Ling 566

Nov 17, 2015

Raising, Control

Overview

- Intro to topic
- Infinitival *to*
- (Subject) raising verbs
- (Subject) control verbs
- Raising/control in TG
- Object raising and object control
- Reading questions

Where We Are & Where We're Going

- In the last two lectures, we have seen a kind of subject sharing -- that is, cases where one NP served as the SPR for two different verbs. Examples?
- Last time, we looked at "dummy" NPs -- that is, non-referential NPs. Examples?
- Today, we're going to look at the kind of subject sharing we saw with *be* in more detail.
- Then we'll look at another kind of subject sharing, using dummy NPs in differentiating the two kinds.

What Makes This Topic Different

- The phenomena we have looked at so far (agreement, binding, imperatives, passives, existentials, extraposition) are easy to pick out on the basis of their form alone.

- In this chapter, we look at constructions with the general form NP-V-(NP)-*to*-VP. It turns out that they divide into two kinds, differing in both syntactic and semantic properties.

The Central Idea

- *Pat continues to avoid conflict* and *Pat tries to avoid conflict* both have the form NP-V-*to*-VP

- But *continues* is semantically a one-place predicate, expressing a property of a situation (namely, that it continues to be the case)

- Whereas *tries* is semantically a two-place predicate, expressing a relation between someone who tries and a situation s/he tries to bring about.

- This semantic difference has syntactic effects.

The Status of Infinitival *to*

- It's not obvious what part of speech to assign to *to*.
- It's not the same as the preposition *to*:

  Pat aspires to stardom

  Pat aspires to be a good actor

  **Pat aspires to stardom and to be a good actor*

- We call it an auxiliary verb, because this will make our analysis of auxiliaries a little simpler.

The Lexical Entry for Infinitival *to*

$$\left\langle \text{to} \;, \left[\begin{array}{ll} \text{SYN} & \left[\begin{array}{ll} \text{HEAD} & \left[\begin{array}{ll} \text{FORM} & \text{base} \\ \text{INF} & + \\ \text{AUX} & + \end{array}\right] \end{array}\right] \\ \text{ARG-ST} & \left\langle \boxed{1} \;, \left[\begin{array}{ll} \text{HEAD} & \left[\begin{array}{ll} \textit{verb} & \\ \text{INF} & - \\ \text{FORM} & \text{base} \end{array}\right] \\ \text{VAL} & \left[\begin{array}{ll} \text{SPR} & \langle\, \boxed{1} \,\rangle \\ \text{COMPS} & \langle\, \rangle \end{array}\right] \\ \text{SEM} & \left[\text{INDEX} \quad s\right] \end{array}\right] \right\rangle \\ \text{SEM} & \left[\begin{array}{ll} \text{INDEX} & s \\ \text{RESTR} & \langle\, \rangle \end{array}\right] \end{array}\right] \right\rangle$$

The Syntax of Infinitival *to*

$$\begin{bmatrix} \text{SYN} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \text{FORM} & \text{base} \\ \text{INF} & + \\ \text{AUX} & + \end{bmatrix} \end{bmatrix} \end{bmatrix}$$

- This makes it a verb, because AUX is declared on *verb*
- [INF +] uniquely identifies the infinitival *to*
- Verbs select complements with different combinations of FORM and INF values, e.g.
  - complements of *condescend* are [FORM base] and [INF +]
  - complements of *should* are [FORM base] and [INF –]
  - complements of *help* are [FORM base]
- The meaning of [AUX **+**] becomes clear in Chapter 13.

The Argument Structure

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \boxed{1}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} & \\ \text{INF} & - \\ \text{FORM} & \text{base} \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle\ \boxed{1}\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \end{bmatrix}$$

- What kind of constituent is the second argument?
- The tagging of the first argument and the SPR of the second argument is exactly like *be*.

The Semantics of Infinitival *to*

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \boxed{1}, \begin{bmatrix} \text{HEAD} & \begin{bmatrix} \textit{verb} & \\ \text{INF} & - \\ \text{FORM} & \text{base} \end{bmatrix} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle\, \boxed{1} \,\rangle \\ \text{COMPS} & \langle\, \rangle \end{bmatrix} \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \end{bmatrix} \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{INDEX} & s \\ \text{RESTR} & \langle\, \rangle \end{bmatrix} \end{bmatrix}$$

- The INDEX value is taken from the SEM of the second argument.
- So what is the semantic contribution of *to*?

Dummies and *continue*

- Some examples:

  There continue to be seats available.

  It continues to matter that we lost.

  Advantage continues to be taken of the innocent.

  **It continues to be seats available.*

  **There continues to matter that we lost.*

  **Advantage continues to be kept of the innocent.*

- Generalization: Non-referential NPs can appear as the subject of *continue* just in case they could be the subject of the complement of *continue*.

