Projects for today

- Review PRO and control, with some additional evidence for PRO from Binding Theory.
- Look at one other place where CPs appear inside other sentences: clausal adjuncts.
- Look at the phenomenon of “V2” languages—another place where CP is important.

Before we finish embedded clauses…

- Embedded clauses can also be modificational adjuncts.
- Pat ate lunch [PP on the hill] [PP by the tree] [PP in the rain].
- To express reasons and times, we also find whole CPs adjoined to our clause:
  - We discussed adjuncts [CP before we finished our discussion of embedded clauses]
  - There’s nothing really new here, except the observation that before can have category C.
  - Just like after, while, during, etc.

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Adjunct clauses: where do they go?

- Pat cleaned poorly yesterday.
- #Pat cleaned yesterday poorly.
- Pat cleaned poorly [before Chris arrived].
- #Pat cleaned [before Chris arrived] poorly.
- Pat cleaned [before Chris arrived] yesterday.
- Pat cleaned yesterday [before Chris arrived].
- Pat heard that [before Chris arrived] [Tracy cleaned the sink].
- Pat heard [before Chris arrived] that [Tracy cleaned the sink].

because clauses

- Reason clauses are also clausal adjuncts.
  - Because I lost the game, I left.
  - I left because I lost the game.

if clauses

- If clauses are like because clauses.
  - If he loses the game, I will leave.
  - I will leave if he loses the game.
Unique $\theta$-Generalization

• "Karr accused.
• This cannot mean Karr accused himself, and isn’t good on its own. We concluded (back in chapter 3, p. 81), that $\theta$-role assignment is constrained by....

• The Unique $\theta$-Generalization
  Each $\theta$-role must be assigned but a constituent cannot be assigned more than one $\theta$-role.
• So, presume that’s true.

PRO

• Jack tried [ to PRO capture Nina ]
• PRO must be there to satisfy the U8G.
• But something must be there in the specifier of TP: T always has a [uD*] feature to check (the "EPP").
  (except maybe in Irish and Arabic)
• Since Jack tried to capture Nina is grammatical, we also need PRO to move to SpecTP to satisfy the EPP.

One more argument for PRO

• Principle A: An anaphor must be bound in its binding domain.
  • Jack hoped [ that Kim would explain herself ]
  • Jack wanted [ Kim to explain herself ]
  • *Jack hoped [ that Kim would call himself ]
  • *Jack wanted [ Kim to call himself ]
  • Jack hoped [ PRO to see Kim ]
  • Jack hoped [ PRO to exonerate himself ]
• Principle B: A pronoun must be free in its binding domain.
  • Jack hoped [ that Chase would exonerate him ]
  • Jack wanted [ Chase to exonerate him ]
  • Jack hoped [ PRO to exonerate him ]

PRO

• Jack tried [ PRO to <PRO> capture Nina ]
• So, we have two deep principles of the grammar that point to a need for PRO in this sentence.
  • Unique $\theta$-Generalization
  • EPP (T has a [uD*] feature)
  • PRO acts a bit like an anaphor, in that it must corefer with the subject of the higher verb (try is a subject control verb).

PRO

• So, we have pretty good evidence for PRO, despite its invisibility:
  • We believe T has a [uD*] feature (EPP).
  • Every TP needs a specifier.
  • We believe the Unique $\theta$-generalization.
  • No DP can get two different $\theta$-roles.
  • Binding Theory reacts as if something is there serving as a binder.
**Idioms**

- Idiomatic interpretation available for raising verbs:
  - [The cat] seems t to have your tongue.
  - [The cat] seems t to be out of the bag.

- The cat was originally Merged within the lower vP—its θ-role comes from have/be out. Not so here:
  - [The cat] tried [PRO to have your tongue].
  - [The cat] arranged [PRO to be out of the bag].
  - A further argument for PRO being there and being something different from [the cat].

