ACC-ing clauses and labels

Dan Milway (University of Toronto)
dan.milway@mail.utoronto.ca

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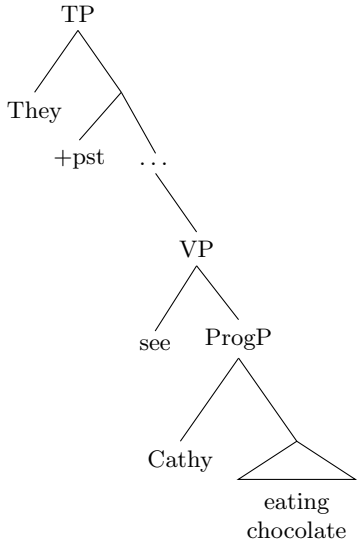
1 Introduction

The construction: Accusative-*ing* clauses (ACs) under direct perception reports (DPRs)

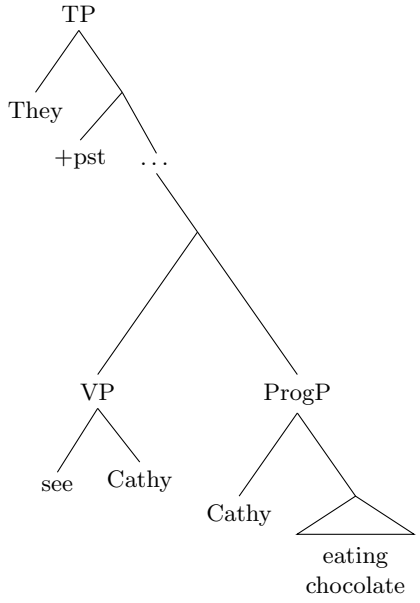
(1) They saw Cathy eating chocolate.

- (see also: pseudo relative constructions)
- Cinque (1996) argues that DPRs like (1) are ambiguous between (2) and (3).[1]

(2) **Argument AC**



(3) **Adjunct AC**



The plan today:

- Describe and discuss puzzling pattern w.r.t. AC subjects.
  - This pattern can't be explained by standard minimalist theories.
- Introduce and modify Label Theory (Chomsky 2013, 2015)
- Show how the puzzling pattern can be derived given my modified label theory.
- Grey boxes indicate theoretical assumptions which I will not be discussing in the talk

[1] Cinque proposes a third structure which is irrelevant to this discussion:

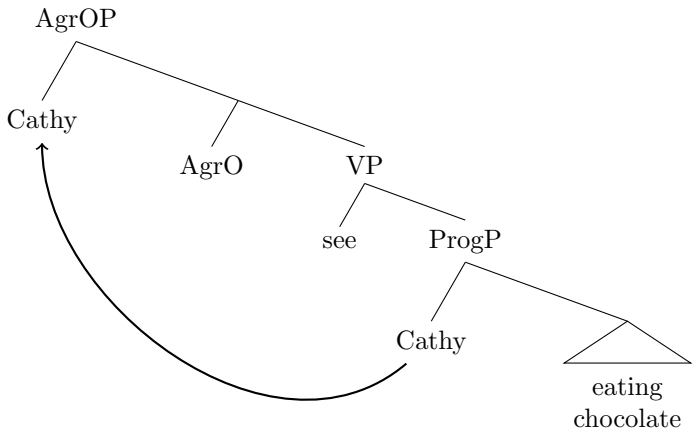
(i) They saw [$_{\text{NP}}$ Cathy [$_{\text{NP}}$ eating chocolate]].

2 The phenomenon

- Subjects **never** move out of argument ACs.
- Subjects **always** move out of adjunct ACs.

2.1 Argument ACs

(4) *



- ACs themselves (not AC subjects) are interpreted as themes of perception verbs.
- The sentences in (5) are acceptable because the AC subjects are not Θ-marked by the perception verbs.

(5) a. We heard it raining last night. (weather *it*)
b. We saw all hell breaking loose. (idiom chunks)
c. We heard Jamie being slandered. (passives of representation verbs)[2]
d. We saw it bothering Cathy that there was no chocolate. (expletive *it*)

- If argument AC subjects were able to move to grammatical object position, then we would expect (5) to be passivizable.

(6) a. *It was heard raining last night.
b. *All hell was seen breaking loose. (*idiomatic)
c. *Jamie was heard being slandered.
d. *It was seen bothering Cathy that there was no chocolate.

