



The idea



More correlates of finiteness

- **Case marking on subjects**

- ▶ An NP may surface in different forms in different structural positions even when it refers to the same thing

(31) a. **He** saw Sabine.
b. Sabine saw **him**.

(32) a. Martin Sabine-e kaNDu
 Martin.NOM Sabine-ACC saw
b. Sabine Martin-e kaNDu
 Sabine.NOM Martin-ACC saw

More correlates of finiteness

- **Case marking on subjects**

- ▶ Pretty good, but wrong, hypothesis: subjects bear Nominative form/ending, objects bear Accusative form/ending

(33) a. **He** climbed tall mountains.

b. She wanted ***he/him** to climb tall mountains.

More correlates of finiteness

- **Case marking on subjects**
 - ◎ Generalization: presence of Nominative case correlates with *finiteness*.
 - ◎ Conjecture: the thing that makes a sentence finite, i.e. Tense feature specification, is responsible for Nominative case on the subject.

More correlates of finiteness

- **Subject-verb agreement**

- ▶ Only finite verbs show SV agreement
- ▶ Non-finite verbs cannot bear agreement morphology

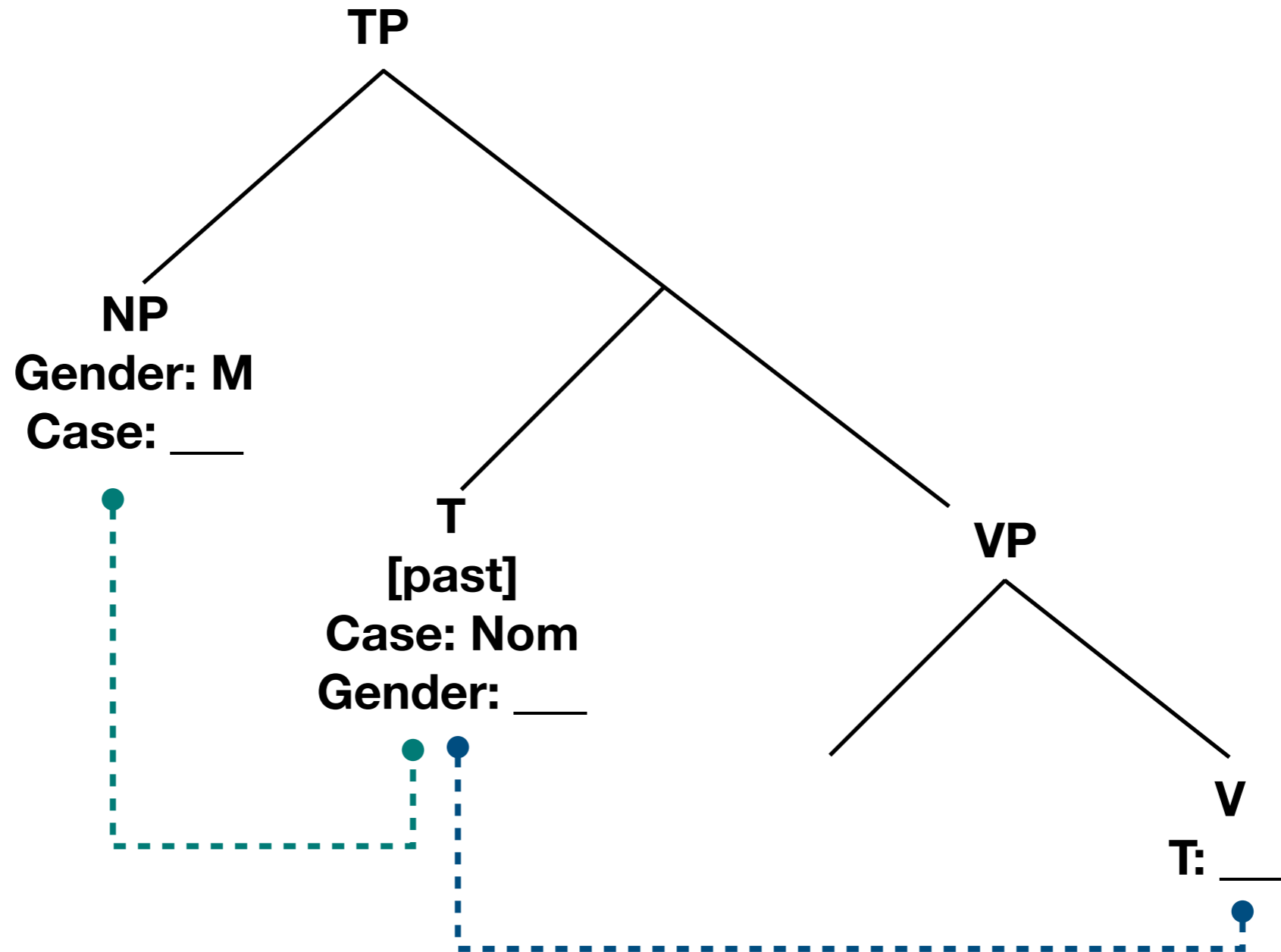
- (31) a. Gianni lo mangia
Gianni it eat.3Sg
- b. Gianni lo vuole mangiar/*mangia
Gianni it wants eat.Inf/*eat.3Sg

