# Ling 566 Nov 14, 2023 <br> 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 chapters, 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: non-referential NPs. Examples?
- Today: the kind of subject sharing we saw with be in more detail.
- Then: 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 $\mathrm{s} /$ 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



## The Syntax of Infinitival to $\left[\right.$ SYN $\left[\right.$ HEAD $\left.\left.\left[\begin{array}{ll}\text { FORM } & \text { base } \\ \text { INF } & + \\ \text { AUX } & +\end{array}\right]\right]\right]$

- 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



- 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



- The INDEX value is taken from the SEM of the second argument.
- So what is the semantic contribution of $t o$ ?


## $W$ 'to' as an auxiliary verb

Unexpected, but clever<br>Dodgy (I'm skeptical)<br>Don't categories mean anything??<br>None of the above

Total Results: 0

## 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):

$$
\left.\left[\begin{array}{ll}
\operatorname{ARG-ST} & \langle ⿴ 囗 十
\end{array} \begin{array}{ll}
\text { IT }, & \left.\left.\begin{array}{ll}
\operatorname{SPR} & \langle ⿴\rangle \\
\operatorname{COMPS} & \rangle \\
\text { INDEX } & s_{2}
\end{array}\right]\right\rangle \\
\operatorname{SEM} & {\left[\operatorname{RESTR}\left\langle\left[\begin{array}{ll}
\operatorname{ARG} & s_{2}
\end{array}\right]\right\rangle\right.}
\end{array}\right]\right]
$$

－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

| $\text { <continue },$ | [srv-lxm |  |
| :---: | :---: | :---: |
|  | ARG-ST | $\left.\left\langle\mathrm{x}, \begin{array}{c}\mathrm{VP} \\ {[\mathrm{INF}} \\ \hline\end{array}\right]\right\rangle$ |
|  |  | [INDEX ${ }^{\text {s }}$ |
|  | SEM | $\left[\operatorname{RESTR}\left\langle\left[\begin{array}{ll}\text { RELN } & \text { continue } \\ \text { SIT } & s_{1}\end{array}\right]\right\rangle\right]$ |

## Entry for continue, with Inherited Information



## 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.


## 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 $\sim$ 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 $\neq$ Disruptive demonstrators tried to be arrested by the police

$$
\left.\begin{array}{c}
\text { A New Type } \\
\text { Subject-Control Verb Lexeme } \text { (scv-lxm): } \\
{\left[\begin{array}{ll}
\text { ARG-ST } & \left\langle\mathrm{NP}_{i},\left[\begin{array}{ll}
\operatorname{SPR} & \left\langle\mathrm{NP}_{i}\right\rangle \\
\operatorname{COMPS} & \langle \rangle \\
\text { INDEX } & s_{2}
\end{array}\right]\right\rangle \\
\operatorname{SEM} & \left.\left[\begin{array}{ll}
\operatorname{RESTR} & \langle\operatorname{ARG} \\
s_{2}
\end{array}\right]\right\rangle
\end{array}\right]}
\end{array}\right] .
$$

- 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



Note that the subject $\left(\mathrm{NP}_{i}\right)$ plays a semantic role with respect to the verb, namely the "TRIER"

## Entry for try, with Inherited Information



## 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?




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

## CONTROL

RAISING

# Which is which? <br> Why? 

## Raising \& Control in Transformational Grammar

- Raising

- Control
[the dogs] $]_{i}$ try $\left[\mathrm{NP}_{\mathrm{i}}\right.$ 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)

| ARG-ST | < NP, 1 , | $\left.\left[\begin{array}{ll}\text { SPR } & \langle\text { 团 }\rangle \\ \text { COMPS } & \rangle \\ \text { INDEX } & s_{2}\end{array}\right]\right\rangle$ |
| :---: | :---: | :---: |
| SEM | [RESTR | $\left.\left\langle\left[\begin{array}{ll}\text { ARG } & s_{2}\end{array}\right]\right\rangle\right]$ |

- The formal distinction is again between tagging and coindexing

Object-Control Verb Lexeme (ocv-lxm)
$\left[\begin{array}{ll}\text { ARG-ST } & \left.\left\langle\mathrm{NP}, \mathrm{NP}_{i}, \begin{array}{ll}\operatorname{SPR} & \left\langle\mathrm{NP}_{i}\right\rangle \\ \mathrm{COMPS} & \langle \rangle \\ \mathrm{INDEX} & s_{2}\end{array}\right]\right\rangle \\ \operatorname{SEM} & {\left[\begin{array}{ll}\operatorname{RESTR} & \left.\left\langle\begin{array}{ll}\text { ARG } & s_{2}\end{array}\right]\right\rangle\end{array}\right]}\end{array}\right]$