- The deviance of the strings in (6), are due to the AC subject being Θ-marked by the perception verb.
- The only way to passivize AC subjects is to move them through [Comp V].
- Such a move is impossible in argument AC structures.[3]

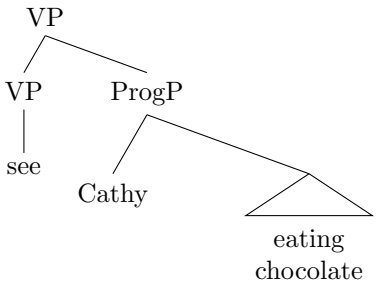
Conclusion: Argument AC subjects never move from [Spec Prog].
Corollary: AC subjects are (case-)licensed in [Spec Prog].

[2] Thanks to Elizabeth Cowper for bringing this class of ACs to my attention
[3] *cf.* subjects of infinitves which do raise to object and can be passivized.

(i) a. It was expected to rain last night.
b. All hell was seen to break loose.
c. Jamie was heard to have been slandered.
d. It was seen to bother Cathy that there was no chocolate.

2.2 Adjunct ACs

(7) *



- If AC subjects could stay *in situ* we would expect (8) to be acceptable.
  - Recall that the AC subject is licensed in [Spec Prog]

(8) *They [[saw Hägar] [Cathy eating chocolate]]

Conclusion: Adjunct AC subjects always move from [Spec Prog] to [Comp V].

- I don't assume the Θ-criterion holds. (*cf.* Hornstein 1999)
- I assume sideward movement. (Nunes 2001)

2.3 The puzzle

- There doesn't seem to be any formal, internal difference between argument and adjunct ACs
  - They differ only in their relation to the rest of the sentence.
- AC-external factors seem to determine whether an overt DP is "licensed" in [Spec Prog]
- Standard minimalist theories do not allow for this.
  - Once something is licensed, it can't become unlicensed.
  - *The ball fell* is well-formed regardless of what you embed it in.

3 Label theory

3.1 Chomsky (2013, 2015)

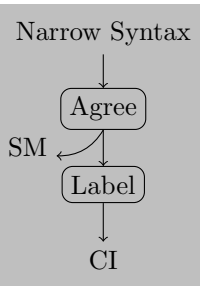
- Narrow syntax is simplest merge
  - Merge(X,Y) = {X, Y}
- This explains the major facts of syntax, except projection/labelling
  - Why is *the destruction of Rome* more like *the ball* than it is like *destroy Rome*?
- Chomsky's proposal: Syntax generates unlabelled structures, which are labelled upon transfer to the semantic interface.
- The Labelling Algorithm (LA) assigns a label to an object deterministically.
- Three relevant classes of objects:
  1. Head-Head objects:
     - $\{X, Y\} \xrightarrow{Label} [_X X, Y]$
       Only if X is not a root, and Y is a root.

– Undefined otherwise.

2. Head-Phrase objects:
   – $\{\text{X, YP}\} \xrightarrow{Label} [_{\text{X}}\text{X, YP}]$
3. Phrase-Phrase objects:
   – $\{\text{XP}_F, \text{YP}_F\} \xrightarrow{Label} \left[_{\langle F,F\rangle}\text{XP, YP}\right]$
   iff XP and YP agree for F
   – $\{t_{\text{XP}}, \text{YP}\} \xrightarrow{Label} [_{\text{Y}}\, t_{\text{XP}}, \text{YP}]$
   Where Y is the label of YP (traces/lower copies are invisible to labelling)
   – Undefined otherwise.

- Not every head can label
  – Roots lack formal features, and can't label.
  – Functional heads with only one set of inflectional features (*e.g.* φ) can't label.
    * English finite T_{φ} cannot label (EPP)
    * Italian finite $\text{T}_{\langle\varphi,\varphi\rangle}$ can label (pro-drop)
  – Non-labelling heads can be made into labellers if they gain a full feature set under agree.

- This assumes a phase-based derivational model of the grammar.
- Agree and Label are post-syntactic operations
  – Both operate on structures in a top-down fashion



3.2 My modifications

- Chomsky's proposal leaves two relevant questions unanswered:
  1. How are Host-Adjunct structures labelled?
  2. Why does the CI interface need labelled structures?
- I propose answers to those questions which will also help explain the behaviour of AC subjects

Proposal 1: Host-Adjunct structures are ignored by LA.

- Consider {XP, ZP}, where XP is the host and ZP is the adjunct.
- {XP, ZP} will be ignored by LA.
- ZP will also be ignored.
- (cf. Chametzky (1996) and Hornstein (2009))

Proposal 2: Labels determine how a complex object composes.

- Phrases labelled by heads compose by Function Application
  – Label({D, NP}) = D
  – $[\![[_{\text{D}}\text{D, NP}]]\!] = [\![\text{D}]\!]([\![\text{NP}]\!])$
- Phrases labelled by feature pairs are interpreted as operator-variable structures.

