

Ling 566  
Oct 16, 2014  
Binding Theory, Imperatives

# Overview

- Review of Ch 1 informal binding theory
- What we already have that's useful
- What we add in Ch 7 (ARG-ST, ARP)
- Formalized Binding Theory
- Binding and PPs
- Examples
- Imperatives
- Reading questions

# *Some Examples from Chapter 1*

- *She likes herself*
- *\*She<sub>j</sub> likes her<sub>i</sub>.*
- *We gave presents to ourselves.*
- *\*We gave presents to us.*
- *We gave ourselves presents*
- *\*We gave us presents.*
- *\*Leslie told us about us.*
- *Leslie told us about ourselves.*
- *\*Leslie told ourselves about us.*
- *\*Leslie told ourselves about ourselves.*

# The Chapter 1 Binding Theory Reformulated

- Old Formulation:
  - A reflexive pronoun must be an argument of a verb that has another preceding argument with the same reference.
  - A nonreflexive pronoun cannot appear as an argument of a verb that has a preceding coreferential argument.
- New Formulation:
  - Principle A (version I): A reflexive pronoun must be bound by a preceding argument of the same verb.
  - Principle B (version I): A nonreflexive pronoun may not be bound by a preceding argument of the same verb.

# Some Challenges

- Replace notions of “bound” and “preceding argument of the same verb” by notions definable in our theory.
- Generalize the Binding Principles to get better coverage.

# A Question

- What would be a natural way to formalize the notion of “bound” in our theory?
- Answer: Two expressions are bound if they have the same INDEX value (“are coindexed”).

# Two More Questions

- Where in our theory do we have information about a verb's arguments?
- **Answer:** In the verb's **VALENCE** features.
- What determines the linear ordering of a verb's arguments in a sentence?
- **Answer:** The interaction of the grammar rules and the ordering of elements in the **COMPS** list.

# The Argument Realization Principle

- For Binding Theory, we need a single list with both subject and complements.
- We introduce a feature ARG-ST, with the following property (to be revised later):

$$\left[ \begin{array}{l} \text{SYN} \\ \text{ARG-ST} \end{array} \left[ \begin{array}{l} \text{VAL} \\ \boxed{A} \oplus \boxed{B} \end{array} \left[ \begin{array}{l} \text{SPR} \\ \text{COMPS} \end{array} \left[ \begin{array}{l} \boxed{A} \\ \boxed{B} \end{array} \right] \right] \right] \right]$$

- This is a constraint on the type word



# Notes on ARG-ST

- It's neither in SYN nor SEM.
- It only appears on lexical heads (not appropriate for type *phrase*)
- No principle stipulates identity between ARG-STs.

# Two Bits of Technical Machinery

- Definition: If *A* precedes *B* on some ARG-ST list, then *A* **outranks** *B*.
- Elements that must be anaphoric -- that is, that require an antecedent -- are lexically marked [**MODE ana**]. These include reflexive pronouns and reciprocals.

# The Binding Principles

- Principle A: A [MODE ana] element must be outranked by a coindexed element.
- Principle B: A [MODE ref] element must not be outranked by a coindexed element.

# Pronoun-Antecedent Agreement

- The Binding Principles by themselves don't block:
  - \* *I amused yourself.*
  - \* *He amused themselves.*
  - \* *She amused himself.*
- Coindexed NPs refer to the same entity, and AGR features generally correlate with properties of the referent.
- The Anaphoric Agreement Principle (AAP):  
Coindexed NPs agree.

# Binding in PPs

- What do the Binding Principles predict about the following?

*I brought a book with me.*

*\*I brought a book with myself.*

*\*I mailed a book to me.*

*I mailed a book to myself.*

# Two Types of Prepositions: the Intuition

- “Argument-marking”: Function like case-markers in other languages, indicating the roles of NP referents in the situation denoted by the verb.
- “Predicative”: Introduce their own predication.