The fuller picture now...

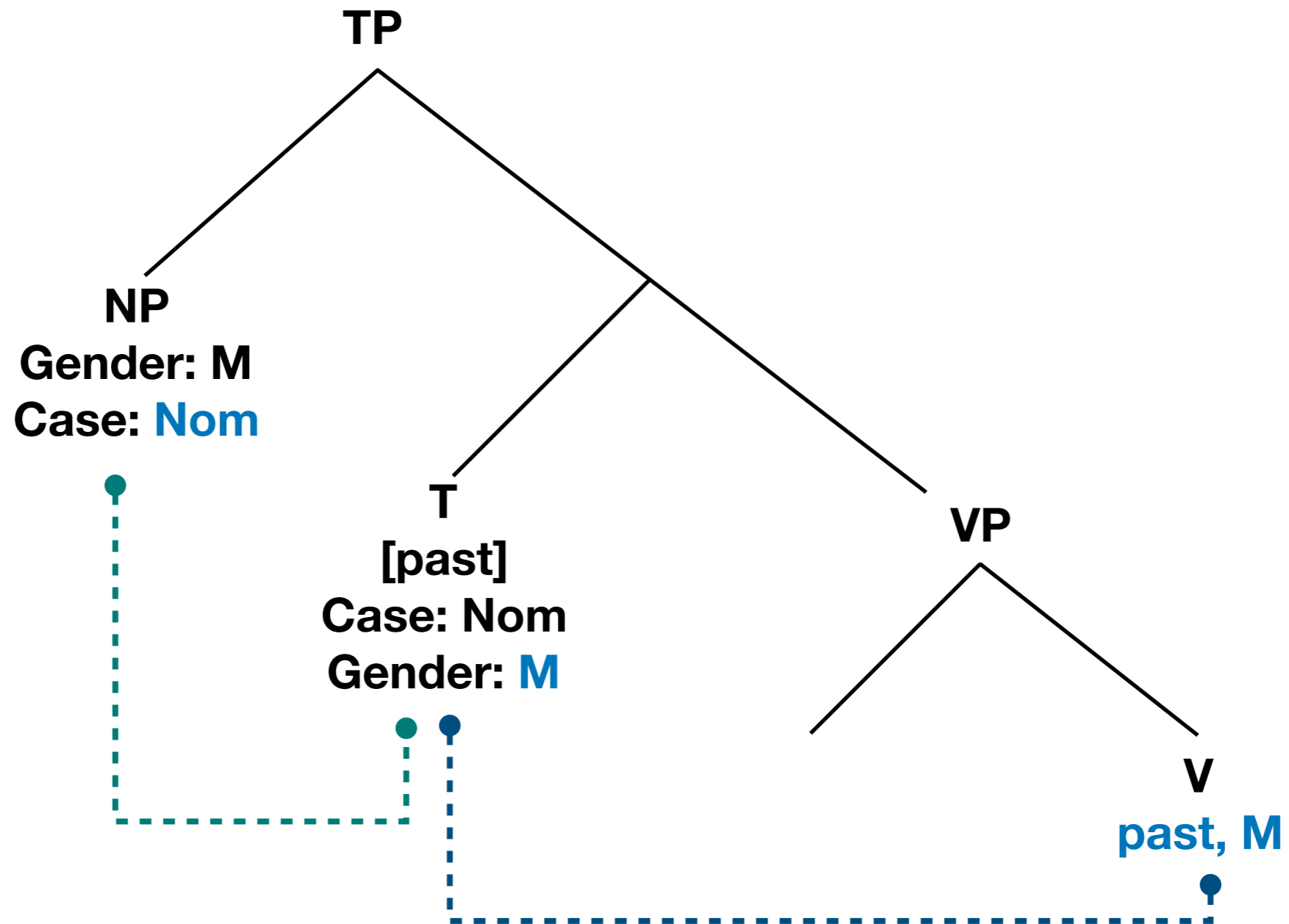
A series of dependencies:

