

Noun phrases and nonprojecting heads

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CLA, Victoria, 2/6/13

Section 1

Introduction

The argument for nonprojecting heads

- ▶ **Projection** is partly about determining which properties of syntactic objects are **externally visible** (e.g. to c-commanding heads).
- ▶ It is therefore closely related to **c-selection** ($=_{df}$ subcategorization for syntactic features): features which project are features which can be selected for.
- ▶ X' -theory ties projection to phrase structure. Bare phrase structure still does, more or less: heads project.
- ▶ Recent results from Bruening (2009) and Abels & Neeleman (2012) can be combined to give an argument that this can't be right: D is a head asymmetrically c-commanding N, but it doesn't project.
- ▶ This was what we intended to present.

What actually selects for what?

- ▶ However, Bruening's argument presupposes the existence of fine-grained c-selection for properties of C.
- ▶ Much work has called this into question (Pesetsky, 1982, 1991; Moulton, 2009), and attempted to explain clausal complementation patterns in purely semantic terms.
- ▶ This leaves us wondering about how much of this argument survives if Bruening's premise is taken away.

Roadmap

1. We start by giving the talk we had planned, as quickly as possible (**The talk**).
2. Next, we scrutinize Bruening's assumptions about c-selection, which underpin the whole argument (**Coda**).
3. Finally, we do our best to weigh the evidence (**Conclusion**).

Section 2

The talk

C-selection for properties of C

- ▶ Bruening (2009) supposes that a verb can select for **syntactic** (not semantic) properties of C.

- (1) a. Sue wants the world to be flat.
b. ??Sue wants that the world be flat.

- ▶ We'll come back to whether he's right to do this in Section 3, but let's grant him this for now.

No c-selection for properties of D

- ▶ Bruening (2009) also notes that (2)–(3) clearly doesn't happen.
 - (2) Samuel is streading a/*the book.
 - (3) John glorped (*his) books.
- ▶ Conclusion (granting these premises): properties of D are not visible to selecting heads in the same way that properties of C are.
- ▶ In other words, noun phrases are not DPs in the same way that clauses are CPs.
- ▶ Rather, noun phrases are NPs.

S-selection for properties of N

- ▶ Finally, Bruening (2009) claims that, to the extent there is any selection for properties of noun phrases, it is selection for semantic properties of N.

- (4)
- a. I gathered the students.
 - b. *I gathered the student.
 - c. I gathered the French Club.
 - d. *I gathered the scissors. (when there is only one pair of scissors)

- ▶ It does seem that the semantic properties in question are not global properties of the noun phrase, but reflect some subset thereof.

- (5) *The boy who was turned by magic into a swarm of bees will soon disperse (Chomsky, 1977).

- ▶ We'll come back to this in Section 3 too.

But D asymmetrically c-commands N

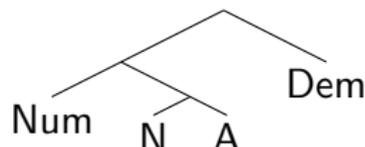
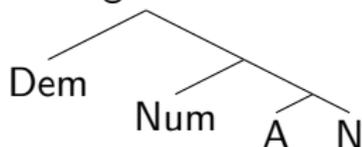
- ▶ Cinque (2005) updated Greenberg's (1963) Universal 20: of 24 possible orders of Dem, Num, Adj, and N, only 14 are attested.

Dem-Num-A-N	Dem-Num-N-A	Dem-N-Num-A	N-Dem-Num-A
*Dem-A-Num-N	Dem-A-N-Num	Dem-N-A-Num	N-Dem-A-Num
*Num-A-Dem-N	Num-A-N-Dem	Num-N-A-Dem	N-Num-A-Dem
*A-Num-Dem-N	*A-Num-N-Dem	A-N-Num-Dem	N-A-Num-Dem
*A-Dem-Num-N	*A-Dem-N-Num	A-N-Dem-Num	N-A-Dem-Num
*Num-Dem-A-N	*Num-Dem-N-A	*Num-N-Dem-A	*N-Num-Dem-A

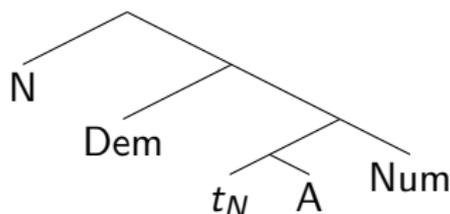
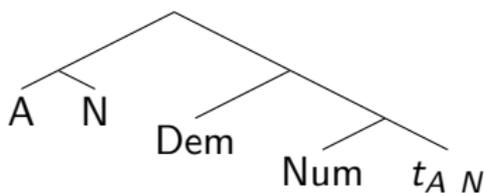
- ▶ Abels & Neeleman (2012), streamlining Cinque's account, explain this using the following stipulations:
 1. All (relevant) movements move a subtree containing N, and target a c-commanding position on the left.
 2. The underlying hierarchy of Dem, Num, A, and N in the extended nominal projection is $Dem \succ Num \succ A \succ N$, where \succ indicates c-command;