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


## Example orv-lxm and ocv-lxm Entries

|  | orv-lum |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $-\mathrm{ST}\left\langle\mathrm{NP}_{j}\right.$ |  |  |
| $\langle\text { expect },$ | SEM | $\left[\begin{array}{l} \text { INDEX } \\ \text { RESTR } \end{array}\right.$ |  | $\left.\left.\begin{array}{c}\text { expect } \\ \text { set } \\ j\end{array}\right]\right\rangle$ |



- Note that the 'persuade' relation has three arguments, but the 'expect' relation has only two
- And the object's INDEX plays a role in the 'persuade' relation, but not in the 'expect' relation


## Ch 12 Prob 4

- Construct examples of each of the following four types which show a contrast between expect and persuade:
- Ex with dummy there
- Ex with dummy it


## Breakout rooms!

- Ex with idiom chunks
- Ex of relevant active/passive pairs


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## RQs: Complementation patterns

- It seems like we have four new lexemes with only one example word for each. Where can we find other examples of words that are generated for srv-lxm, scv-lxm, orv-lxm, and ocv-lxm?
- Can raising verbs take non-[INF +] compmlements, like "The FBI tried finding Lee"?
- Does the second element on the ARG-ST list for srv-lxm have to be a VP? If so, why is it not constrained in (13)? If not, then what else could it be?
accept_v3 := v_np-pp_oeq-as_le \& appeal_vl := v_pp-vp_oeq_le \& accommodate_v2 := v_np-pp_oeq-as_le \& appear_vl := v_Pp-vp_ssr_le \& accustom_vl := v_np-vp_oeq_le \& ache_v2 := v_vp_seq_le \& acknowledge_v3 := v_np-pp_oeq-as_le \& act_seem_vl := v_ap-pp_seq_le \& adjudge_v4 := v_np-prd_oeq_le \& advertise_v2 := v_np-pp_oeq-as_le \& advise_v4 := v_np-vp_oeq_le \& advise_v5 := v_np-pp_oeq-as_le \& advocate_v3 := v_np-pp_oeq-as_le \& afford_v3 := v_vp_seq_le \& agree_v3 := v_vp_seq_le \& aim_v2 := v_vp_seq_le \& allege_v2 := v_np-vp_sor_le \& allow_vl := v_np-vp_oeq_le \& alter_v2 := v_np-vp_oeq_le \& amend_v2 := v_np-vp_oeq_le \& anticipate_prp_vl := v_vp_seq-prp_le \&
appear_v6 := v_prd_seq-va_le \& apply_v6 := v_vp_seq_le \& arrange_for_vl := v_it-pp-vp_seq_le arrange_with_vl := v_pp-vp_seq_le $\delta$ arrange_with_v2 := v_it-pp-vp_seq_l arrest_v2 := v_vp_seq-prp_le \& ask_v2 := v_np-vp_oeq_le \& ask_v4 := v_vp_seq_le \& aspire_vl := v_vp_seq_le \& assay_vl := v_vp_seq_le \& assess_v2 := v_np-pp_oeq-as_le \& assess_v3 := v_np-vp_oeq_le \& assign_v3 := v_np-vp_oeq_le \& assume_v3 := v_np-vp_oeq_le \& attempt_v2 := v_vp_seq_le \& authorize_vl := v_np-vp_oeq_le \& authorize_vl_br := v_np-vp_oeq_le


## The full menagerie

```
v_vp_seq_le B intended to win.
v_vp_seq-from_le B refrained from smoking.
v_prd_seq_le B remained doubtful.
v_prd_seq-idm_le B made sure that C won.
v_prd_seq-va_le B became impatient | admired.
v_ap_seq_le B proved competent | ?admired.
v_pp_seq_le B wanted into the game.
v_pp_seq-e_le My battery shows as empty.
v_vp_seq-prp_le B loves playing chess.
v_vp_seq-bse_le B helped finish the paper.
v_vp_seq-go_le B will go play chess | *goes play chess.
v_vp_seq-and_le They try and find it | #tried and found it.
v_vp_seq-and-bse_le B will try and find it.
v_vp_seq-but_le
B couldn't help but continue.
v_p-vp_seq_le B turned out to be wrong.
```


