Ling 165B: Syntax II

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VP ellipsis: first glance I

Here is an example of "VP ellipsis":

(1) John smokes. He shouldn't.   Heim & Kratzer (1998)

The second sentence is missing a VP on the surface but it is understood as if there was one present.

(2) John smokes. He shouldn't <smoke>

How does this operation work? It is not allowed to omit arbitrary material in arbitrary environments:

(3) *John smokes. He shouldn't <drink>

Ellipsis of a VP happens under identity with VP in the preceding clause:

(4) Identity condition on Ellipsis (simplified)
   The elided VP is understood as being identical to another overt VP in the discourse context.

VP ellipsis: first glance II

How do we get the intended meaning from something that is phonologically absent?

- → Structural approaches assume there is underlying syntactic structure at the ellipsis site, and it's from this covert syntactic structure that we get the intended meaning.

- → In other words, while the structure is not there at the level of pronunciation, (PF), it is there at the level of interpretation (LF).

- → There are two main variants: PF-deletion (Ross, 1967) and LF-copying (Williams, 1977).

Our model of grammar I

How does deletion work?
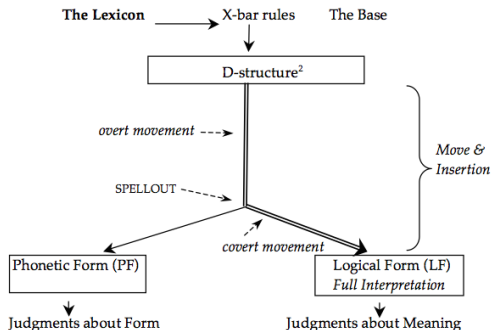
LF and PF are two interface levels, because they represent the interface with the phonological system and with the interpretive system respectively.

PF: what the sentence sounds like

LF: what the sentence means

Copying or delition happens between SPELLOUT *and LF.*

Our model of grammar II

PF-Deletion

→ The PF-deletion approach starts with the syntactic structure that represents the intended meaning of the sentence, then deletes the VP of the second clause because it is structurally identical to another VP in the discourse context.

→ Deletion happens after SPELLOUT and does not affect the LF (interpretation) of the sentence. It only affects the pronunciation.

(5) a. John smokes. He should not smoke   SPELLOUT and LF.
   b. John smokes. He should not ~~smoke~~   PF-Deletion rule
   c. John smokes. He should not.   PF

Our model of grammar III

LF-Copying

→ The LF-copying approach starts with a syntactic structure where there is a phonologically null anaphoric element at the ellipsis site. identical to another VP in the discourse context.

→ When the derivation splits off to PF and LF, the structure with the phonologically null anaphoric element is what gets pronounced, but at LF there is a process which copies the antecedent VP to the ellipsis site.

    (6)   a. John smokes. He should not [$_{VP}$ ∅]   SPELLOUT and PF
          b. John smokes. He should not [$_{VP}$ smoke]   LF-copying rule
          c. John smokes. He should not smoke   LF

Our model of grammar IV

LF-copying is a process that happens after spellout.

→ It's a copying operation that gives a reference to a referential pronoun for example.

→ It happens covertly on the way to LF after SPELLOUT

→ It is triggered by (co)indexation.

<div>

Frank$_i$ thinks that he$_i$ should come.   SPELLOUT and PF

⇓ *covert copying rule*

Frank$_i$ thinks that Frank$_i$ should come.   LF

</div>

Scope ambiguities I

Can you think of other cases of mismatch between pronunciation and meaning (and therefore after SPELLOUT*)?*

<u>Recall</u>: scope ambiguities with quantifiers (ambiguities that occurs when two quantifiers or similar expressions can take scope over each other in different ways in the meaning of a sentence.)

(7)   Some boy danced with every girl

 (i) There is a unique boy, Peter, who danced with every single girl.

    (8) $\exists x[boy(x) \& \forall y[girl(y) \rightarrow dance(x,y)]]$ $\exists > \forall$

 (ii) Every girl is such that some boy (not necessarily the same boy danced with her.