A New Type, for Verbs like *continue*

Subject-Raising Verb Lexeme (*srv-lxm*):

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \boxed{1}, \begin{bmatrix} \text{SPR} & \langle\, \boxed{1} \,\rangle \\ \text{COMPS} & \langle\, \rangle \\ \text{INDEX} & s_2 \end{bmatrix} \right\rangle \\ \text{SEM} & \left[\text{RESTR} \left\langle \begin{bmatrix} \text{ARG} & s_2 \end{bmatrix} \right\rangle \right] \end{bmatrix}$$

- Notes on the ARG-ST constraints
  - The subject sharing is just like for *be* and *to*: the subject of *continue* is also the subject of its complement
  - *continue* imposes no other constraints on its subject
- Note on the SEM constraint
  - The index of the complement must be an argument of the predication introduced by the verb

The Lexical Entry for *continue*

$$\left\langle \text{continue} \;,\; \left[\begin{array}{ll} \textit{srv-lxm} & \\ \text{ARG-ST} & \left\langle \text{X} \;,\; \left[\begin{array}{ll} & \text{VP} \\ \text{INF} & + \end{array}\right] \right\rangle \\ \text{SEM} & \left[\begin{array}{ll} \text{INDEX} & s_1 \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{continue} \\ \text{SIT} & s_1 \end{array}\right] \right\rangle \end{array}\right] \end{array}\right] \right\rangle$$

Entry for *continue*, with Inherited Information

$$\left\langle \text{continue} , \left[\begin{array}{ll} \textit{srv-lxm} & \\ \text{SYN} & \left[\begin{array}{ll} \text{HEAD} & \left[\begin{array}{ll} \textit{verb} & \\ \text{PRED} & - \\ \text{INF} & - \\ \text{AGR} & \boxed{2} \end{array}\right] \\ \text{VAL} & \left[\text{SPR} \quad \left\langle \, [\text{AGR } \boxed{2}] \, \right\rangle\right] \end{array}\right] \\ \text{ARG-ST} & \left\langle \boxed{1}\left[\begin{array}{ll} \text{HEAD} & \textit{nominal} \\ \text{VAL} & \left[\begin{array}{ll} \text{SPR} & \langle\,\rangle \\ \text{COMPS} & \langle\,\rangle \end{array}\right] \end{array}\right] , \left[\begin{array}{ll} & \text{VP} \\ \text{INF} & + \\ \text{SPR} & \langle\, \boxed{1} \,\rangle \\ \text{INDEX} & s_2 \end{array}\right] \right\rangle \\ \text{SEM} & \left[\begin{array}{ll} \text{MODE} & \text{prop} \\ \text{INDEX} & s_1 \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{continue} \\ \text{SIT} & s_1 \\ \text{ARG} & s_2 \end{array}\right] \right\rangle \end{array}\right] \end{array}\right] \right\rangle$$

Key Property of Subject-Raising Verbs

The subject plays no semantic role in the predication introduced by the SRV itself. Its semantic role (if any) is only in the predication introduced in the complement.

