

# The anatomy of a syntax paper

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Asad Sayeed

Uni-Saarland

**There is a special secret to reading  
syntax papers.**

**(They're mostly like any other  
scientific paper. Shh.)**

# The difference is just the type of content.

Differences in jargon aside, that's a big difference!

- *Hypotheses* are framed as structural descriptions or algorithms.
- *Evidence* is usually in the form of grammaticality/acceptability judgements.
  - Sometimes from a single speaker, but sometimes from surveys.
  - Not clear if the surveys are “worth it” (Sprouse and Almeida 2013).
- *Generalizations* are deductively interpolated between grammaticality/acceptability judgements.

# And they come in different flavours.

A couple of major flavours:

- “Grand” theory papers.
  - Propose a major unification or meta-generalization.
  - Written in response to a large body of work or growing consensus.
- Mechanism-proposing papers.
- “Evidence-gathering” papers.

(No clear lines between these.)

# And now, the paper.

*Preposition-stranding vs. pied-piping: Negative Shift of prepositional complements in dialects of Faroese* by Eva Engels. (2009, Nordlyd Tromsø Working papers in linguistics)

- This is a typical “evidence-gathering” paper.
- Basic point in a nutshell:
  - Negation has special properties in (Germanic) Scandinavian languages.
  - This appears slightly differently in different Scand. languages.
  - The differences can be predicted if one accepts “cyclic linearisation”.

**But what is “cyclic linearisation”???**

**For this we need yet more  
background.**



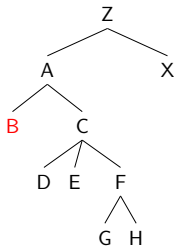
# Recall c-command.

We need to impose some kind of ordering between elements of the structure.

- Many relations are asymmetrical.
  - Like reflexives. “Bob hates himself” vs. “\*Himself hates Bob”.
  - In fact symmetry is massively disfavoured in linguistic structures!
- Ubiquitous in syntax: c-command (U. calls it just “command”).

# A c-commands B iff...

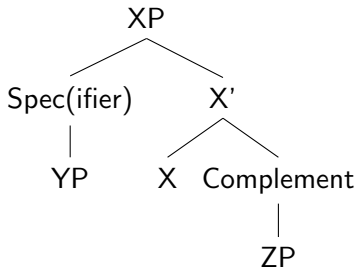
Uriagereka defines (c-)command formally, but what you need to know is this:



- B c-commands: C D E F G H
- B does not c-command: A X Z

**c-command(X, Y) just means: X is  
sister or (great-\*)aunt of Y**

# But there is another asymmetry in Merge.



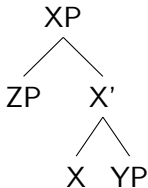
# One Merge is usually different from the rest.

The first merge:



This creates the head-complement relation. X now c-commands everything in the full maximal projection YP.

# The other Merges create specifiers.

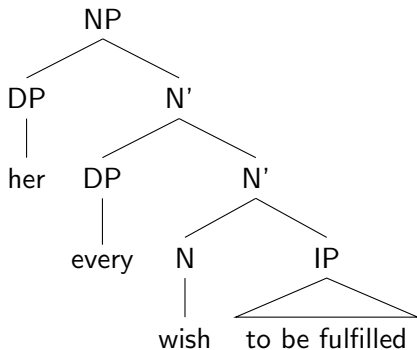


A rough semantic relationship (very rough, do not quote me):

- X's property is applied to the complement.
- ZP restricts the way X applies.

(Then there is *adjunction*, but we'll leave that out for now.)

# Let's illustrate this a little bit.



(Many analysis actually put determiner phrases (DPs) **above** NPs, by the way, with NPs as complements.)

# But it turns out that some specifiers are “special” .

The notion of the “cycle”:

- Sentences appear to have an “outward to inward” structure.
- This appears to be able to repeat itself only bounded by boredom and memory.

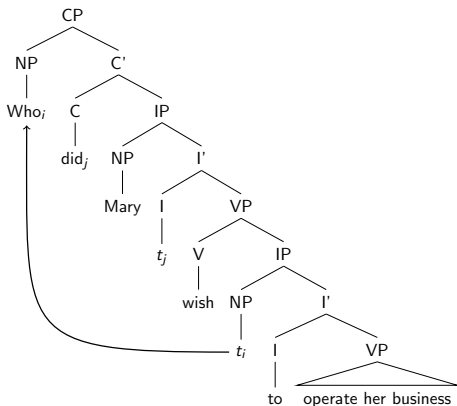
Some variation, eg:

**Clause**  $\Rightarrow$  (**Tense/Aspect/Mood**  $\Rightarrow$  (**Verb**  $\Rightarrow$  (**Complement**  $\Rightarrow$  ...