    (9) $\forall y[girl(y) \rightarrow \exists x[boy(x) \& dance(x,y)]]$ $\forall > \exists$

Scope ambiguities II

The surface position of the quantifiers in (7) does not predict the reading (ii). This reading is normally derived through <u>Quantifier Raising</u>. That is, we move the universal quantifier so that it can scope over the existential one.

→ This movement that we can't hear is an example of <u>covert movement</u> that happens after SPELLOUT.

(10) [TP [DP some boy]i ... [VP ti danced [PP with [DP every girl]]]]

(11) [[DP every girl]k [TP [DP some boy]i ... [VP ti danced [PP with tk]]]]

<u>Practice</u>: show the main steps of derivation of (11). You should include: (i) deep structure, (ii) spell out (iii) PF and (iv) LF.

<u>Question</u>: we discussed a different type of ambiguity in this class. An example is given below:

(12) John killed the prisoner with a knife.

What is the difference between the type of ambiguity displayed by (12) and the scope ambiguity in (7)?

Scope ambiguities III

Now consider the following sentence:

(13) Someone hates every faculty member.

(13) is ambiguous. What happens when we add *and adores the princess*?

(14) Someone hates every faculty member and adores the princess.

Can you explain it?

Scope ambiguities IV

Any funny ones?

Here is mine:

(15) A woman gives birth every 48 seconds.

VP ellipsis and sloppy and strict readings I

Now we can go back to the difference between coreference and binding. We can distinguish the two even when the antecedent is a referential expression.

(16) John [loves his wife] and so does Bill < love his wife>.

    a. John loves Max's wife, and Bill loves Max's wife.   "strict identity", coref.

    b. John loves John's wife, and Bill loves John's wife.   "strict identity", coref.

    c. John loves John's wife, and Bill loves Bill's wife.   "sloppy identity", binding

There are no "mix and match" readings, with coreference in one conjunct and binding in the other.

$\neq$ John loves Max's wife, and Bill loves Bill's wife.

How does this work? Pronouns can be

  (i) interpreted referentially (strict readings)

  (ii) interpreted in some other way which makes them covary with the antecedent (sloppy readings). *How?*

VP ellipsis and sloppy and strict readings II

Let's look at the referential cases first. They are easy to account for! Both the LF-copying approach and the PF-deletion approach can derive them.

Here is the derivation for reading (a) under a LF-copying approach:

(17) a. John$_j$ loves his$_i$ wife and so does Bill [$_{VP}$ $\emptyset$].   SPELLOUT and PF
     b. John loves Max's wife and so does Bill [$_{VP}$ $\emptyset$].   covert pronoun-copying rule
     c. John loves Max's wife and so does Bill [$_{VP}$ love Max's wife] VP-copying rule
     d. John loves Max's wife and so does Bill love Max's wife   LF

Here is the derivation for reading (b) under a LF-copying approach:

(18) a. John$_i$ loves his$_i$ wife and so does Bill [$_{VP}$ $\emptyset$].   SPELLOUT and PF
     b. John loves John's wife and so does Bill [$_{VP}$ $\emptyset$].   covert pronoun-copying rule
     c. John loves John's wife and so does Bill [$_{VP}$ love John's wife] VP-copying rule
     d. John loves John's wife and so does Bill love John's wife   LF

Discuss with your neighbor: do we need to order the cover pronoun-copying rule and the VP-copying rule?

VP ellipsis and sloppy and strict readings III

Now derive the LF and PF of readings (a) and (b) under a PF-deletion approach!

(19) John$_j$ loves his$_i$ wife and so does Bill love his$_i$ wife   SPELLOUT

(20) John$_i$ loves his$_i$ wife and so does Bill love his$_i$ wife   SPELLOUT

VP ellipsis and sloppy and strict readings IV

But how do we derive the sloppy reading? The sloppy reading is particularly problematic since we've seen that the elided VP must be identical to its antecedent VP. Under the sloppy reading [VP loves John's wife] ≠ [VP loves Bill's wife]

In sloppy readings, the pronoun is not interpreted referentially.

→ It is interpreted as a bound variable, whose value depends on a local antecedent (it covaries with a binder).