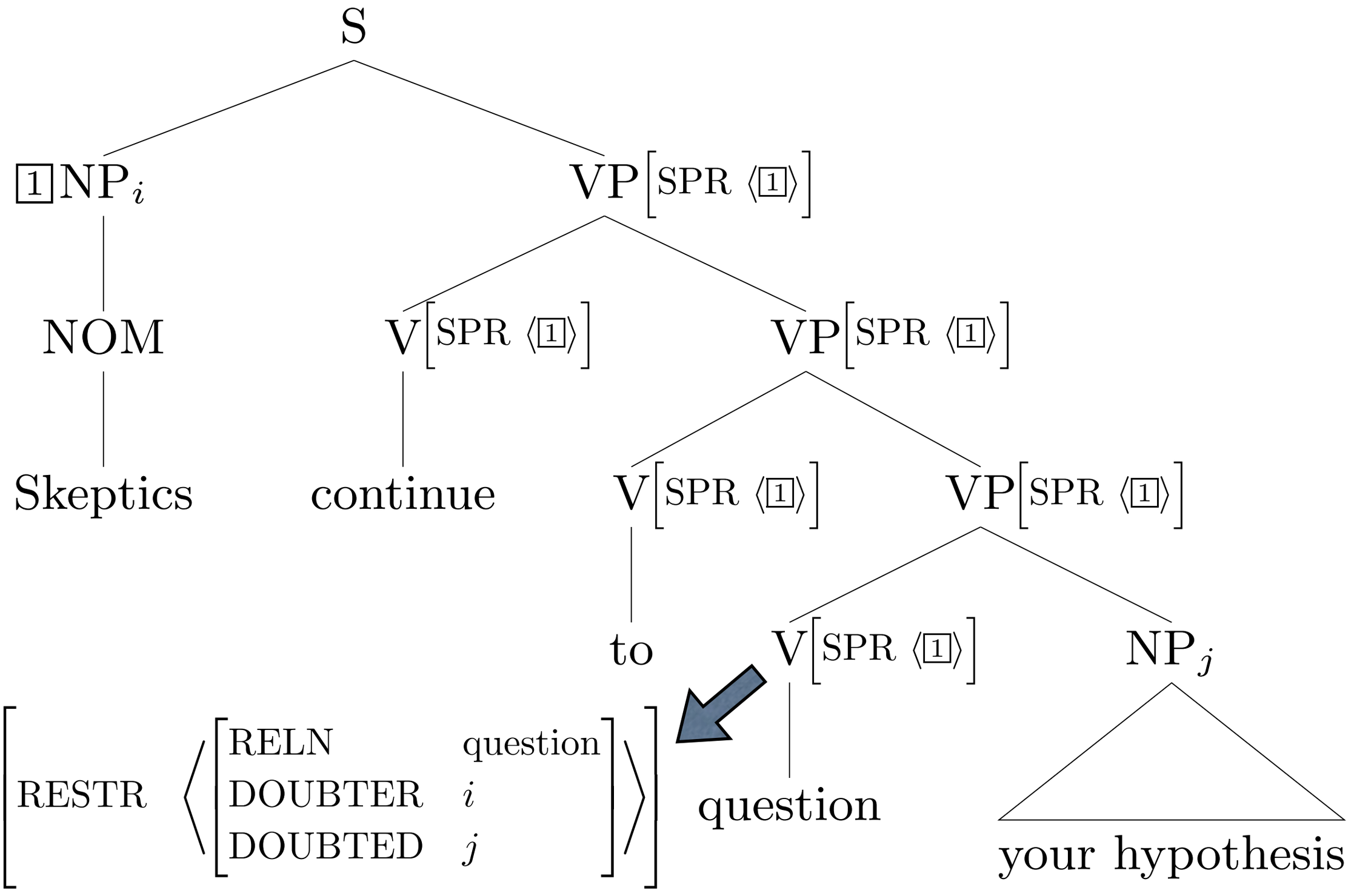
$$\begin{bmatrix} \text{ARG-ST} & \left\langle \boxed{1} \begin{bmatrix} \text{HEAD} & \textit{nominal} \\ \text{VAL} & \begin{bmatrix} \text{SPR} & \langle\ \rangle \\ \text{COMPS} & \langle\ \rangle \end{bmatrix} \end{bmatrix}, \begin{bmatrix} \text{VP} \\ \text{INF} & + \\ \text{SPR} & \langle \boxed{1} \rangle \\ \text{INDEX} & s_2 \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{MODE} & \text{prop} \\ \text{INDEX} & s_1 \\ \text{RESTR} & \left\langle \begin{bmatrix} \text{RELN} & \textbf{continue} \\ \text{SIT} & s_1 \\ \text{ARG} & s_2 \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix}$$

Hence, constraints on the subjects of SRVs are imposed by their complements

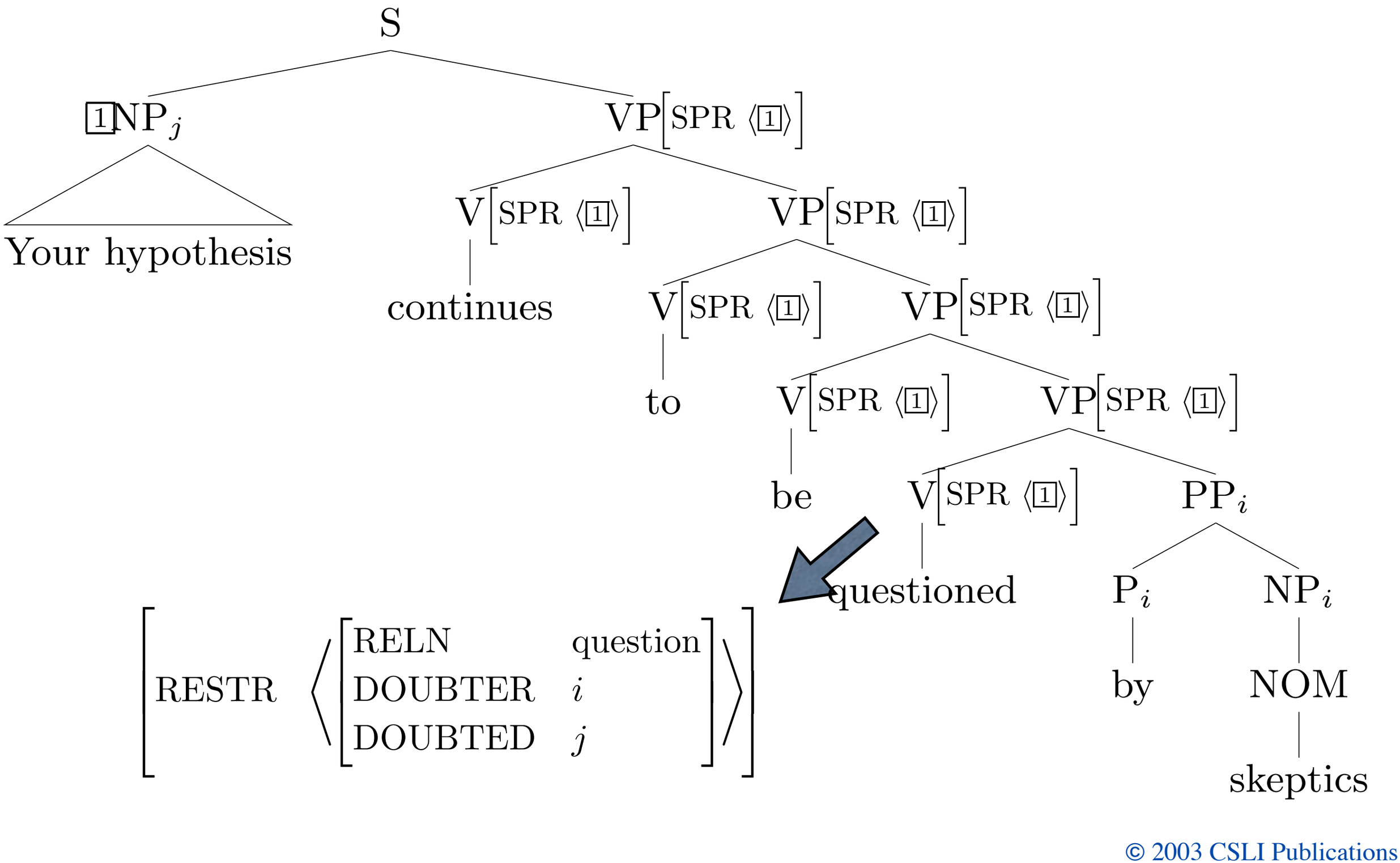
- SRVs take dummy subjects when and only when their complements do.
- SRVs take idiom chunk subjects when and only when their complements do.
- Passivizing the verb in the VP complement of an SRV doesn't change the truth conditions of the whole sentence:

  Skeptics continue to question your hypothesis ~
  Your hypothesis continues to be questioned by skeptics

Continue with active complement



Continue with passive complement



Control Verbs

- Control verbs, like *try*, appear in contexts that look just like the contexts for raising verbs:

  Pat tried to stay calm looks superficially like

  Pat continued to stay calm

- Control verbs also share their subjects with their complements, but in a different way.

- A control verb expresses a relation between the referent of its subject and the situation denoted by its complement.

Control Verbs Are Not Transparent

- They never take dummies or idiom chunks as subjects.

  **There try to be bugs in my program*

  **It tries to upset me that the Giants lost*

  **Advantage tries to be taken of tourists*

- Passivizing the complement's verb changes the truth conditions.

  The police tried to arrest disruptive demonstrators ≠
  Disruptive demonstrators tried to be arrested by the police

A New Type

Subject-Control Verb Lexeme (scv-lxm):

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \text{NP}_i\ , \begin{bmatrix} \text{SPR} & \langle\ \text{NP}_i\ \rangle \\ \text{COMPS} & \langle\ \rangle \\ \text{INDEX} & s_2 \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{RESTR} & \left\langle \begin{bmatrix} \text{ARG} & s_2 \end{bmatrix} \right\rangle \end{bmatrix} \end{bmatrix}$$

- This differs from *srv-lxm* in that the first argument and the SPR of the second argument are coindexed, not tagged.
  - This means that they only need to share INDEX values, but may differ on other features
  - And the first argument -- the subject -- must have an INDEX value, so it cannot be non-referential

The lexical entry for *try*

$$\left\langle \text{try} , \left[\begin{array}{ll} \textit{scv-lxm} & \\ \text{ARG-ST} & \left\langle \text{NP}_i , \left[\begin{array}{c} \text{VP} \\ \text{INF } + \end{array} \right] \right\rangle \\ \text{SEM} & \left[\begin{array}{ll} \text{INDEX} & s_1 \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{try} \\ \text{SIT} & s_1 \\ \text{TRIER} & i \end{array} \right] \right\rangle \end{array} \right] \end{array} \right] \right\rangle$$

Note that the subject (NP_i) plays a semantic role with respect to the verb, namely the "TRIER"

Entry for *try*, with Inherited Information

$$\left\langle \text{try} \;,\; \left[\begin{array}{ll} \textit{scv-lxm} & \\ \text{SYN} & \left[\begin{array}{ll} \text{HEAD} & \left[\begin{array}{ll} \textit{verb} & \\ \text{PRED} & - \\ \text{INF} & - \\ \text{AGR} & \boxed{1} \end{array}\right] \\ \text{VAL} & \left[\text{SPR} \quad \langle\, [\text{AGR}\ \boxed{1}] \,\rangle\right] \end{array}\right] \\ \text{ARG-ST} & \left\langle \text{NP}_i \;,\; \overset{\text{VP}}{\left[\begin{array}{ll} \text{INF} & + \\ \text{SPR} & \langle\, \text{NP}_i \,\rangle \\ \text{SEM} & \left[\text{INDEX} \quad s_2\right] \end{array}\right]} \right\rangle \\ \text{SEM} & \left[\begin{array}{ll} \text{INDEX} & s_1 \\ \text{MODE} & \text{prop} \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{try} \\ \text{SIT} & s_1 \\ \text{TRIER} & i \\ \text{ARG} & s_2 \end{array}\right] \right\rangle \end{array}\right] \end{array}\right] \right\rangle$$

Things to Note:

- The first argument has an index
- The first argument is coindexed with the SPR of the second argument
- Both the first and second arguments play semantic roles in the 'try' relation
- Very little had to be stipulated in the entry for *try*