**Preposition**  $\Rightarrow$  (**Determiner**  $\Rightarrow$  (**Noun**  $\Rightarrow$  (**Rel.Clause**  $\Rightarrow$  ...

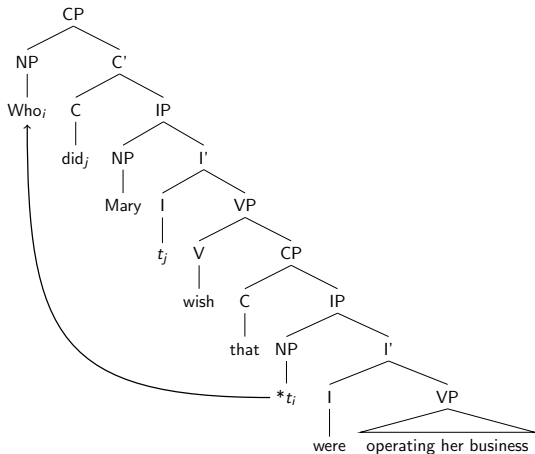


# But it turns out that some specifiers are “special”.



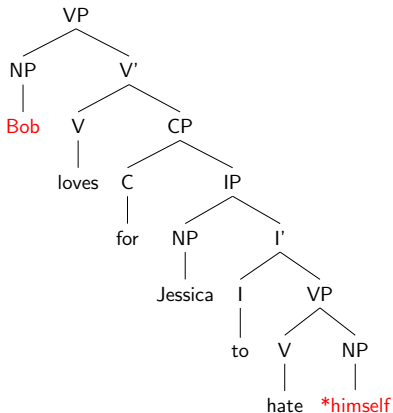
IP is fine for extraction.

# But it turns out that some specifiers are “special”.



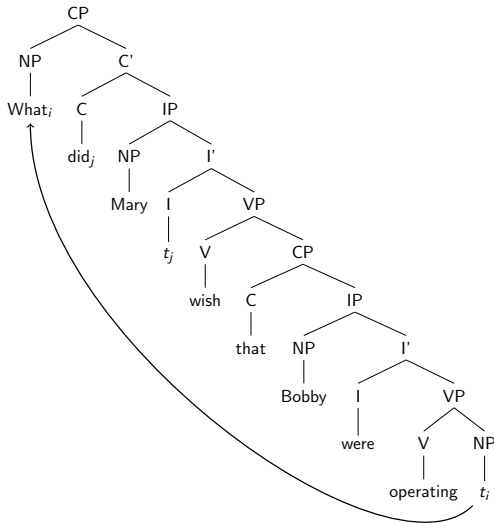
CP is not OK for extraction from the specifier of IP.

# Remember this?



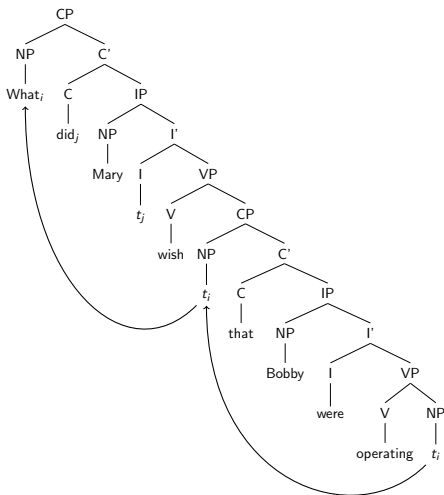
Complementizer phrases (CP) appear to have special powers.

# However, we can extract complement phrases.



# But we can't extract more than one complement phrase.

So we infer that it “goes though” and occupies something, which is Spec,CP.



**There are further tests for this,  
e.g., Irish marks it explicitly.**

# Some further points. . .

- More “barrier” nodes (or more recently “phases”) than CP.
- Are they the same across languages (part of UG) or are they parametric and learned?
- (And some Slavic languages allow multiple wh-questions. How to account for this?)