# Two Types of Prepositions: a Formalization

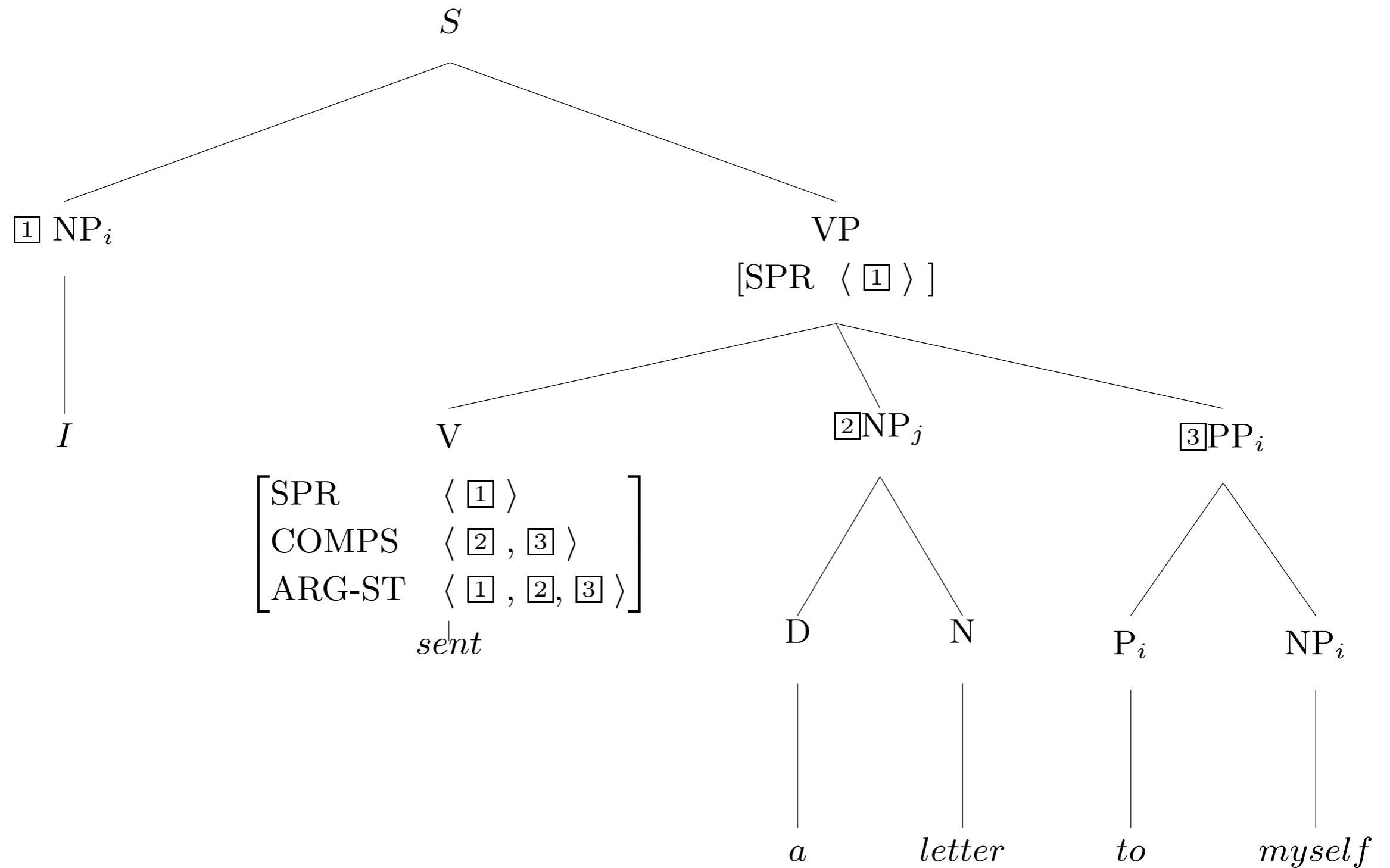
- Argument-marking prepositions share their objects' **MODE** and **INDEX** values.
  - This is done with tagging in the lexical entries of such prepositions.
  - These features are also shared with the PP node, by the Semantic Inheritance Principle.
- Predicative prepositions introduce their own **MODE** and **INDEX** values.

# Redefining Rank

- If there is an ARG-ST list on which  $A$  precedes  $B$ , then  $A$  outranks  $B$ .
- If a node is coindexed with its daughter, they are of equal rank -- that is, they outrank the same nodes and are outranked by the same nodes.