Questions

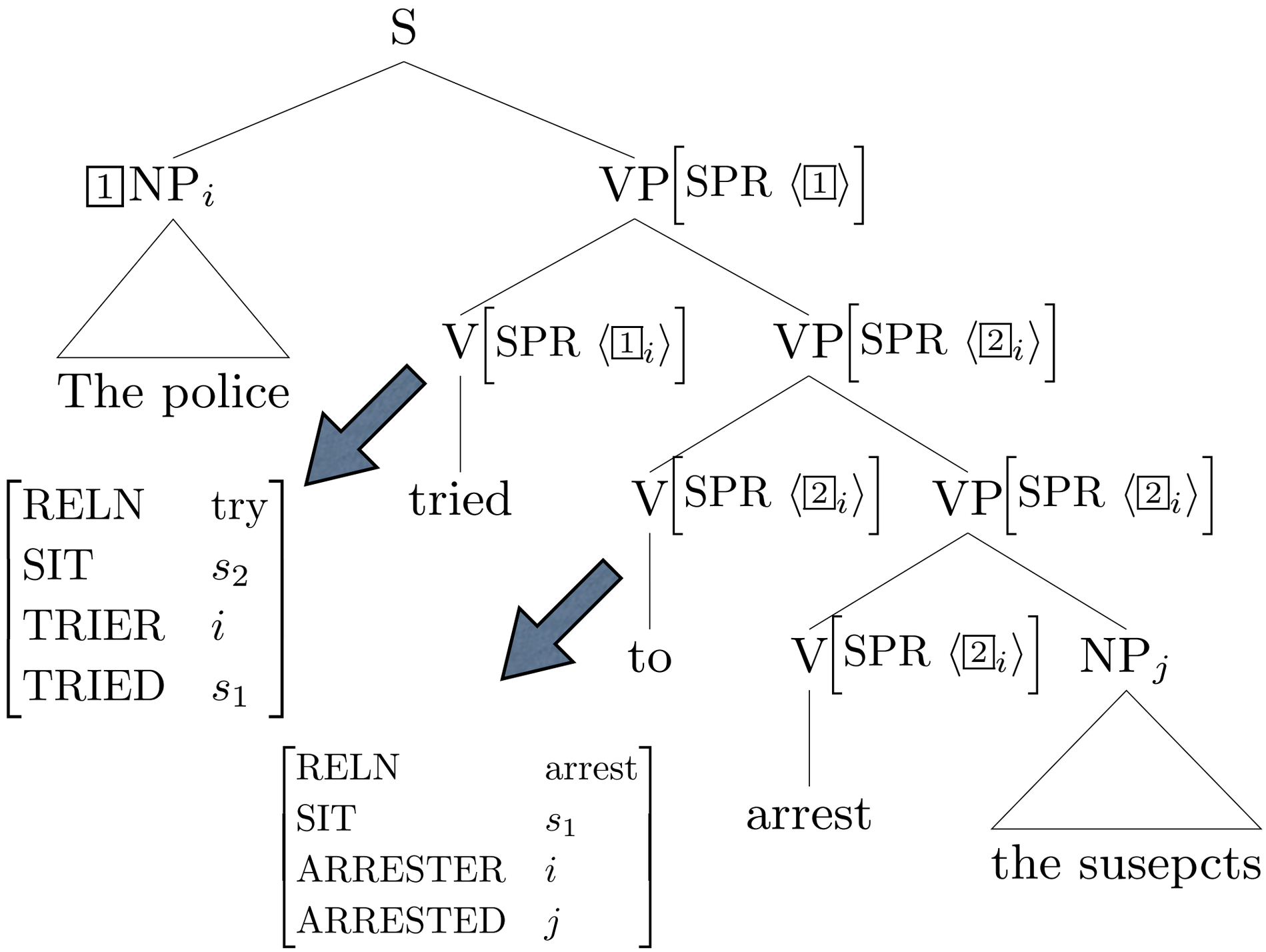
- What rules out dummies and idiom chunks as subjects of *try*?
- What accounts for the semantic non-equivalence of pairs like the following?