## The full menagerie

| v_pp-vp_seq_le | $B$ arranged with C to stay. |
| :---: | :---: |
| v_np-vp_oeq_le | $B$ invited C to stay. |
| v_np-vp_oeq-ntr_le | $B$ got C to stay. |
| v_np-vp_oeq-bse_le | $B$ helped C win. |
| v_np-vp_oeq-psv_le | The teacher promised me to be allowed to play outside. |
| v_np-prd_oeq_le | $B$ proved C wrong. |
| v_np-ap_oeq_le | $B$ imagined C taller. |
| v_np-prd_oeq-ntr_le | B wanted C ready. \| ${ }^{*} \mathrm{C}$ was wanted ready (by B). |
| v_np-vpsInp_oeq_le | $B$ had $C$ to talk to. |
| v_np-vp_oeq-from_le | B excused C from playing. |
| v_p-vp_oeq_le | $B$ geared up C to go. |

## The full menagerie

v_vp_ssr_le There failed to be a link.
v_vp_ssr-n3sg_le We needn't wait here.
v_vp_ssr-n3sg-r_le We need only wait here.
v_p-vp_ssr_le B has yet to win.
v_prd_ssr-va_le It became obvious that Kim arrived.
v_vp_ssr-prp_le It finished raining.
v_vp_ssr-nimp_le There tend to be problems.
v_pp-vp_ssr_le It seems to B to be windy.

## The full menagerie

v_np-vp_aeq-ntr_le B promised C to stay. | ${ }^{*} \mathrm{C}$ was promised by B to stay.
v_np-vp_aeq_le $\quad B$ used $C$ to reach D.
v_np-vp_aeq-psv_le B asked C to be allowed to leave. | \#B asked C to leave.
v_np-vp_aeq-noel_le B took an hour to finish.
v_np-vp_aeq-prp_le B had trouble sleeping.

## The full menagerie

aj_pp-vp_i-it_le It is easy for $B$ to win.
aj_pp-vp_i-it-nt_le It is urgent for B to win. | *B is urgent to win.
aj_pp-vp_i-on-it_le It is incumbent on B to go.
aj_pp-vp_i-of-it_le It is nice of $B$ to go.
aj_pp-vp_i-tgh_le This race is tough to win.
aj_pp-vp-pp_i-cmp-it_le It is easier to solve this problem than that one aj_vp_i-it-prp_le It is worth reading that book.
aj_vp_i-ssr_le There are destined to be unicorns in the garden.
aj_vp_i-wrth_le The race is worth running.
aj_vp_i-prty_le Paris is pretty to look at.
aj_vp_i-seq-nmd_le $B$ is supposed to win.
aj_vp_i-seq-prp_le $B$ is done running.

## The full menagerie

n_vp_c_le
n_vp_m_le
n_vp_mc_le
n_vp_c-it_le
n_vp_m-it_le
n_vpsInp_c_le
$B$ has the ability to win.
B has permission to stay.
$B$ has clearance to stay.
It is a pleasure for B to sleep.
It is drudgery for B to do that.
$B$ is a pleasure for $C$ to mmet.

## RQs: Specifier sharing

- The lexical entry for to on p. 362 (4), lists the tag 1 in both the ARG-ST position for to's specifier and as the specifier of its complement. This was the same with be-lxm in ch 11. Is this simply saying that to is searching for the same specifier as its VP complement? I see that this appears to be the case based on the tree for the FBI continues to visit Lee in (16) on p. 169. Why is this identity necessary? That is, why does "to" need this noted when its VP complement (such as visit Lee) already requires a specifier?


## RQs: srv v. scv

- As several others have mentioned, my main question is what is the difference between raising and control. Based on the type constraints for srvlxm and scv-lxm, it looks like scv-lxm could simply be a more specific subtype of srv-lxm. ocv-lxm also looks like it is just a subtype of orv1xm.
- I am still unclear about the difference between "raising" and "control". And for subject-raisinglxm, what motivates the subject to "raise"? And the same question for the object-raising.


## RQs: srv v. scv

- I don't totally understand why the object-xxx-lxm and subject-xxx-lxm's need to be different constraints if the only real difference is that there's an extra NP at the front for the object versions. Is there not some way to generalize this by indices or something similar?


## RQs: Types v. rules

- Since orv-lxm and ocv-lxm are so similar, why do we have two separate lexemes instead of creating a d-rule instead?


## RQs: Cross-linguistic

- Is a distinction between raising and control verbs/adjectives a linguistic universal?