# An Example

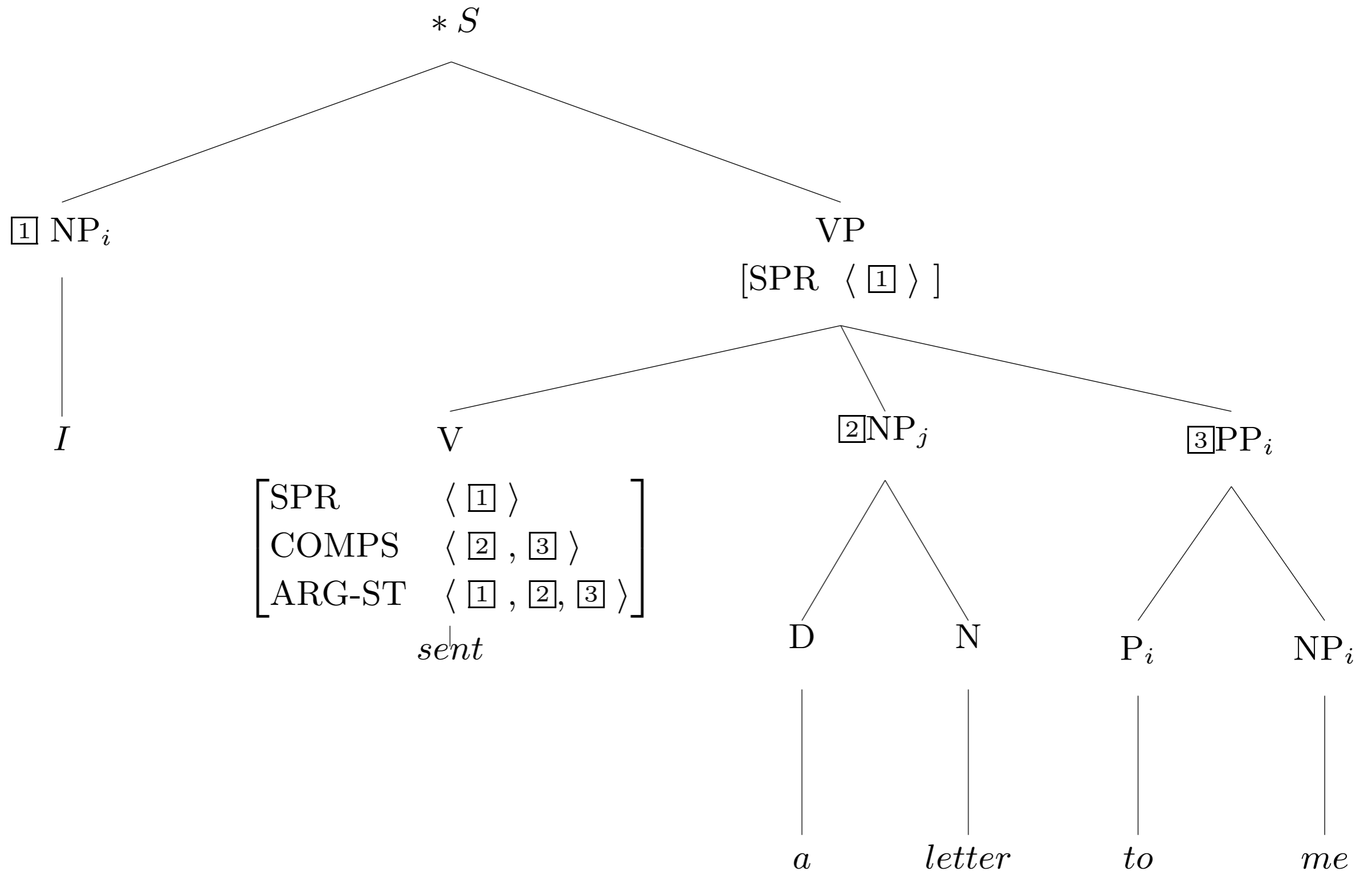


# The ARG-ST

$$\left[ \text{ARG-ST} \left\langle \left[ \text{MODE ref} \right]^{NP_i}, \left[ \text{MODE ref} \right]^{NP_j}, \left[ \text{MODE ana} \right]^{PP_i} \right\rangle \right]$$

- The PP is outranked by the first NP. (Why?)
- *myself* has the same rank as the PP. (Why?)
- So, *myself* is outranked by the first NP. (Why?)
- Therefore, Principle A is satisfied.