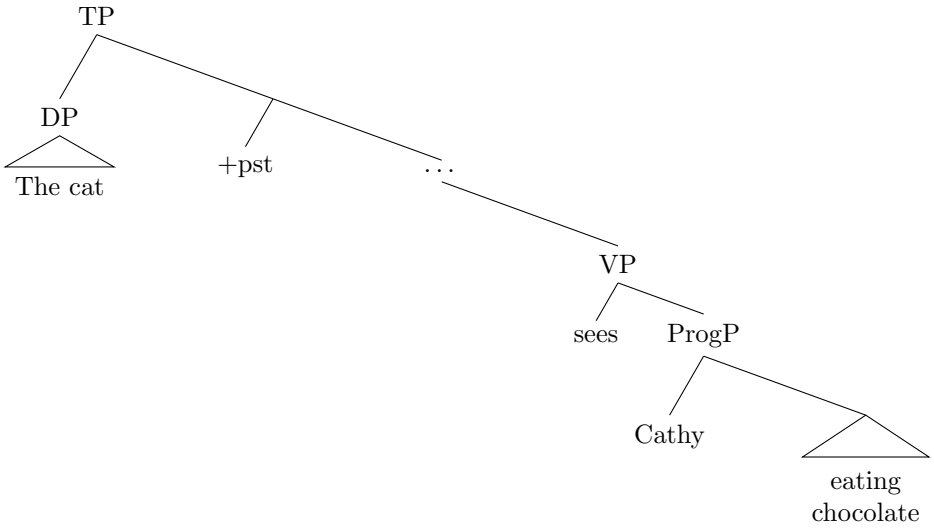
- Label($\{\text{WhP}_Q\ \text{CP}_Q\}$) = $\langle$Q, Q$\rangle$
- $[\![[_{\langle Q,Q\rangle}\text{WhP}_Q, \text{CP}_Q]]\!]$ =(Wh x)(... x ...)

- Unlabelled phrases are interpreted conjunctively.
  - Label($\{\text{VP PP}\}$) = $\emptyset$
  - $[\![[_\emptyset \text{VP PP}]]\!] = [\![\text{VP}]\!](e) \wedge [\![\text{PP}]\!](e)$

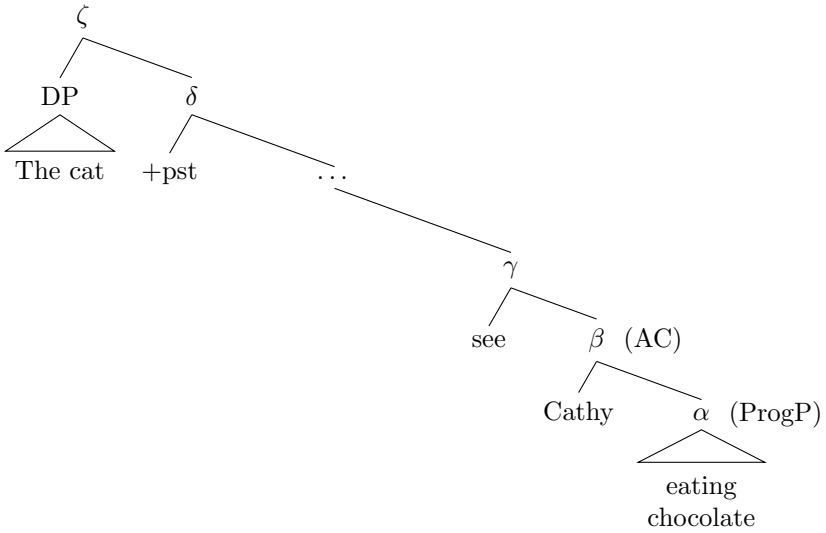
3.3 A note on tree diagrams

- The X-bar schema in tree diagrams is no longer meaningful.
- Labels on non-terminal nodes are purely for reference.
- X-bar labels will be replaced by a mix of conventional labels and greek letters

(9) **X-bar tree**



(10) **Unlabelled tree**



4 Explaining the puzzle

(11) **Argument ACs**
a. {DP, ProgP}
b. *{t, ProgP}

(12) **Adjunct ACs**
a. *{DP, ProgP}
b. {t, ProgP}

4.1 Argument AC subjects cannot move

- This general phenomenon is called **Criterial Freezing**. (Rizzi 2006)
- Chomsky (2015) proposes an account of criterial freezing.
  - $\{XP_F, \{Y_F, ZP\}\}$ is labelled ⟨F,F⟩.
  - Y is "too weak" to label on its own.
  - $\{t, \{Y_F, ZP\}\}$ is unlabellable so it yields a crash.
- Replace XP with the AC subject and Y with Prog and we have our account.