**Subject control v. object control**

- **Subject control verbs** take a nonfinite complement, with PRO as the subject, and PRO must refer to the higher subject.
  - Gael tried [ PRO to disarm the bomb ]

- **Object control verbs** are ditransitives that take an object and a nonfinite complement, with PRO as the subject, and PRO must refer to the higher object.
  - David persuaded Sherry [ PRO to leave ]

**Persuasion and promises**

- Not all ditransitive control verbs are object control verbs.
  - Though all object control verbs are ditransitives.
  - 1) David persuaded Sherry [ PRO to leave ]
  - 2) David promised Sherry [ PRO to run for office ]
  - 3) Chase asked Jack [ PRO to be allowed to continue ]
  - 4) Chase asked Jack [ PRO to get off his case ]
  - Whether a verb is a subject control verb or an object control verb is an individual property of the verb. Promise is recorded in our lexicon as a subject control verb, persuade as an object control verb.

**ECM verbs**

- ECM verbs also take infinitive complements, but with an overt subject (that checks accusative case with the ECM verb).
  - Tony found [ Michelle to be charming ]
  - Tony found [ that Michelle was charming ]
  - Jack expected [ Tony to take the day off ]
  - Jack expected [ that Tony would take the day off ]

**Raising verbs**

- Raising verbs have no Agent/Experiencer in SpecvP and take a nonfinite complement. The subject of the embedded complement moves into their subject position:
  - Jack seems [ <Jack> to be tired ]
  - It seems [ that Jack is tired ]
  - The time appears [ <the time> to have expired ]
  - It appears [ that the time has expired ]
  - The President happened [ <the P> to have a pen ]
  - It happened [ that the President had a pen ]

**Verb classes in summary**

- **ECM verbs**, e.g., believe, find
  - I believe [ TP him to have told the truth ].
- **Subject control verbs**, e.g., attempt, promise
  - Subject control verbs, e.g., attempt, promise
  - Kimk promised Jack [ CP Ω NULL PROk to avoid kidnappers ].
- **Object control verbs**, e.g., persuade, ask
  - Object control verbs, e.g., persuade, ask
  - I convinced herk [ CP Ω NULL PROk to drive to work ].
  - Jack asked Kimk [ CP Ω NULL PROk to avoid kidnappers ].
- **Raising verbs**, e.g., appear, seem
  - Raising verbs, e.g., appear, seem
  - I appear [ TP <I> to have missed the bus ].
  - Jack seems [ TP <Jack> to need a nap ].
While thinking about syntax

- Before finishing his homework, Ike watched TV.
- *Finish*: transitive (Agent, Theme)
  - Agent: ?
  - Theme: *his homework*
- *Watch*: transitive (Agent, Theme)
  - Agent: Ike
  - Theme: TV
- *Ike watched TV* is the main clause.
- *Before finishing his homework* is a modifier.

While PRO thinking about syntax

- Before PRO finishing his homework, …
- This PRO does seem to be controlled by the subject somehow (*While raining, Ike dashed to the store*).
- The form *finishing* is not the progressive, it is the present participle, a nonfinite form.

Before PRO finishing…

- T is not finite, so no [tense] feature.
- It is not the infinitive either.
- We’ll say this form has the [ing] feature.
- The [uInf] feature of v is matched, valued, and checked by the [ing] feature, resulting in *finishing*.

- How does PRO get its case feature checked?
- Some relevant sentences:
  - Before he finished his homework, Ike watched TV.
  - Before Ike’s finishing of his homework, tension was high.
- Given this, the best hypothesis seems to be that the [ing] T also has a [null] feature, checking case with PRO just like finite T checks nominative case with other subjects.
- [null] = [ucasenull]
Before PRO finishing…

The only thing left is to attach the modifier into the main clause…

Before his cooking of the turkey, Ike had never opened the oven before.

On gerunds

- There is yet another form of the verb that shows up with -ing on the end of it in English: the gerund.
- A gerund is basically a verb acting as a noun—we’ve been looking at this kind of deverbal noun already. One way to tell whether you are looking at a gerund (noun) or not (a verb) is to see whether it is modified by adjectives or adverbs:
  - Before his quick(ly) cooking of the turkey…
  - Before quick-*(ly) finishing his homework…