# Replacing *myself* with *me*

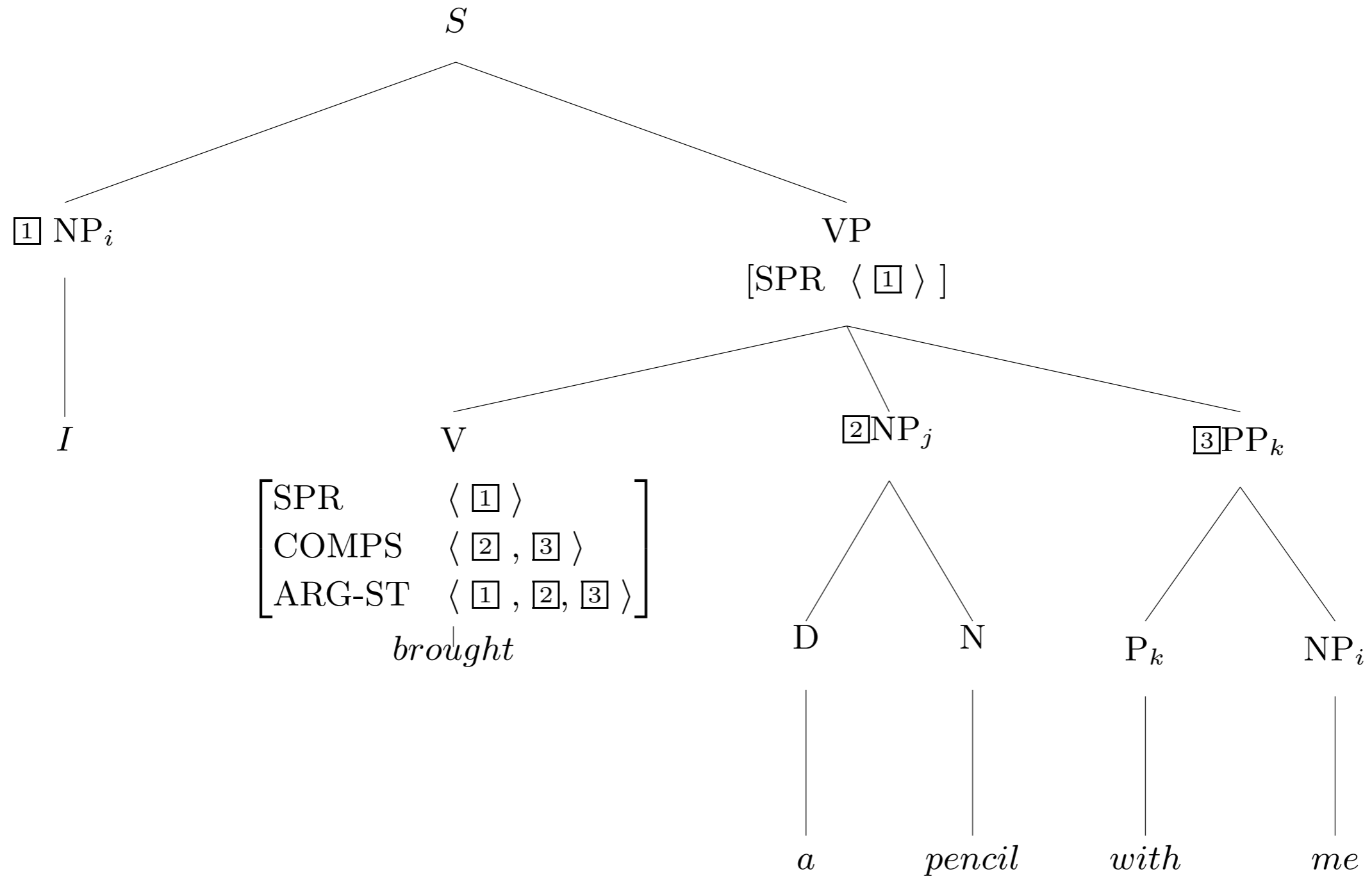


# The ARG-ST

$$\left[ \text{ARG-ST} \left\langle \begin{array}{c} \text{NP}_i \\ \left[ \text{MODE ref} \right] \end{array}, \begin{array}{c} \text{NP}_j \\ \left[ \text{MODE ref} \right] \end{array}, \begin{array}{c} \text{PP}_i \\ \left[ \text{MODE ref} \right] \end{array} \right\rangle \right]$$

- The PP is outranked by the first NP.
- *me* has the same rank as the PP.
- So, *me* is outranked by the first NP.
- Therefore, Principle B is violated.

# Another Example



- Here *I* does not outrank *me*, so Principle B is satisfied.



# Imperatives

- Have the internal structure of a VP