# Finally, to understand the paper.

We can define “cyclic linearization”, which is key to the Engels paper.

- From Fox and Pesetsky (2004), *Cyclic linearization of syntactic structure*
- What does Spell-Out really do?
  - Linearization of a phase doesn't create strings.
  - Instead produces “ordering statements” that apply within the spelled-out clause.
  - Items can still be extracted to higher clauses, but must still respect the ordering statements.



**Grammaticality then partly depends  
on not generating contradictory  
ordering statements.**

# We'll illustrate this with Engels paper shortly.

But let's now skip back to what Engels is concerned about.

- In section 1, Engels introduces her main interest, which is good for people already “in the know”.
- In section 2, she produces the main data points she wants to explain.
- Negation in Scandinavian (Norwegian):
  - (1) a. Per leste **ikke noen bøker**.  
*Per read not any books*  
'Per didn't read any books.'
  - b. Per leste **ingen bøker**.  
*Per read no books*  
'Per read no books.'

# So far, so good.

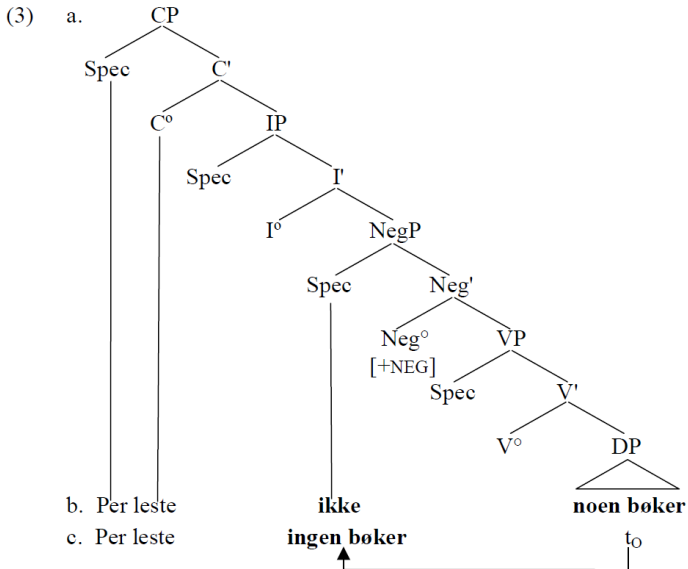
Just like English: two ways to negate. But there's an additional restriction.

- (2) a. Per har **ikke** [<sub>VP</sub> lest **noen bøker**]  
*Per has not read any books*  
'Per hasn't read any books.'
- b. \*Per har [<sub>VP</sub> lest **ingen bøker**]  
*Per has read no books*  
'Per has read no books.'

Scandinavian languages apparently don't allow negation to reside inside the VP.

- NB: when there isn't an auxiliary as in (1), the “surface form” gets tense, etc and “lives” in IP, so (1) is OK.

# An illustration of this.



# Scand. languages vary on how much you can take across the border.

- (4)
- |    |  |           |
|----|--|-----------|
| a. | *Jeg har <u>ingenting</u> sagt t <sub>0</sub> .  | <i>No</i> |
| b. | Jeg har <u>ingenting</u> sagt t <sub>0</sub> .   | <i>Da</i> |
| c. | Jag har <u>ingenting</u> sagt t <sub>0</sub> .   | <i>Sw</i> |
| d. | Ég hef <u>ekkert</u> sagt t <sub>0</sub> .   | <i>Ic</i> |
| e. | Eg havi <u>einki</u> sagt t <sub>0</sub> .<br><i>I have nothing said</i><br>'I have said nothing.' | <i>Fa</i> |

# Norwegian forces you to leave something behind.

- (5) a. \*Jeg har **sagt ingenting.**
- b. \*Jeg har **ingenenting sagt** to.  
*I have nothing said*  
'I have said nothing.'
- c. Jeg har **ikke sagt noe.**  
*I have not said anything*  
'I haven't said anything.'

You should interpret this:

- *if* something is forced to be left behind, it must not be negative.
- *that* something is forced to be left behind exposes a part of the system.

# Furthermore, preposition-stranding behaves interestingly.

In Danish:

- (6) a. ?Jeg har **ingen** **peget** **på** t<sub>0</sub>.  
*I have nobody pointed at*  
'I have pointed at nobody.'
- b. \*Jeg pegede **ingen** t<sub>V</sub> **på** t<sub>0</sub>.  
*I pointed nobody at*  
'I pointed at nobody.'