- **Tense → verb:** tense features appear on the verb, verb merges w/ tense
- **Tense → subject:** finite tense responsible for Nominative case
- **Subject → verb:** properties of the subject shows up on the verb...
...but only when the verb is finite
- **Missing link:** subject → tense

The fuller picture now...



The fuller picture now...



Main clauses are finite!

- Basic distributional difference between finite vs. non-finite/infinitival verbs:
 - ▶ Finite verbs can function as main verbs of a standalone sentence; non-finite verbs cannot
 - ▶ Non-finite verbs must combine with *to* + higher finite verb

(32) *Martin climb/to climb tall mountains.

Eve talk funny

- i. Papa have it (Eve 1;6)
- ii. Marie go. (Sarah 2;3)
- iii. Doggy bite (Adam 2;4)
- iv. Baby doll ride truck (Allison 1;10)
- v. Pig say oink (Claire 2;1)

Generalization: main clause non-finite utterances

Optionality

- Same transcript, Eve 2;1
 - i. Papa go put my jammies on
Noel wears jammies when he take a nap
 - ii. It a lady
That's a man
 - iii. This one better
Someone's in the kitchen with Dinah

The puzzle

- The errors are unmotivated
- Children fail at making certain generalizations even when their input is rife with the necessary evidence

The cross-linguistic picture

i. **German**

*Du das hab-en. (Andreas, 2;1)
you that have-infin

ii. **French**

*Dorm-ir petit bébé. (Daniel, 1;11)
Sleep-infin little baby

iii. **Danish**

*Hun sove (Jens, 2;0)
She sleeps.infin

iv. **Dutch**

*Earst kleine boekje lez-en (Hein, 2;6)
First little book read-infin

The cross-linguistic picture

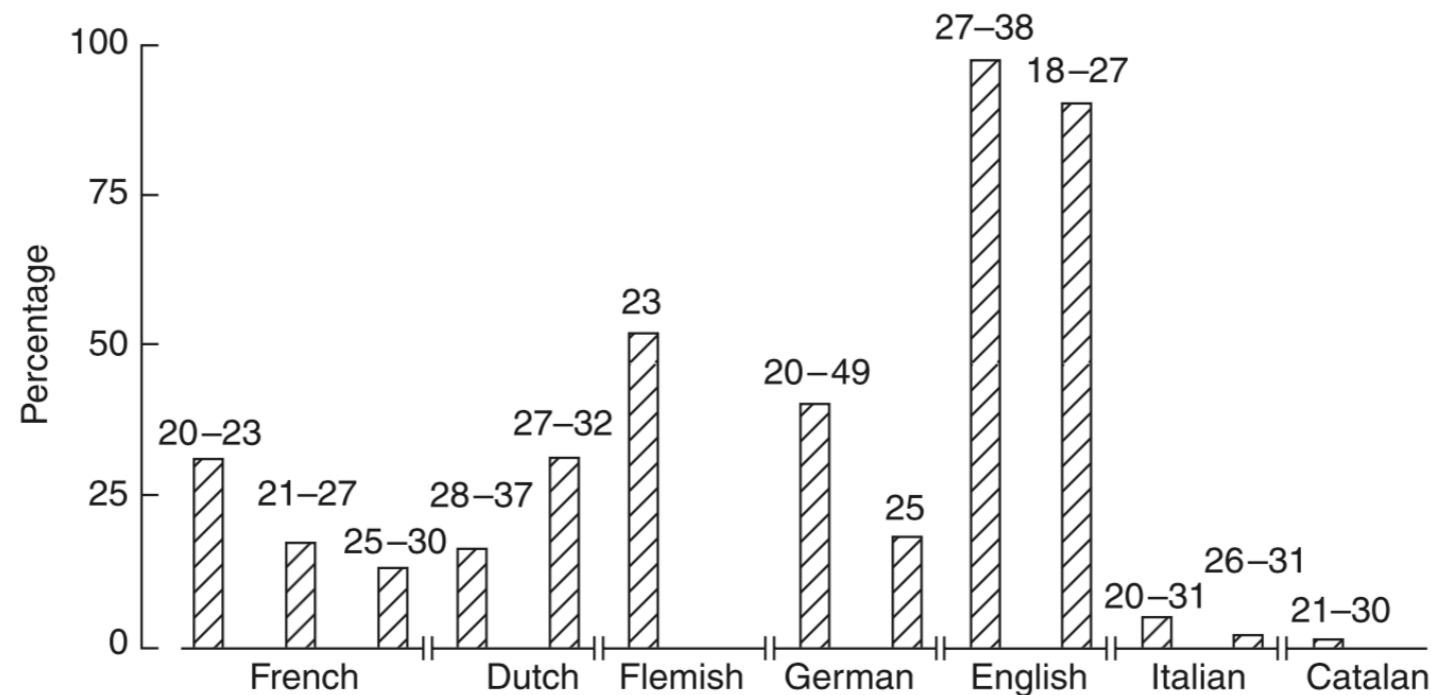


Figure 4.1

Percentage of root infinitives (RI) in early languages. Each bar shows the overall percentage of RIs produced by a single child in the age range (given in months) indicated above the bar. Data taken from Rasetti 2000 (French: Daniel, Nathalie, Philippe); Haegeman 1995b (Dutch: Hein); Phillips 1995, crediting Krämer 1993 (Dutch: Thomas; Flemish: Maarten); Phillips 1995, crediting Beherens 1993 (German: Simone); Poeppel and Wexler 1993 (German: Andreas; English: Eve, Sarah); Guasti 1993/1994 (Italian: Martina, Guglielmo); Torrens 1995 (Catalan: Guillem).