→ The binder (John or Bill) behave like quantifiers (they undergo QR)

≈ John has the property of being a x who likes x's wife. Bill does [have the property of being a x who likes x's wife] too.

→ The binder has to c-command the pronoun when it is interpreted as a variable.

→ We'll use a different notation when for cases in which the pronoun is interpreted as a variable: him_x.

We need a rule that copies the content of the local antecedent into the bound variable. Let's call this rule *covert variable-copying rule*.

<u>Let's derive this together!</u> We are going to look at the LF-copying approach first.

<u>Question</u>: Do we need to order the covert variable-copying rule with respect to the VP-copying rule?

(21) a. John loves his$_x$ wife and so does Bill [$_{\text{VP}}$ ∅].   SPELLOUT and PF
    b.
    c.
    d. John loves John's wife and so does Bill love Bill's wife   LF

Now, let's consider the other ordering:

(22) a. John loves his$_x$ wife and so does Bill [$_{\text{VP}}$ ∅].   SPELLOUT and PF
    b.
    c.
    d.

<u>On your own</u>: do the derivation for the sloppy reading under a PF-deleting approach.

VP ellipsis and sloppy and strict readings VI

The same is true for VP-ellipsis with quantificational subjects, where either both pronouns are bound or both are referential, and if both are referential, they must have the same referent.

(23) Every woman in Culver City [hates her neighbor], but no woman in Los Feliz does <hate her neighbor>

    a. Every woman in C.C. hates her own neighbor, but no woman in Los Feliz hates her own neighbor.   "sloppy identity"

    b. A free-variable "her" identified pragmatically: it's all about Ms. Jones's neighbor, for instance.   "strict identity"

    c.*Every woman in CC hates her own neighbor, but no woman in LF hates Ms. Jone's neighbor

    d.*Every woman in CC hates Ms. Jone's neighbor, but no woman in LF hates her own neighbor.

VP ellipsis and scope ambiguities I

(24) Some boy admires every teacher. Some girl does, too.

    a. [$_{TP}$ [$_{DP}$ some boy]$_i$ ... [$_{VP}$ t_i admires [$_{DP}$ every teacher]]]

       [$_{TP}$ [$_{DP}$ some girl]$_i$ ...does [$_{VP}$ t_i admire [$_{DP}$ every teacher]]]   ($\exists > \forall$)

    b. [[$_{DP}$ every teacher]$_k$ [$_{TP}$ [$_{DP}$ some boy]$_i$ ... [$_{VP}$ t_i admires t_k]]]

       [[$_{DP}$ every teacher]$_k$ [$_{TP}$ [$_{DP}$ some girl]$_i$ ... [$_{VP}$ t_i admires t_k]]]   ($\forall > \exists$)

    c.*[$_{TP}$ [$_{DP}$ some boy]$_i$ ... [$_{VP}$ t_i admires [$_{DP}$ every teacher]]]

       [[$_{DP}$ every teacher]$_k$ [$_{TP}$ [$_{DP}$ some girl]$_i$ ... [$_{VP}$ t_i admires t_k]]]

    d.*[[$_{DP}$ every teacher]$_k$ [$_{TP}$ [$_{DP}$ some boy]$_i$ ... [$_{VP}$ t_i admires t_k]]]

       [$_{TP}$ [$_{DP}$ some girl]$_i$ ...does [$_{VP}$ t_i admire [$_{DP}$ every teacher]]]

The two VPs have to be identical:

(25) a. [$_{VP}$ t_i admires [$_{DP}$ every teacher]]   ($\exists > \forall$)

    b. [$_{VP}$ t_i admires t_k]   ($\forall > \exists$)

VP-ellipsis and verb movement

1. Consider the following sentence:

   (26) John fell down and Peter did <fall down>, too.

   If we assume that tense lowering is an example of overt movement that happens before SPELLOUT and the VP-copying/deletion rule happens after SPELLOUT, do you see a problem?

2. The following is a case of VP-ellipsis in KiShawili (data from Ngonyani 1996). Does it provide evidence for (or against) V to T movement in KiSwahili?