(13) a. *[The girl]$_i$ was see-en [t_{see} [t_i be-ing parodied]]

b. **Derivation**

1.Merge(DP, {Prog, ZP})

2.Transfer+Label(ZP)[4]

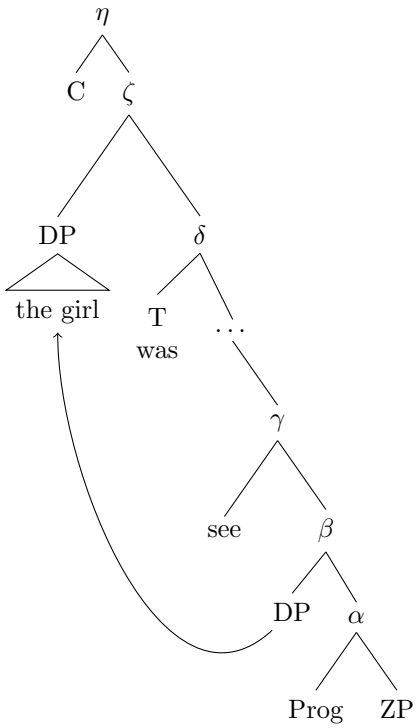
3.Merge(see, β)
...
(Derive the finite clause)
...

4.(Internal-)Merge(DP, δ)

5.Merge(C, ζ)

6.Transfer+Label(η)
CRASH
($\{t, \alpha\}$ is unlabellable.)

*

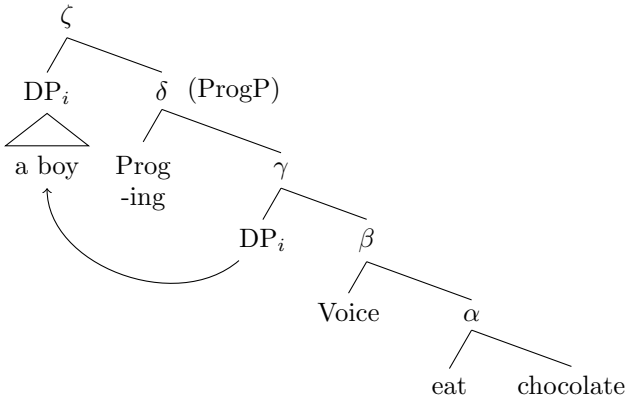


4.2 Adjunct ACC-ing subjects must move

- Since adjuncts are ignored by the LA, we don't need to worry about their labellability.
- {t, ProgP} is still unlabellable, but it doesn't matter.
- {DP, ProgP} will be ruled out for interpretive reasons.
  - The AC subject is also an argument of the progressive verb.
  - ProgP is a predicate of events.

[4]Assuming Prog is a phase head, following Harwood (2015)

(14) A boy eating chocolate



- When the AC adjoins to the perception VP, [Comp Prog] has been labelled and transferred.
- The remainder of the AC will be transferred at the next phase (CP)
- Since ζ is adjoined to the VP, it will be unlabelled.

(15) $\{\text{DP, ProgP}\}_{\zeta} \xrightarrow{Label} [_{\emptyset}\text{DP, ProgP}]$

- Because it is unlabelled, ζ will be interpreted conjunctively
  - DP and ProgP will be predicated of the same event/individual
  - ζ will be interpreted as describing an individual which is both a boy and an event of a boy eating chocolate.
  - Furthermore, the boy which is also an eating event is identical to the boy which is a participant in that event

(16) $[\![[_{\emptyset}\text{DP, ProgP}]]\!] = \lambda z\,[\textbf{boy}(z)\&\textbf{eating\_chocolate}(z)\&\textsc{Agent}(z)(z)]$

- This is incoherent.
- This would violate the i-within-i condition.

(17) ***i*-within-*i* condition**
$[\ldots\alpha\ldots]_{\beta}$ where α and β are coindexed. (Chomsky 1981)

(18) *[a picture of it$_i$]$_i$ (Higginbotham 1983)

5 Conclusion

- Subjects of accusative-*ing* clauses show a strange behaviour.
  - When the AC is an argument, its subject cannot move.
  - When the AC is an adjunct, its subject must move.
- This pattern cannot be explained in a standard minimalist theory.
- Chomsky's label theory, with some modification, can explain the pattern.
- As such, the behaviour of AC subjects represents crucial evidence in favour of a theory like label theory.

5.1 Future directions

- Does this account work for pseudo relatives?
- What are the fuller implications of my modifications to label theory?
- What, precisely, are the crucial differences between standard minimalist theory and label theory that give them different empirical coverage.

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