U20 examples

1. Base-generable structures:



2. Movement-derived structures:

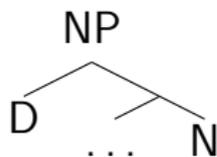


3. Impossible order: Num-A-Dem-N (or all other N-final orders except Dem-Num-A-N):

No way to reorder Dem, Num, and A, without also moving N leftward.

Bruening (2009) + Abels & Neeleman (2012)

- ▶ The stipulation that Dem (and so, we assume, D) asymmetrically c-commands N cannot be eliminated from Abels & Neeleman without overgeneration.
- ▶ But Bruening argues that noun phrases are not projections of D.
- ▶ Combining the two results suggests that D is a **nonprojecting head**.



Not a conclusion

- ▶ At this point, if we fully believed everything we have told you, we would go on to investigate the consequences of nonprojecting heads for phrase structure.
- ▶ We would tell you how the existence of nonprojecting heads makes phrases look more like extended projections.
- ▶ We would go on to investigate the relationship between these strange new syntactic objects and phases.
- ▶ But we have our doubts about some of this.
- ▶ All of the above is built on the assumption that verbs do subcategorize for particular syntactic features of CP.
- ▶ In fact, there is fairly widespread agreement that this is not the case.

Section 3

Coda

Is there c-selection for properties of C?

- ▶ CPs come in the following types (among others):
 1. [\pm finite]
 2. [\pm Q]
 3. [\pm subjunctive]Etc.

These distinctions can be understood in either a syntactic or semantic sense.

- ▶ Grimshaw (1979): selection for such fine-grained properties should be reduced to semantic selection.
- ▶ This raises a (genuine) question: what remains of our talk if there is no c-selection for the fine-grained properties of C that Bruening relies on?

Syntactic factors conditioning complementation

- ▶ Grimshaw: *ask* and *wonder* both select for questions, but only *ask* allows this question to be expressed as a noun phrase.

- (6)
- a. John asked/wondered what time it was.
 - b. John asked/*wondered the time.

Pesetsky (1982): this should be reduced to Case theory: *ask* assigns ACC; *wonder* doesn't (but see Rothstein 1992). This predicts that NP is the only category which will exhibit this variable selectional behaviour.

- ▶ Some verbs require a complement headed by a particular preposition (Pesetsky's 1991 **L-selection**).

- (7) Bill relied on/*under Sue.

Remaining potential c-selection effects I

- ▶ Classical subcategorization effects.

- (8) a. Bill ate (the muesli).
b. Simon devoured *(the muesli).

A hint that this is semantically conditioned:

1. Take a verb like *eat* that participates in the unspecified object alternation (Levin, 1993);
2. Look (on WordNet) for hyperonyms, or for 'troponyms' that specify a manner of acting agentively on the (independently existing) object;
3. Typically, you'll find an obligatorily transitive verb.

- (9) a. John is cooking/*sautéing/*altering
b. He drinks/*guzzles/*consumes.
c. I'm reading/*skimming/*construing in here.

So these alternating verbs have nonrandom semantic properties, suggesting this is not pure syntax (though we have no theory of why).

Remaining potential c-selection effects II

- ▶ Crosslinguistic differences in selectional requirements.

- (10)
- *I think to be happy (in the future).
 - ?I think him to be happy.
 - I think that I/he will be happy.

- (11)
- ?Je pense être heureux.
 - *Je (le) pense (l')être heureux.
 - Je pense que je vais/qu'il va être heureux.

We can't fully explain this, but hope it comes down to the complement of *think/penser* encoding a belief (Moulton, 2009), plus variation in licensing of full NP (English) vs. PRO (French).

- ▶ See Odijk (1997) for more things we can't explain.

An s-selectional asymmetry

- ▶ We cannot definitively evaluate the status of c-selection, but we do want to discuss what remains of Bruening's asymmetry if the role of c-selection is diminished.
- ▶ S-selection for NP types can target properties of N; s-selection for clause types targets properties of T/C (not V).

(12) **Selection for properties of N:** I gathered the students/French Club/*scissors.