Root Infinitive Stage

- Although ungrammatical in the target language, main clause infinitives are common in child speech cross-linguistically
- Co-occur with inflected forms
- Children get out of this stage by ~age 3, after which point they consistently produce inflected forms

The puzzle deepens

- Experience-independent, to a degree
 - ▶ widespread across unrelated languages
 - ▶ inconsistent in fundamental ways w/ input
 - ▶ reliably over by ~3 despite no marked change in input
- Experience-dependent, to a degree
 - ▶ not all languages
 - ▶ some property of the target language must trigger/
preclude the possibility of root infinitives

Maturation

- The idea that root infinitives develop on a **maturational schedule** is a widely held view
 - ▶ i.e. it might have something to do with the biological course of acquisition as opposed to learning (cf. baby teeth, puberty, walk- ing)
- The goal in an explanation of (a) why root infinitives occur, and (b) why they only occur in certain languages, is to pinpoint the exact thing that is maturing, such that the difference only has an effect in the languages that show root infinitives.

Sophistication in the errors

Verb placement in French

Table 4.2

Finiteness versus verb placement with respect to the negation in the speech of three French learners. Data from Philippe, Nathalie, and Daniel (age range 1;8–2;3).

	+Finite	–Finite
Verb-Neg	173	2
Neg-Verb	9	122

Source: Based on Pierce 1992b

$\chi^2 = 263.02, p < .001$

© MIT Press. All rights reserved. This content is excluded from our Creative Commons license. For more information, see <https://ocw.mit.edu/help/faq-fair-use/>.

- Replicated in French (Rasetti 2003), German and Dutch (Weissenborn 1990, Poeppel and Wexler 1993)

Sophistication in the errors

Verb placement in V2 languages

- In adult Dutch and German matrix clauses, finite verbs appear in second position in the clause, whereas infinitival verbs appear clause-finally

- (1) a. Simone braucht das.
Simone needs that
'Simone needs that.'
- b. Simone wird das lesen.
Simone will that read-inf
'Simone will read that.'