*Leave!*

*Read a book!*

*Give the dog a treat!*

*Put the ice cream in the freezer!*

- Function as *directives*

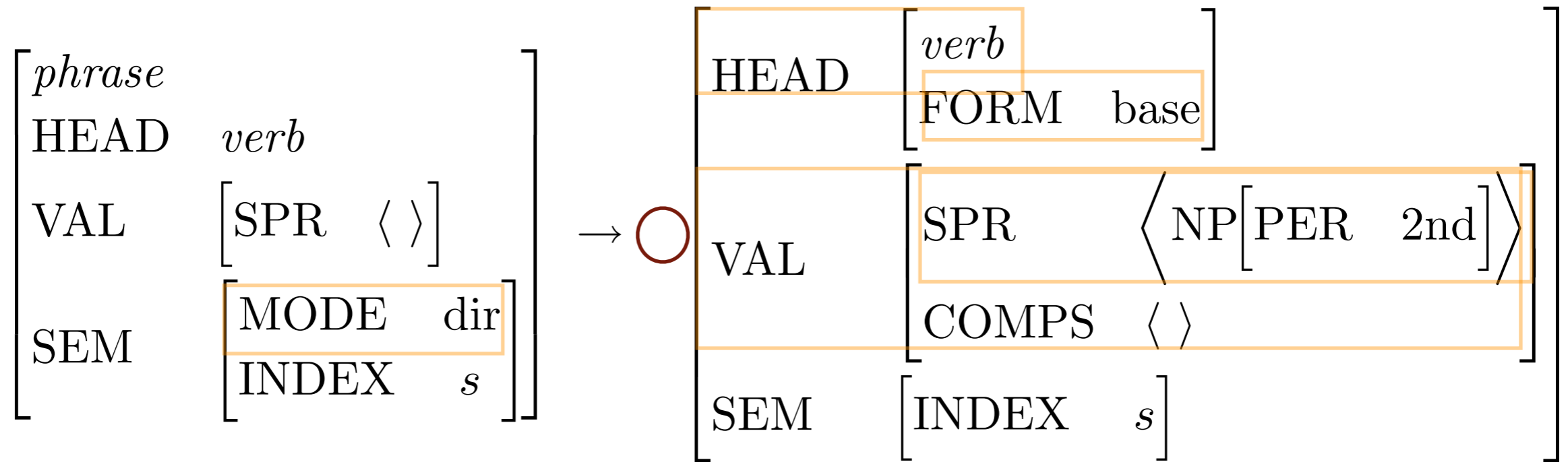
- Have the verb in base form

*Be careful!* not *\*Are careful!*

- Allow 2nd person reflexives, and no others

*Defend yourself!* vs. *\*Defend myself/himself!*

# The Imperative Rule



- Internal structure of a VP
- Directive function
- Base form
- Only 2nd person reflexives
- Note that this is not a headed rule. Why?
- Answer: It would violate the HFP and the SIP.



# Imperative example (Combining constraints again)

What's the SPR value on S?

Why?

What's the SPR value on VP?