They're both bad, but leaving negation behind the main verb is worse.

# Cyclic linearization allows us to make some generalizations.

When the verb has already moved to IP, we get “string vacuous” movement as in (1). Ordering constraint preserved.

## (10) String-vacuous NegS in Sc, (1b)

**VP:** [VP V O<sub>[+NEG]</sub>]

Ordering: V < O

**CP:** [CP S V ... [NegP O<sub>[+NEG]</sub> ... [VP t<sub>V</sub> t<sub>O</sub>]]]

Ordering: S < V                      V < O  
                  V < O



# What breaks the ordering constraint?

VP is spelled out, so order must be preserved even when leaving VP.

(11) No NegS across a verb *in situ* in No, (4a)

**VP:** [VP V O<sub>[+NEG]</sub>]

Ordering: V < O

**CP:** \*<sub>[CP S Aux ... [NegP O<sub>[+NEG]</sub> ... [VP V t<sub>O</sub>]]]</sub>

Ordering: S < Aux

Aux < O

O < V

V < O

# But when you can just take out the negation...

The V<O order is once again preserved.

(12) *Ikke...noen* variant, (5c)

**VP:** [VP V O]

Ordering: V<O

**CP:** [CP S Aux ... [NegP *ikke* ... [VP V O]]]

Ordering: S<Aux                    V<O  
              Aux<*ikke*  
              *ikke*<V

# So what does that have to do with Faroese?

Engels collected some Faroese data by survey.

- (15) a. Í dag hevur Petur **ongan**      **tosað** **við**  $t_O$   
b. Í dag hevur Petur **við** **ongan** **tosað**  $t_{PP}$   
c. Í dag hevur Petur                      **tosað** **við** **ongan**  
*today has Peter*                      *spoken with nobody*  
'Today Peter has spoken with nobody.'

<i>Fa</i>
34/34 (34/34)
0/34 (1/34)
1/34 (7/34)

Faroese forces preposition-stranding! (Unlike Danish, which just tolerates it.)

# But there is dialect variation.

If you push the verb up to IP so it gets tense.

(16)

a. Í gjár tosaði P **ongan** t<sub>V</sub> **við** t<sub>O</sub>

b. Í gjár tosaði P **við ongan** t<sub>V</sub> t<sub>PP</sub>

*yesterday spoke P with nobody*

'Yesterday Peter spoke with nobody.'


M	T <sub>V</sub>	S	K	T	F
7/7 (7/7)	0/4 (0/4)	0/4 (2/4)	0/6 (2/6)	1/8 (1/8)	1/5 (1/5)
2/7 (4/7)	1/4 (3/4)	1/4 (2/4)	0/6 (1/6)	4/8 (6/8)	3/5 (3/5)

# So what is the proposed explanation?

This is how in-situ verbs work in languages with this property:

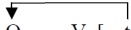
- (19) **NegS stranding a preposition in WJ/DaL/Fa, main verb *in situ*, (8a)/(15a) (revised version of (17) above)**

PP: [PP O<sub>[+NEG]</sub> P t<sub>O</sub>]



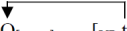
Ordering: O<P

VP: [VP O<sub>[+NEG]</sub> V [PP t<sub>O</sub> P t<sub>O</sub>]]



Ordering: O<V      O<P  
V<P

CP: [CP S Aux ... [NegP O<sub>[+NEG]</sub> ... [VP t<sub>O</sub> V [PP t<sub>O</sub> P t<sub>O</sub>]]]]



Ordering: S<Aux      O<V      O<P  
Aux<O      V<P  
O<V

**Then most of the rest of the paper  
deals with objections and special  
cases.**

# Like why do some dialects forbid it for tensed verbs?

- Engels refers to her own previous work on “edge feature” transmission.
- V transmits an “edge feature” to P, making its specifier “special” as above.

(I have some objections to the idea since I think all Ps ought to be phases, but that’s for another, more advanced course. . . )

**But mostly, that's it! (Give or take  
a bit about pied-piping)**



# But from your point of view. . .

Specialists worry about covering all the exits in order to publish.

- For people OUTSIDE theory, you can still get an idea of what is being said about language.
- This paper surveyed Scandinavian languages and found an “exception”.
- That “exception” provided support for a theory of “cyclic linearization”.