Sophistication in the errors

Verb placement in V2 languages

- Child learners of these languages who are in the RI stage reserve second position for finite verbs and final position for infinitives

Table 4.3

Finiteness versus verb placement in the speech of a German learner. Data from Andreas (age 2;1).

	+Finite	–Finite
V2	197	6
Verb-final	11	37

Source: Based on Poeppel and Wexler 1993

$\chi^2 = 150.25, p < .001$

Restating the puzzle

- Kids optionally produce non-finite main clauses
- That do so at a time when they know:
 - ▶ the relevant inflectional forms
 - ▶ the relevant distinctions between finite and non-finite clauses
- What do these errors follow from?
 - ▶ We'll look at two proposals, though the puzzle, from my assessment, is an open one.

The truncation model (Rizzi 1993/1994)

- Sentences in which the verb is not tensed might be sentences where TP is missing in the child's structure.
- Adult root clauses are always CPs. Children's structures can be as complex as adult structures, but children sometimes just stop early. They may "truncate" the structure at the VP. Or at TP. Or at CP.
- The truncation mechanism is crucially **monotonic**. So: no omission of TP while projecting CP.

Explaining RI patterns on the truncation model

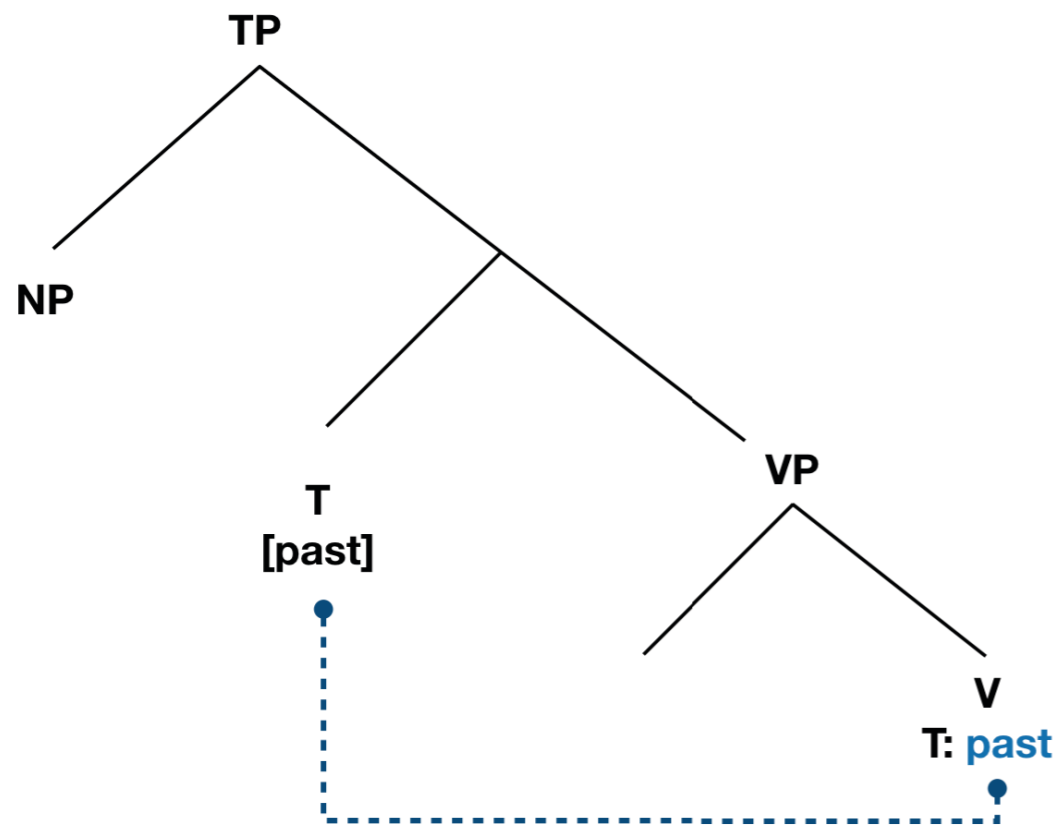
- The obvious: if TP is missing, then no T-relevant information (Tense, S-V-Agreement) will be present
- Verb movement: If TP is missing in root infinitives, this explains why the children's nonfinite verbs do not move to T — there is no place for them to move to.
- V2-related facts: If TP is missing, so is CP, the position to which verbs move in a V2-language. Consequently, in a root infinitive sentence, V2 cannot obtain because the landing site is missing.