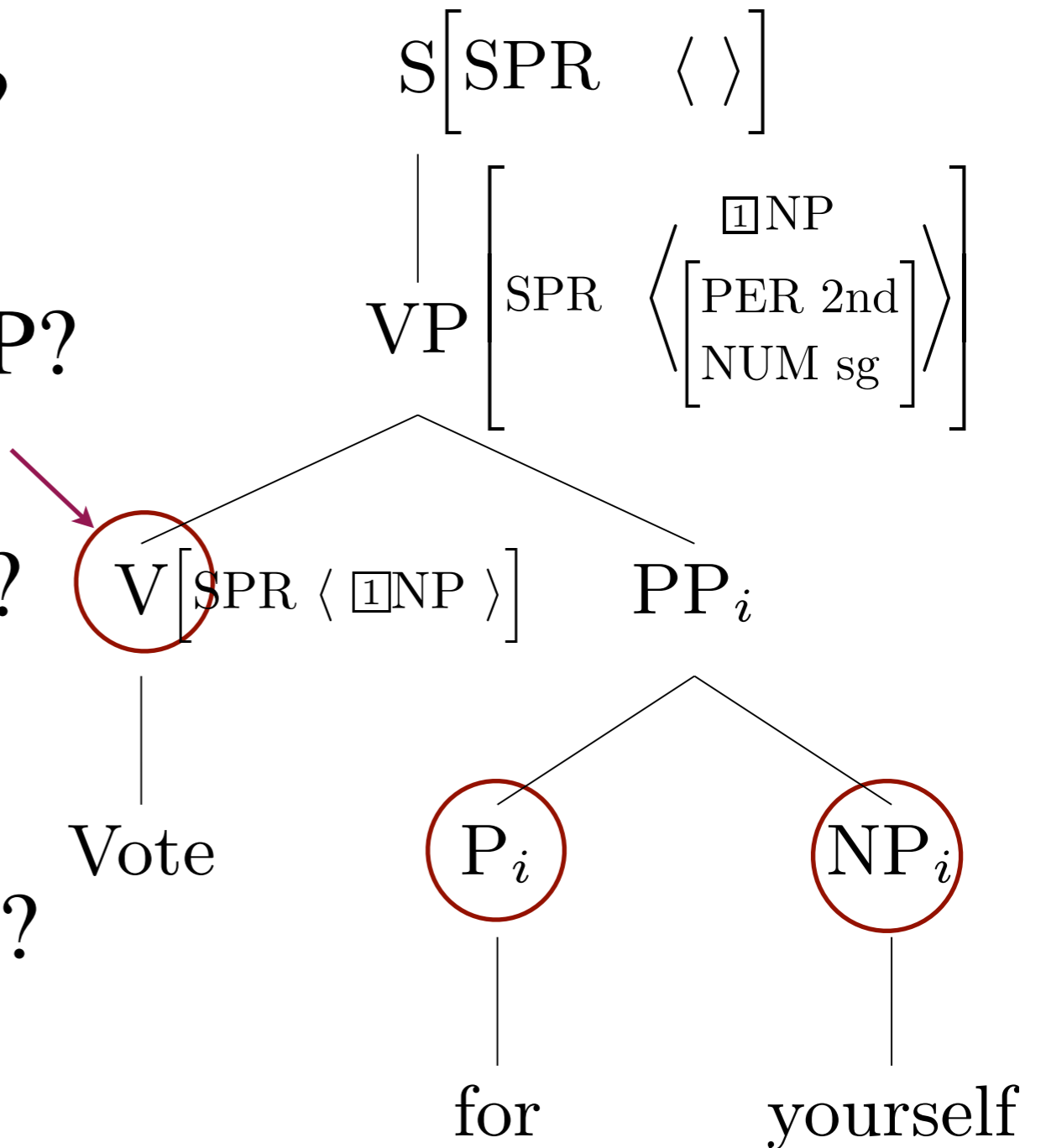
Why?

What's the SPR value on V?