- (13)
- Questions:** John asked if it was time to leave.
 - Irrealis:** John requested {that he/to} be allowed to leave.
 - Factive:** We are lucky to have you here/that you are here.

No s-selection for V within CP

- ▶ CP-selecting verbs don't care about aspectual class.

- (14)
- a. John wanted to dance/to sweat/to **really** understand women.
 - b. John was upset that he couldn't dance/sweat/**really** understand women.

- ▶ CP-selecting verbs don't care about argument structure.

- (15) John asked if he could leave/smoke/imagine a post-apocalyptic wasteland/give flowers to his uncle/bet Michael \$20 that you would leave town until Wednesday.

Exception that proves the rule

VP-selecting verbs can s-select for verbal properties

- ▶ Perception verbs can take VP/TP/CP complements.

- (16)
- I saw him leave.
 - ?I saw him to be leaving.
 - I saw that he had left.

- ▶ When they take VP complements, the VP must describe an event, not a state.

- (17) *I saw him be good at arithmetic.

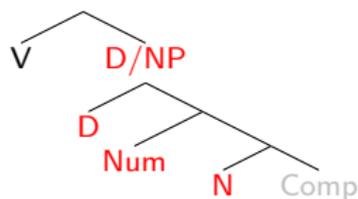
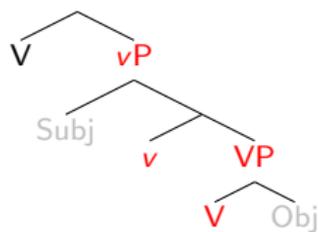
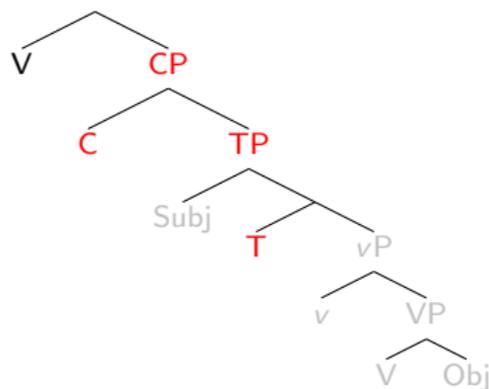
- ▶ But when they take complements bigger than VP, they can no longer care.

- (18)
- I saw him to be good at arithmetic.
 - I saw that he was good at arithmetic.

Putting it all together

The s-selection generalization

- ▶ S-selection only targets properties of the immediately subordinate phase.
- ▶ There are two phases in clauses (CP/vP) but only one in noun phrases.



Lexical and functional projections

- ▶ The T/CP phase is distinct from the N/DP and V/vP phases in that it doesn't contain an open class category.
- ▶ So the T/CP phase, uniquely, contains nothing but “functional” syntactic/semantic material, while N/DP and V/vP are partially “lexical”.
- ▶ This may help explain why s-selection for properties of T/CP is harder to disentangle from c-selection, than s-selection for properties of N/DP.
- ▶ Only a partial answer, though: we still don't know why nothing s-selects for properties encoded on D.

Section 4

Conclusion?

C-selection and s-selection

- ▶ Bruening (2009) probably overstated the extent of c-selection for properties of C, but still highlighted a real asymmetry.
- ▶ This asymmetry suggests that s-selection is strictly local (roughly, phase-bounded), whatever the status of c-selection.
- ▶ This would explain why Bruening's arguments initially seem persuasive:
 - ▶ Noun phrases contain one phase, clauses contain two.
 - ▶ If V has a noun phrase complement, it can s-select for properties of N.
 - ▶ If V has a clausal complement, it **can't** s-select for properties of V.
 - ▶ V can't s-select for other material (arguments of N/V, adjuncts) in either case.

Where do we go from here?

- ▶ If c-selection for properties of C is real, our original argument for nonprojecting heads is still valid.
- ▶ If c-selection for properties of C doesn't happen, the asymmetry described above w.r.t. s-selection holds, but the question of what projects where becomes more acute.
- ▶ This leaves us:
 1. trying to sharpen and motivate the locality of s-selection;
 2. trying to evaluate the remaining arguments for c-selection;
 3. trying to work out what projection is good for.

Acknowledgements

- ▶ Geoff Pullum made similar arguments to Bruening in unpublished talks, shared his slides with us, and argued constructively with Rob about Section 2. Thanks, Geoff!
- ▶ The rest of this reflects Paul's ongoing MA work, funded by Ottawa U's admission scholarship. His participation in CLA is funded by CUPE, and by Ottawa U's Graduate Student Association / Association d'Étudiant.e.s Diplômé.e.s. Thanks, people with money!

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