  Reporters tried to interview the candidate

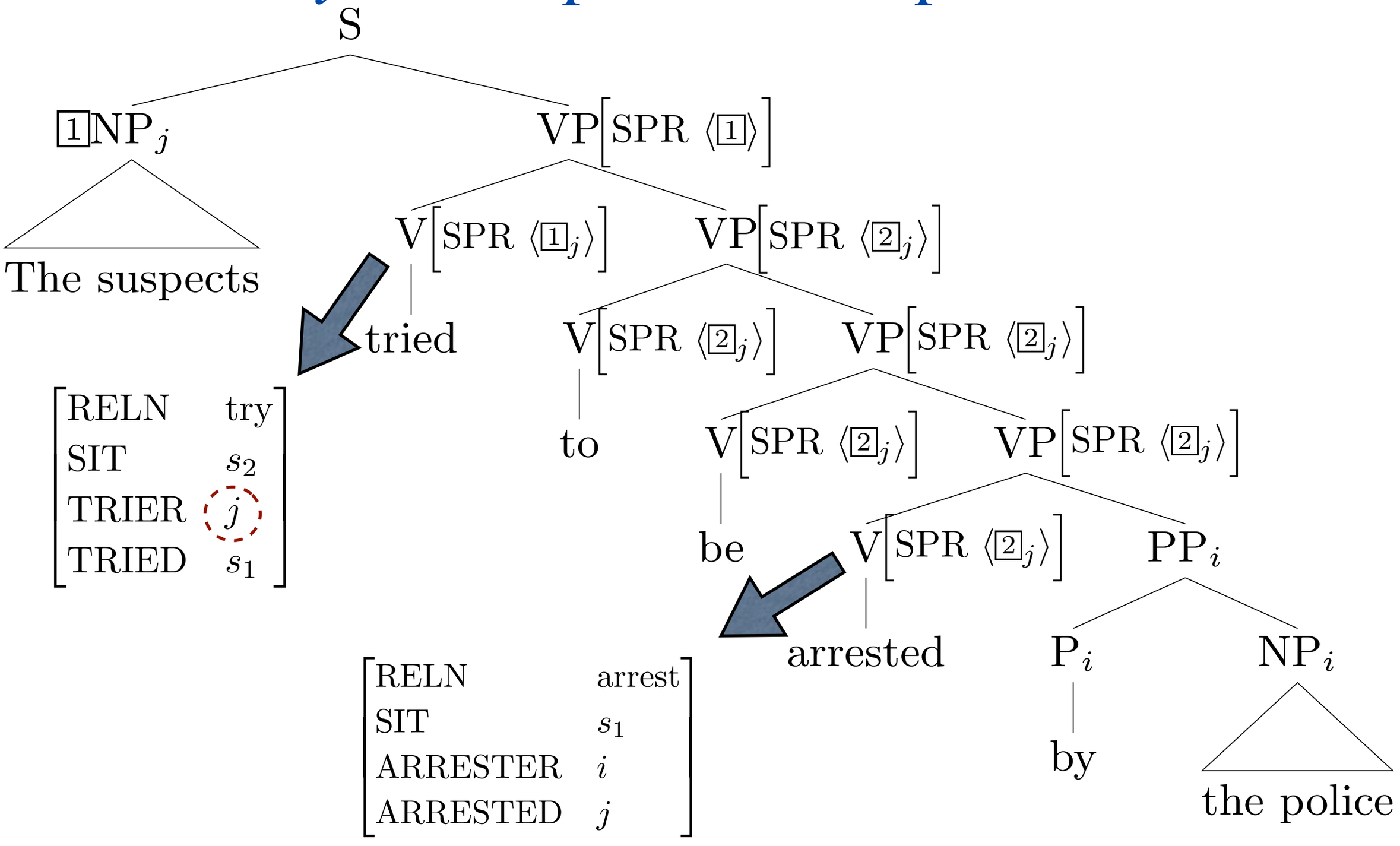
  The candidate tried to be interviewed by reporters

- Why does *continue* behave differently in these respects?

Try with an active complement



Try with a passive complement



The main formal difference between raising and control verbs is in ARG-ST

$$\left\langle \text{NP}_i \ , \begin{bmatrix} \text{INF} & + \\ \text{SPR} & \langle\ \text{NP}_i\ \rangle \\ \text{SEM} & \left[\text{INDEX} \quad s_2\right] \end{bmatrix}^{\text{VP}} \right\rangle$$

CONTROL

$$\left\langle \boxed{1}\ \text{NP} \ , \begin{bmatrix} \text{INF} & + \\ \text{SPR} & \langle\ \boxed{1}\ \rangle \\ \text{SEM} & \left[\text{INDEX} \quad s_2\right] \end{bmatrix}^{\text{VP}} \right\rangle$$

RAISING

Which is which?

Why?

Raising & Control in Transformational Grammar

- Raising

  _____ continue [the dogs to bark]

- Control

  $[\text{the dogs}]_i$ try $[NP_i$ to bark]

  - In early TG, the NP got deleted.
  - In more recent TG, it's a silent pronoun.

We make another raising/control distinction

Object-Raising Verb Lexeme (*orv-lxm*)

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \text{NP} \ , \boxed{1} \ , \begin{bmatrix} \text{SPR} & \langle \ \boxed{1} \ \rangle \\ \text{COMPS} & \langle \ \rangle \\ \text{INDEX} & s_2 \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{RESTR} & \left\langle [\text{ARG} \quad s_2] \right\rangle \end{bmatrix} \end{bmatrix}$$

- The formal distinction is again between tagging and coindexing

Object-Control Verb Lexeme (*ocv-lxm*)

$$\begin{bmatrix} \text{ARG-ST} & \left\langle \text{NP} \ , \text{NP}_i \ , \begin{bmatrix} \text{SPR} & \langle \ \text{NP}_i \ \rangle \\ \text{COMPS} & \langle \ \rangle \\ \text{INDEX} & s_2 \end{bmatrix} \right\rangle \\ \text{SEM} & \begin{bmatrix} \text{RESTR} & \left\langle [\text{ARG} \quad s_2] \right\rangle \end{bmatrix} \end{bmatrix}$$

- This time it's the **second** argument and the SPR of the **third** argument.

