CAS LX 321 / GRS LX 621 *Syntax: Introduction to Sentential Structure*

October 2ish, 2018

1   Complement Sentences

Sentence forms	Lisa is a genius.	Declarative
	Is Lisa a genius?	Interrogative (yes-no question)
	Who is a genius?	Interrogative (*wh*-question)
	What a genius Lisa is!	Exclamative
	Ask Lisa	Imperative

Sentences can be *embedded* within other sentences.

(1) a.   Lisa left.
  b.   Bart said Lisa left.
  c.   Homer believed Lisa left.
  d.   Homer believed Bart said Lisa left.

(2) In a high-pitched voice, Homer said Lisa left and Bart stayed.

(3) a.   Lisa give the book to Bart on Tuesday.
  b.   Lisa give the book to Bart on Tuesday at school.
  c.   * Lisa give the book on Tuesday to Bart.
  d.   * Lisa give the book at Bart.
  e.   * Lisa give the book to Bart to Milhouse.

What was our conclusion about the status of *to Bart* with respect to *give*?

(4)   *give*, V, [+ __ ?]

What does it mean for PP to have a [to] feature? (or [dat] perhaps, the feature of *to* here.)

(5)   *to*, P, [to]

(6)   PP → P NP

2   Selection

Now, sentences of various types can be embedded, *but* certain verbs seem to care about what kind.

(7) a.   Bart believes that Marge is a genius.
  b.   * Bart believes whether Marge is a genius.

(8) a.   * Bart wonders that Marge is a genius.
  b.   Bart wonders whether Marge is a genius.

(9) a.   Bart knows that Marge is a genius.
  b.   Bart knows whether Marge is a genius.

Three observations:

- *Believe*, *wonder* (as compared to *know*) are selective about their complements.

- Complement type is signaled/determined by *that* vs. *whether*.

- *That* goes with declaratives, *whether* goes with yes-no interrogatives.

We know that *Marge is a genius* is an S. (Or, at least, what we've been calling an S.)

So what are *whether* and *that*?

The **introduce** the embedded sentences. They allow the S to be a **complement**.
They are **complementizers**. We'll abbreviate that as being category **C**.
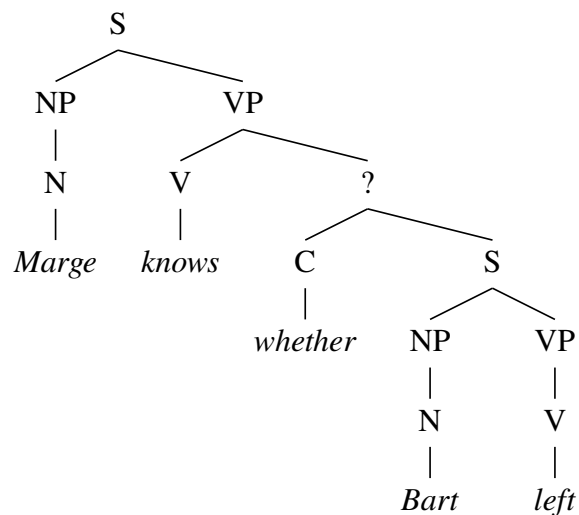
(10)   *whether*, C, [+Q]

(11)   *that*, C, [+D]

So, what is the structure of *whether Bart left* in *Marge asked whether Bart left*?

We have a C and an S. And an S is an NP and a VP. So there are a couple of possibilities.

(12)   a. Marge asked whether Bart left and whether Lisa stayed.
        b. Marge asked whether Bart left and Lisa stayed.

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                        S
                   ┌────┴────┐
                  NP         VP
                   │      ┌───┴───┐
                   N      V       ?
                   │      │    ┌──┴──┐
                 Marge  knows  C     S
                              │   ┌──┴──┐
                          whether NP    VP
                                  │     │
                                  N     V
                                  │     │
                                 Bart  left
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Now—we know that *believe* and *ask* make selectional demands of their complements.
The complements have hte relevant feature—e.g., *whether* is [+Q].
The constituent that contains *whether* and the S must also be [+Q].
That is, the ? gets its [+Q] from *whether*.
So, *whether* is the **head** of ?

2

3 CP

We saw how that worked for a PP.

- *whether* is a C.

- *to* is a P.

- *to* NP is a PP.

- *whether* S is a CP.

So, we add to our grammar:

(13) CP → C S   [C is the head]

And we have verbs that embed CPs like *ask* and *believe*, so we also need:

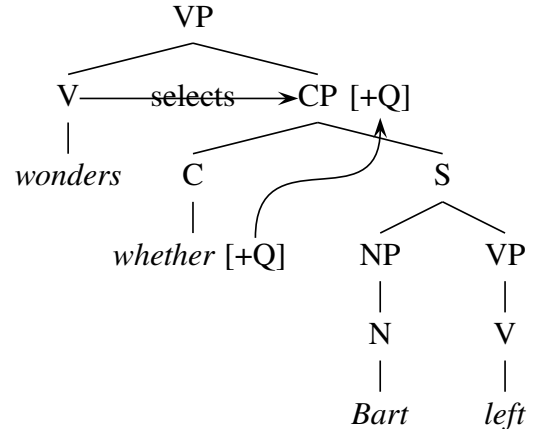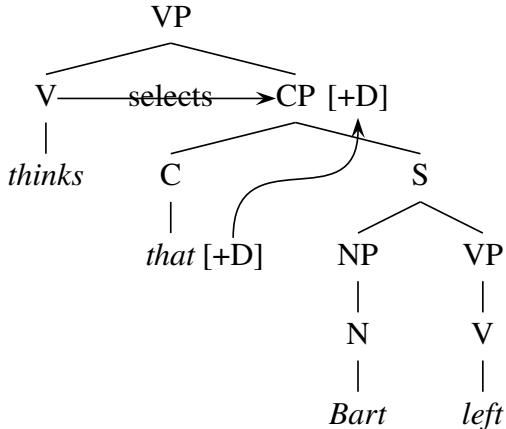(14) VP → V CP   [V is the head]