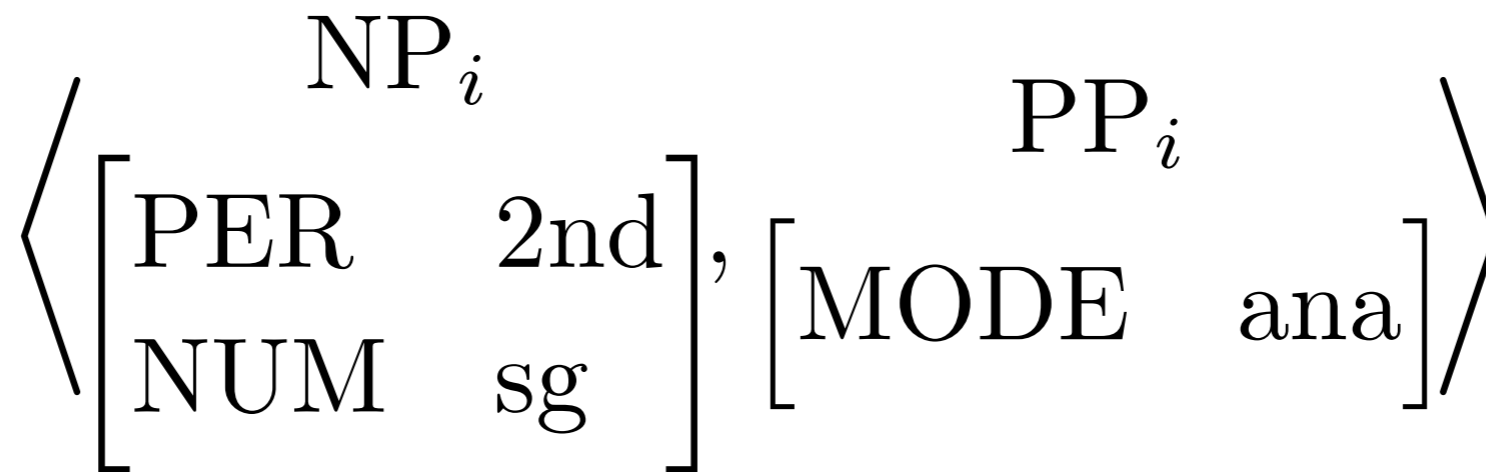
Why?

Which nodes have ARG-ST?

Which ARG-ST matters for  
the licensing of yourself?



# ARG-ST on *vote*



- Is Principle A satisfied?
- How?
- Is Principle B satisfied?
- How?

# Day 1 Revisited

- Recall

*F----- yourself!*

*F----- you!*

*Go f----- yourself!*

*\*Go f----- you!*

- *F--- NP!* has two analyses
  - As an imperative
  - As a truly subjectless fixed expression.
- *Go f----- NP!* can only be analyzed as an imperative.

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# Reading Questions

- If SPR + COMPS is always ARG-ST (because of the ARP), why bother with ARG-ST?
- Why isn't ARG-ST a VAL feature like SPR and COMPS?
- Why doesn't ARG-ST appear on phrases
- Why does the lexical entry for the argument marking to in (28) show SPR and ARG-ST but not COMPS?

# Reading Questions

- Why should the VP inside an imperative be [MODE prop]?
- How does the S become [MODE dir]?
- If the VP isn't the head, aren't we losing information?
- If we're trying to get rid of non-branching rules, why have one for imperatives?

# Reading Questions

- What about hortatives?
  - *Let's dance.*
  - *Let's amuse ourselves/\*yourselves.*
- How can you show in the lexical entry for a verb that it's subject can be dropped?
- What about imperatives with subjects?  
*Everybody listen to yourselves! You in the back get moving!*

# Reading Questions

- What's the difference between coindexing and coreference?
- I'm confused as to whether we already know two words share the same INDEX. According to (33) and (34), it seems that we have no such knowledge but rather are testing all possible cases against A, B, AAP. However, the explanation under (22) and (23) seems to be based on a known fact that "there are two distinct entities being referred to by distinct indices".
- *An interesting couple walked in. He was four foot nine, she was six foot two.*



# Reading Questions

- How do we tell if a preposition is argument marking or predicational?
- How do we tell if a pronoun is [MODE ref] or [MODE ana]?
- What about: *Being mad at himself, she cried.*

# Reading Questions

- Could Principles A and B (p.205) be extended to VPs, or whole Verb-headed branches? Or do they only function with a single word verb; by extension, what would this mean for verbs that have an auxiliary?