Example *orv-lxm* and *ocv-lxm* Entries

$$\left\langle \text{expect} , \left[\begin{array}{l} \textit{orv-lxm} \\ \text{ARG-ST} \ \langle \ \text{NP}_j \ , \ \text{X} \ , \left[\begin{array}{c} \text{VP} \\ \text{INF} + \end{array} \right] \rangle \\ \text{SEM} \left[\begin{array}{ll} \text{INDEX} & s \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{expect} \\ \text{SIT} & s \\ \text{EXPECTER} & j \end{array} \right] \right\rangle \end{array} \right] \end{array} \right] \right\rangle$$

- Note that the 'persuade' relation has three arguments, but the 'expect' relation has only two

$$\left\langle \text{persuade} , \left[\begin{array}{l} \textit{ocv-lxm} \\ \text{ARG-ST} \ \langle \ \text{NP}_j \ , \ \text{NP}_i \ , \left[\begin{array}{c} \text{VP} \\ \text{INF} + \end{array} \right] \rangle \\ \text{SEM} \left[\begin{array}{ll} \text{INDEX} & s \\ \text{RESTR} & \left\langle \left[\begin{array}{ll} \text{RELN} & \textbf{persuade} \\ \text{SIT} & s \\ \text{PERSUADER} & j \\ \text{PERSUADEE} & i \end{array} \right] \right\rangle \end{array} \right] \end{array} \right] \right\rangle$$

- And the object's INDEX plays a role in the 'persuade' relation, but not in the 'expect' relation

Reading Questions

- How do we handle phrases like *Kim continued biking*? What about *Kim continued the course*? *Kim helped Sandy move*?
- Why is to an auxiliary verb?
- Isn't it enough to make it [INF +]?

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Reading Questions

- Why just the INDEX in one place and the whole expression in the other?
- Pg 374 talks about how the data only requires the two elements in question to be coindexed, not necessarily identical, for subject controlling verbs. I understand the desire to stipulate no more than is necessary in the grammar, but out of curiosity are there any examples in English where these two elements would not be identical?

Reading Questions

- The text indicates that data from other languages motivate the difference in the analyses of raising and control verbs. How much weight is given to phenomena occurring in other languages as applying to English?

Reading Questions

- The text indicates that data from other languages motivate the difference in the analyses of raising and control verbs. How much weight is given to phenomena occurring in other languages as applying to English?

Reading Questions

- It seems to me that the differences between raising and control verbs in this grammar is that where control verbs require an NP of index i in their ARG-ST lists, raising verbs, raising verbs can take any phrase which could be the specifier of the final element of the ARG-ST list. However, I am unable to think of any example of a raising verb where this phrase is anything other than an NP. What might be an example of a verb where this is not the case? Or is the key difference that a control verb's requirement that the NP have index i more important than I realize?

Reading Questions

- Do raising verbs have a semantic property that allows us to determine their category, or are they somewhat 'randomly' distributed in English? What I mean by this is how verbs like "continue" or "exist" seem to be talking about the passage of time. Do raising verbs in one language tend to have similar meanings compared to raising verbs in English?

- Besides the verbs already stated in the book, can you provide a sample verb for each of the new verb-lxm types (srv-lxm, scv-lxm, orv-lxm, ocv-lxm)?