And finally we can specify the lexical entries for our example embedding verbs:

(15) *believe*, V, [+ __ CP$_{[+D]}$]

(16) *ask*, V, [+ __ CP$_{[+Q]}$]

(17) *know*, V, [+ __ CP]   (or [+ __ CP$_{[+D]}$], [+ __ CP$_{[+Q]}$])

4 To recap

Clause type is a feature of the complementizer.
   The complementizer is the head of CP, a constituent containing C and S.
   CP inherits the clause type features of C.
   Lexical rules for V can select for specific clause type complements.

But wait, this is where we started:
Sentences can be *embedded* within other sentences.

(18)　a.　Lisa left.

　　　b.　Bart said Lisa left.

　　　c.　Homer believed Lisa left.

　　　d.　Homer believed Bart said Lisa left.

So, should we add an alternative lexical entry for *believe* that allows either an S or a $CP_{[+D]}$ comple-ment?

No. No we should not.

A simpler alternative to saying that any verb can take a $CP_{[+D]}$ comeplement can also take an S, complement, interpreted as a declarative, is to say that there are two ways to pronounce the declarative complementizer. There seem to be two ways to pronounce the interrogative complementizer, it wouldn't be all *that* weird.

(19)　　*whether*, C, [+Q]

(20)　　*if*, C, [+Q]

(21)　　*that*, C, [+D]

(22)　　∅, C, [+D]

5　Finiteness

(23)　a.　Marge hopes for Bart to leave.

　　　b.　Marge hopes that Bart will leave.

Changes are, we all remember learning that *to leave* is the **infinitive form.**
What's the other form, the one that's not infinitive? Logically enough, it's a **finite** form.
We consider infinitive clauses to be **untensed** and finite clauses to be **tensed**.

(24)　a.　* Marge hopes for Bart will leave

　　　b.　* Marge hopes that Bart to leave

First guesses here: *for* is like *that*. They're both Cs.
But *for* goes with infinintive clauses and *that* goes with finite clauses.
This sounds kind of similar to what we saw with verbs selecting clause types.
This is Cs selecting finiteness.

(25)　　*that*, C, [+D], [+ __ S$_{+TNS}$]

(26)　　*for*, C, [+D], [+ __ S$_{-TNS}$]

We're partway there now, but we can't yet quite draw our trees for (23). What is *to*?
Or, for that matter, *will*?

Let's start with *will*.
Will a **modal** (or "modal verb"—but that's confusing. Modal.)

Other modals include: *would*, *shall*, *should*, *can*, *could*, *may*, *might*, *must*.

(Maybe—for the moment—-also *have-to*, *ought-to*, *need-to*, *used-to*, though clearly that's kind of a placeholder for something more sophisticated later.)

They sit between the subject and the verb.

Somewhere in the past, we'd handled these by saying they are verbs that take VPs. (I think, maybe we didn't. But we might have if we needed to.)

We're now going to consider a different approach.

(Spoiler: shortly, we're going to do something that's a bit like combining the two approaches.)

Any clause with one of those modals listed above is a finite clause.

(27) a. Marge hopes that Bart will leave.

  b. * Marge hopes for Bart will leave.

  c. Marge hopes that Bart can leave.

  d. * Marge hopes for Bart can leave.

  e. Marge hopes that Bart might leave.

  f. * Marge hopes for Bart might leave.

Any clause with *to* instead is an infinitive clause.

(28) a. * Marge hopes that Bart to leave.

  b. Marge hopes for Bart to leave.

Since these things that sit between the subejct and VP are determining **tense** we are going to consider them to be of category **T**.

(29) *to*, T, [–TNS]

(30) *will*, T, [+TNS]

(31) *can*, T, [+TNS]

(32) *shall*, T, [+TNS]

etc.

(33) S → NP T VP

And now, remember the logic we used before.

For selects for an S$_{[-TNS]}$. *That* selects for an S$_{[+TNS]}$.

The [±TNS] feature is a property of T. But is has to get to S. Which means?

T is the head of S.

And actually, that makes "S" kind of a clunky name for this.

If P is the head of PP, V is the head of CP, the thing T is the head of should be TP.

So:

(34) TP → NP T VP

(35) CP → C TP

This is really just a re-labeling of S. Nothing's changed except that we're making explicit the fact that T is the head of this thing.

But now, wait a minute.

(36) a. Bart left.
b. Maggie cries.

Is there no T?

Is TP getting [+TNS] from *left*?

Left is tensed after all.

Again—we'll appeal to simplicity. It would be simpler to say that [±TNS] lives in T. *Always*. Rather than make the syntax more complex, we'll make the pronunciation more complex. "Left" is how you pronunce "T$_{[+TNS, PAST]}$ leave" For French enthusiasts, cf. *à la*, *de la*, *au*, *du*.