Explaining RI patterns on the truncation model

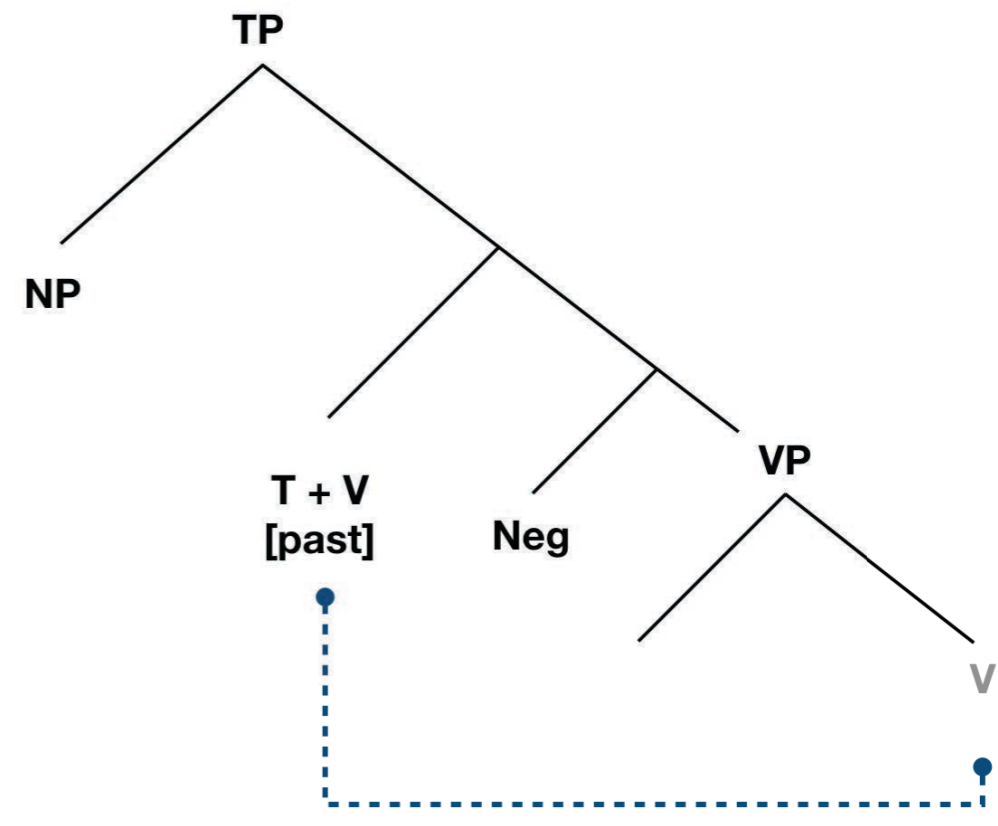
- What characterizes non-RI languages?

Explaining RI patterns on the truncation model

- Recall...



English-type



French-type

Explaining RI patterns on the truncation model

- What characterizes non-RI languages?
 - ▶ In non-RI languages, both finite and non-finite verbs are such that they must move to T.
 - in Italian, e.g., both finite and non-finite verbs undergo movement to T
 - ▶ The result is that there is no way to create a grammatical structure that lacks a TP, even in child grammar where root clauses need not be CPs.

Further predictions of truncation

- No RIs in subordinate clauses (e.g. They said that [Martin climb the mountain])
 - ▶ not enough evidence to tell...
- No RIs in *wh*-questions
 - ▶ Borne out in some languages
 - ▶ A complication: English children puzzlingly produce questions (Bromberg & Wexler 1995)

(1) Where train go? (Adam, 2;4)

Haegeman 1995 for Dutch
Crisba 1992 for French

Assessment

- How does this account fare in so far as explaining RI?
- **Next up:** some patterns that the truncation model does not straightforwardly capture

MIT OpenCourseWare

<https://ocw.mit.edu>

24.904 Language Acquisition, Spring 2022

For more information about citing these materials or our Terms of Use, visit <https://ocw.mit.edu/terms>.