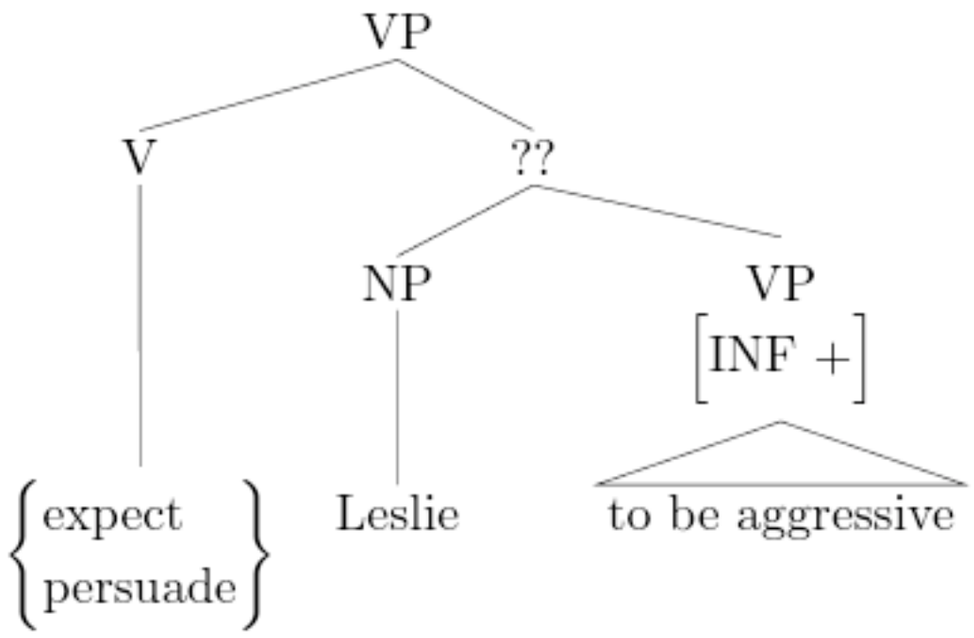
Reading Questions

- scv: ache, afford, attempt, bear, beg, bid, bother, demand, desire, expect, itch, learn, like, long, pledge, prefer... [178]
- srv: appear, become, begin, cease, chance, fail, finish, happen, keep, quit, start, tend... [25]
- ocv: accept, accommodate, advise, ask, authorize, beg, condemn, criticize, defy, fate, forbid, impel, leave, remind... [268]
- orv: allege, believe, estimate, need, presume, thought, want... [34]

Reading Questions

- I have been studying the analysis of trees (35) and (36), in particular why (35) would not work. It seems we are saying (p. 381) that combining the NP and infinitival VP phrase under one ?? node would be problematic because the passive rule would not be able to access the daughters of the ?? node as needed for the ARG-ST rearrangement. Is it the head complement rule that would allow ?? as one complement, but not its daughters as two separate complements?

(35)



Reading Questions

- Looking at (39) and (40) in page 379. While the difference in the semantics of object-raising and object-control verbs is clear, I do not understand the subtle distinction that we are trying to do with the specifier of the verb complement:
  - a) For ORV: The second argument in the ARG-ST of ORV is the same as the specifier in the VP complements.
  - b) For SRV: The index of the second argument in the ARG-ST or SRV is the same as the index of the specifier in the VP complement.
  - Neverthless both NPs are the same identity, aren't they?

Reading Questions

- I followed subject raising vs subject control without a problem, but didn't understand the distinction between object raising vs object control as clearly... Why is there a role for "persuadee" but not for "expectee" (or that which is expected to do/be something)?

Reading Questions

- Must all srv-lxm lexical entry complements be [INF +], as shown in the lexical entry for 'continue' in example (14)? What about the sentence: "The FBI continues visiting Lee". Would this involve a different lexical entry from the entry for 'continue' in (14)?

Reading Questions

- Consider: "Kim promised Lee to stop smoking" Here it seems to be a case of subject-control, but there is an object that does not appear in the ARG-ST of scv-lxm. Do we need a separate lexeme type for this class of verbs, or instead modify the constraints for scv-lxm?

Reading Questions

- First, consider:
- (i) Pat continued the race.
- (ii) The race was continued by Pat.

- There is an active-passive alternation here, but clearly not of the same kind as in the chapter. Even more obviously, continued must semantically involve both the subject and the object, otherwise there is no predication that relates them. Right?

Reading Questions

- But what about the following:
- (iii) Pat continued running the race.
- (iv) The race continued being run by Pat.
- This seems more like a subject-raising situation. The continue in these sentences doesn't do anything with its subject, since (iii) and (iv) are semantically equivalent.

Reading Questions

- I asked the teacher to go home.
- I was considering if this would be an ocv-lxm, but it doesn't fit with how ocv-lxm works. "The teacher" is not the shared specifier of "to go home," "I" is. How does "asked" work in the grammar?

Reading Questions

- I'm curious how we would handle sentences like "I expected to be aggressive." (contrasted with "I expected Leslie to be aggressive."). Would we analyze the first as a different form of 'expect' with a different lexical entry specifying only one thing, an [INF +] VP, on its COMPS list? It seems like there is an understood subject of the phrase 'to be aggressive' in the first sentence, which can optionally be realized (as in, "I expected myself to be aggressive."). Could we posit some rule where the first complement of 'expect' and verbs like it become optional when the 'expecter' and the subject of the infinitival VP are the same? Would that make sense or is there a better way to handle these cases?

Reading Questions

- It easy to come up with examples where we find both of these structurally different words.
  - They try to continue to fix the bike.
  - They continue to try to fix the bike.
- This does not appear to be a problem for the lexical entries, but does it cause any issue for the stipulations of each type? (I'm thinking about the differences between the lists on pages 368 and 374 particularly.) And is it the lexical entries themselves that rule out ungrammatical combinations of these two? Or is it the work of the type constraints?

Reading Questions

- What does it mean for a verb to be "transparent"? Is transparency directional? Raising verbs seem to have particular type of transparency, while control verbs share another type. The difference between subject-raising and object-raising, or subject-control and object-control, looks like a matter of directionality. Transparency reminds me of the valences of verbs, since both define the "shape" of a verb and how it "fits." Are there other kinds of transparency in the grammar? For example, transparency for argument-marking prepositions. Could this be a productive abstraction?

Reading Questions

- It's interesting to me that we treat INF as a feature. I see it doing its job in distinguishing between other FORM base AUX lexemes, but it seems to me that adding very specific binary features like INF is a good way to clutter up our grammar. How can we decide when to make something its own feature and when to distinguish these things (e.g. it's infinitival-ness) another way?