

Raising vs. control

1 Two types of nonfinite clauses

- Nonfinite clauses without overt subjects divide into two types:¹

- (1) a. He **seems** to scare them.
- b. He **wants** to scare them.

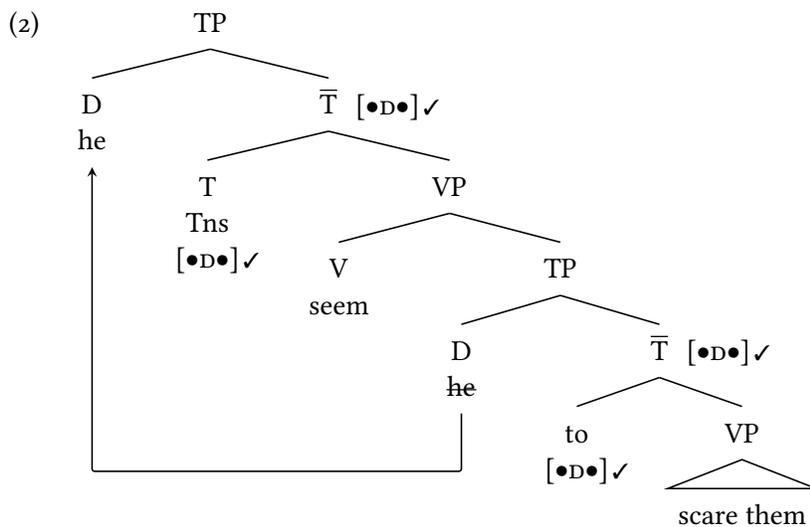
raising

control

¹ Rosenbaum (1967); Chomsky (1981); Manzini (1983); Williams (1985); Hornstein (1999); Landau (2000), amongst many, many others.

* *Raising infinitives*

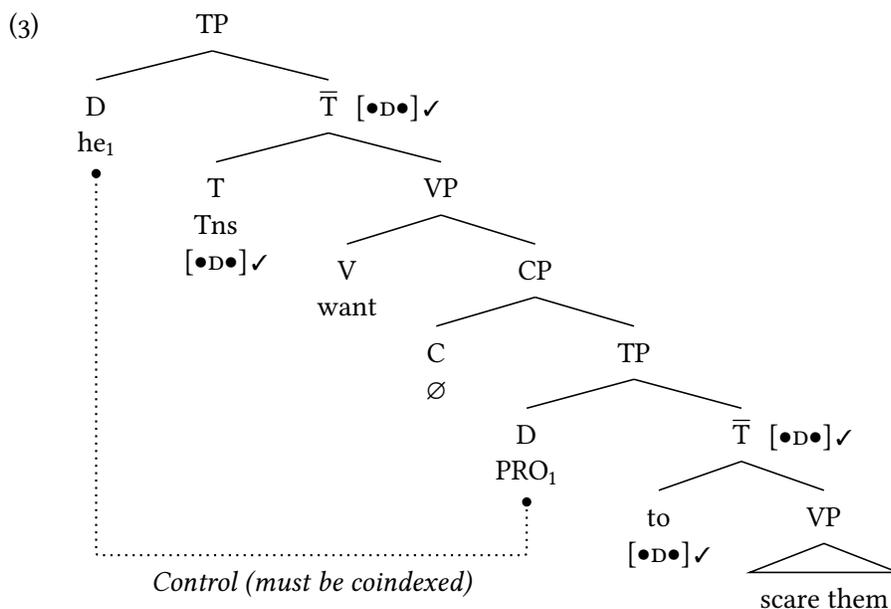
The matrix subject starts out as the embedded subject and RAISES (i.e. moves) into matrix [Spec, TP]:



* *Control infinitives*

The matrix subject CONTROLS a null pronoun in the embedded [Spec, TP] position, conventionally designated as PRO (“big PRO”):²

² PRO contrasts with *pro* (“little PRO”), which is discussed below.



- **Terminology**
 - **CONTROL VERBS**: verbs that embed an infinitival complement with PRO
 - **RAISING VERBS**: verbs that embed an infinitival complement out of which the subject raises
 - **CONTROLLER**: the DP whose index PRO must bear, i.e. PRO's antecedent
 - **CONTROL**: the dependency that holds between PRO and its controller
- Depending on the embedding verb, PRO's controller is either the matrix subject or the matrix object. For now, we will focus on subject-control verbs.

2 Motivation for local nonfinite subjects

2.1 Argument structure

- **Background: Arguments**
 - **ARGUMENT** describes the role played by particular types of expressions in the semantic structure of sentences.
 - For example, a transitive verb has two arguments: the subject and the object.
 - **ARGUMENT STRUCTURE** refers to the constellation of arguments associated with a verb or a predicate.
- **Common semantic roles**
 - **AGENT**: the entity that carries out or initiates the event; involves volition; typically intentional
 - (4) **Alex** gave Sam the book.
 - **THEME**: the entity that directly undergoes the event; essentially a catch-all
 - (5) Alex gave Sam **the book**.
 - **GOAL**: the entity that represents the endpoint of the event or receives something in the event
 - (6) Alex gave **Sam** the book.

⇒ **Problem**

- A verb like *stay* is a one-place predicate that requires a subject argument:
 - (7) I am sorry [I have stayed]. *finite*
- Where then is the subject argument of *stay* in (8)?
 - (8) a. I am sorry [to have stayed]. *control*
 - b. I seem [to have stayed]. *raising*

⇒ **Solution**

There is a DP in embedded [Spec, TP] that satisfies the argument-structure requirements of the embedded verb:

- (9) a. I am sorry [**PRO** to have stayed]. *control*
b. I seem [**I** to have stayed]. *raising*


2.2 Condition A

- Recall that under Condition A, reflexives must have a local antecedent:

- (10) a. Kate₁ wants [**Bill**₂ to appreciate **himself**₂].
b. *Kate₁ wants [Bill₂ to appreciate **herself**₁].

- If there is no local subject in nonfinite clauses, the data in (11) are mysterious then, because they have reflexives without local antecedents:

- (11) a. Kate₁ wants [to appreciate **herself**₁]. *control*
b. Kate₁ seems [to appreciate **herself**₁]. *raising*

⇒ If nonfinite clauses have local subjects though, then the reflexives also have local antecedents and thus satisfy Condition A without further ado:

- (12) a. Kate₁ wants [**PRO**₁ to appreciate **herself**₁]. *control*
b. Kate₁ seems [**Kate**₁ to appreciate **herself**₁]. *raising*


2.3 The EPP (parsimony)

- The EPP *generalizes* to all T constituents, finite and nonfinite alike:

- (13) **EXTENDED PROJECTION PRINCIPLE (EPP)**
T must be extended into a TP projection containing a subject.

⇒ Thus, all T heads bear [**•D•**].

3 Analysis

* *Ingredients*

- Raising predicates embed TPs.
- Control predicates embed CPs (headed by a null complementizer).
- PRO can only occur in nonfinite CPs (headed by a null complementizer).
- Raising predicates do not have their own DP arguments. Thus, when [**•D•**] on matrix T probes the structure for the closest DP, it finds the subject DP of the embedded nonfinite clause.
- The movement involved in raising is A-movement to [Spec, TP].

- **Distribution of PRO**

- The classical theory of the distribution of PRO comes from Chomsky (1981):

- (14) **THE PRO THEOREM**

- a. PRO is a pronominal anaphor.
- b. PRO is subject to Conditions A and B simultaneously.
- c. PRO has no governing category (otherwise, (b) entails a contradiction).
- d. PRO has no governor, i.e. PRO is ungoverned. [Chomsky 1981:191]

- (15) a. **CONDITION A**

An anaphor must be bound in its governing category.

- b. **CONDITION B**

A pronoun must be free in its governing category.

- c. The GOVERNING CATEGORY of X is the minimal phrase containing X, a subject, and a governor for X.

- Lexical heads and finite T (technically, Infl) are governors, but nonfinite T is not.

⇒ Thus, PRO can only occur in the specifier position of nonfinite T. In any other position, it would be governed.

- **Why the structural difference?**

- First, we need to distinguish raising from control in *some way* syntactically, in order to account for their differences (see below).

- Second, control clauses distribute like *for*-CPs:

- (16) a. What she really wanted was [_{CP} for him to apologize].

- b. *What she really wanted was [_{TP} him to apologize].

- c. What she really wanted was [to apologize].

- (17) a. She wanted more than anything [_{CP} for him to apologize].

- b. *She wanted more than anything [_{TP} him to apologize].

- c. She wanted more than anything [to apologize].

- Control clauses can be coordinated with *for*-CPs:

- (18) I will arrange [to see a specialist] and [_{CP} for my child to see one at the same time].

- **Dependence on the embedded clause**

- With raising predicates, the argument that is A-moved to matrix [Spec, TP] comes from inside an embedded nonfinite clause.

- Thus, iff the embedded predicate is compatible with the expletive *there* (i.e. is unaccusative) the matrix subject can be *there*. The *there* actually originated in the embedded clause and A-moved to matrix [Spec, TP].

⇒ **Derivations**

When the embedded predicate allows for the expletive *there* and the matrix predicate is raising, there are four possible derivations:³

- (19) a. **Embedded: A-movement; Matrix: A-movement**
 [TP *Some hope* Tns[•D•] **seem** [TP ~~*some hope*~~ to[•D•] [VP remain *some hope*]]]
- b. **Embedded: Expletive; Matrix: A-movement**
 [TP *There* Tns[•D•] **seem** [TP ~~*there*~~ to[•D•] [VP remain *some hope*]]]
- c. **Embedded: Expletive; Matrix: Expletive**
 [TP *It* Tns[•D•] **seem** [CP that *there* Tns[•D•] [VP remain *some hope*]]]
- d. **Embedded: A-movement; Matrix: Expletive**
 [TP *It* Tns[•D•] **seem** [CP that ~~*some hope*~~ Tns[•D•] [VP remain *some hope*]]]

³ These derivations are condensed and only show the parts of the structure relevant to A-movement.

• **Expletive algorithm**⁴

- If the predicate is unaccusative, the expletive *there* may be used to satisfy the EPP.
- If the predicate is not unaccusative, the EPP is satisfied by A-moving the closest DP to [Spec, TP].
- If no DP is accessible to A-movement, the expletive *it* is inserted into [Spec, TP].
- No DP is accessible to A-movement iff there is no accessible DP in *the smallest containing CP*.

⁴ I am 98% sure that this covers all of the possible cases in English. The formulation entails that raising predicates are not unaccusatives, which some would probably disagree with.

4 Distinguishing raising and control verbs

❶ **Expletive ‘it’**

If the matrix clause allows an expletive *it* subject, then the embedding verb is a raising verb:⁵

- (20) a. Alex seems to be happy.
 b. **It** seems [CP that Alex is happy]. *raising*
- (21) a. Alex hopes to be happy.
 b. ***It** hopes [CP that Alex is happy]. *control*

⁵ This happens for raising verbs only when the embedded clause is a CP.

❷ **Expletive ‘there’**

– If the matrix clause allows an expletive *there* subject, then the embedding verb is a raising verb:

- (22) a. Three people seem to be in the garden.
 b. **There** seem [~~there~~ to be three people in the garden]. *raising*
- (23) a. Three people wanted to be in the garden.
 b. ***There** wanted [PRO to be three people in the garden]. *control*

- A prerequisite for this diagnostic is that the embedded predicate independently allow for an expletive *there* subject. You need to test for this separately:

- (24)
- There are three people in the garden.
 - There arrived two trains in the station.
 - *There complained a student about the assignment.

③ Idioms

- Idioms are expressions that have an idiosyncratic meaning that is not a purely composition function of the meaning of its component parts:

- (25)
- Let's have a couple of drinks to **break the ice**.
 - Be careful not to **make waves**.
 - The president must **bite the bullet**.

- Only strings that form a unitary constituent can be idioms. We thus find *verb+object* idioms, but never *subject+verb* idioms, where the verb takes a complement.

- This follows from the fact that the subject and the verb do not form a constituent to the exclusion of the object.

⇒ Against this backdrop, only raising predicates preserve idiomatic interpretations:⁶

- (26)
- The shit** seems [~~the shit~~ to have **hit the fan**]. *raising*
 - #**The shit** wants [PRO to have **hit the fan**]. *control*

⁶ Here, the #-sign indicates that the sentence does not have the intended interpretation.

④ Scope

- The subject of a raising predicate can take logical scope above or below the raising predicate, but the subject of a control predicate can only scope above it:

(27) **Someone from CA** *is likely* to win the lottery.

- Wide-scope reading** someone >> is likely
There is a person *x* from CA such that *x* is likely to win the lottery.
- Narrow-scope reading** is likely >> someone
It is likely that there is a person *x* from CA such that *x* wins the lottery.

(28) **Someone from CA** *wants* to win the lottery.

- Wide-scope reading** someone >> want
There is a person *x* from CA such that *x* wants that *x* wins the lottery.
- Narrow-scope reading** want >> someone
*It is wanted that there is a person *x* from CA such that *x* wins the lottery.

- This scope ambiguity follows in raising constructions from LF electing to interpret the higher or lower copy of movement. There is no movement in a control construction, so this is not possible.

⑤ *Equivalence under passivization [best diagnostic]*

Passivization of the embedded predicate does not change the meaning in raising constructions, but it does radically change it in control constructions:⁷

⁷ This was first observed in Chomsky (1965:22–24).

- (29) a. A specialist seems [a-specialist to have examined Alex].
b. Alex seems [Alex to have been examined by a specialist].
- (30) a. A specialist intends [PRO to examine Alex].
b. Alex intends [PRO to be examined by a specialist].

5 Finite null subjects: *pro*

- Some languages allow for null subjects (and sometimes null objects) in finite clauses, conventionally represented as *pro*:⁸

⁸ *pro* is read as ‘little pro’.

- (31) a. **Finnish**
(Minä) katso-n auringonnousu-a.
I.NOM watch-1SG sun.rise-PTV
‘I watch the sunrise’
- b. **Basque**
(Ni-k) (Jon-i) (liburuak) eman d-i-zki-o-t
I-ERG Jon-DAT books.ABS give 3.ABS-√-PL.ABS-3SG.DAT-1SG.ERG
‘I have given {the books / them} to {Jon / him}’

- English allows null subjects in finite clauses in a few very limited cases, but is generally not considered a *pro*-drop language:

(32) Imperatives (only for second person)

- a. Don’t (**you**) dare lose your cool!
b. Don’t *(**anyone**) dare lose their cool!

(33) Diary speech⁹

- a. (**I**) can’t find my pen.
b. (**I**) think *(**I**) left it at home.
c. Why do *(**I**) always lose things?

⁹ Null subjects in diary speech are highly restricted. Only some pronouns may be dropped, and only those that are sentence initial.

* *PRO* vs. *pro*

- *PRO* only occurs as the subject of nonfinite clauses.
- *pro* occurs elsewhere, i.e. *never* as the subject of nonfinite clauses.

What to read if you want to learn more?

- Landau (2013): A fantastic ‘research’ textbook on control

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