   (27) Mama alitaka kumnunulia motto viatu na baba alitaka pia
        mother want   buy   child shoes and father want   also
        'Mother wanted to buy the child shoes and father did too' (literally 'father wanted also')

Causative Affixes

Let's consider the following sentences:

(28) The towel was wet

(29) They will wet the towel

What is the relation between the adjective *wet* in (28) and the de-adjectival causative verb *wet* in (29)?

We are going to consider two hypotheses:

1. A syntactic treatment and

2. A morphological treatment.

We will favor the syntactic account.

Syntactic account to causative verbs I

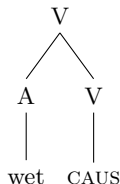According to the syntactic account, there are two syntactic atoms in (29):

$\rightarrow$ the adjective *wet* that takes a DP subject
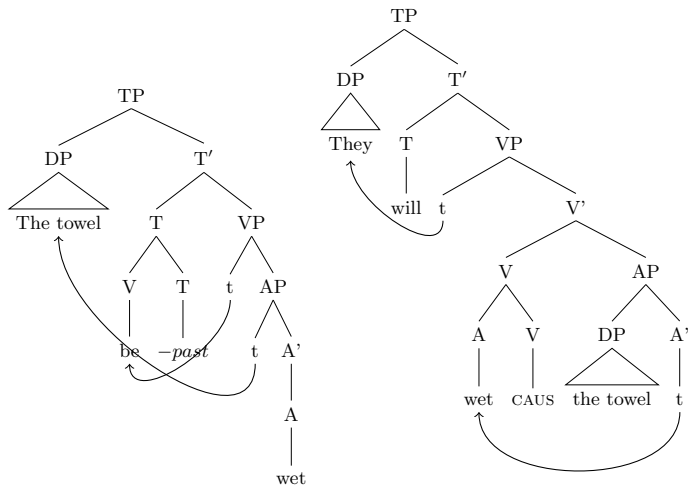
         wet   **A** $\underline{DP_{theme}}$

$\rightarrow$ the verb CAUS that selects a causer or cause as subject.

         CAUS   **V**   bound $\underline{DP_{agent/cause}}$ AP

The verb *wet* is a complex head, which results from head movement.
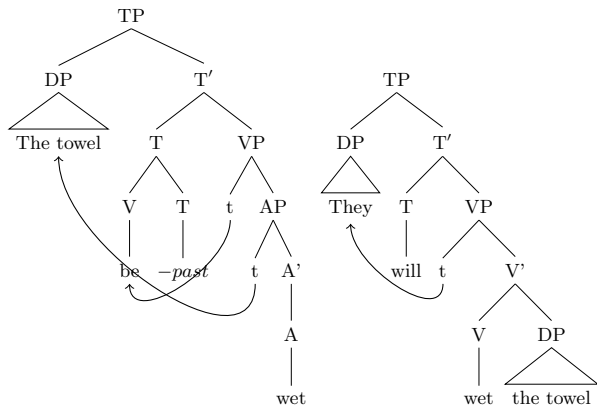
Syntactic account to causative verbs II

Morphological account to causative verbs I

According to the morphological account the verb *wet* is composed by a separate morphological component. For this reason, it is a syntactic atom with a separate lexical entry:

wet	A	$\underline{DP_{theme}}$	
wet	V	$\underline{DP_{agent/cause}}$	DP_{theme}

Morphological account to causative verbs II

Not only As: anticausative verbs. I

Can CAUS *combine with other categories beside As?*

Yes, there is a large class of verbs in English that alternate between an intransitive use and a causative interpretation.

(30) a. The wood burned
     b. Sam burned the wood

(31) a. The ice melted
     b. The sun melted the ice

(32) a. The glass broke
     b. Someone broke a glass.

(33) a. The water boiled
     b. I boiled the water

→ In their intransitive usages (that is when they occur without a direct object) these verbs are often called inchoative or anticausative verbs.

→ The alternation shown above is referred to as the causative/inchoative alternation.

Not only As: anticausative verbs. II

burn	V		$\underline{DP_{theme}}$		meaning "be(come) wet"
CAUS	v	bound	$\underline{DP_{agent/cause}}$	VP	meaning "cause to be(come) V"
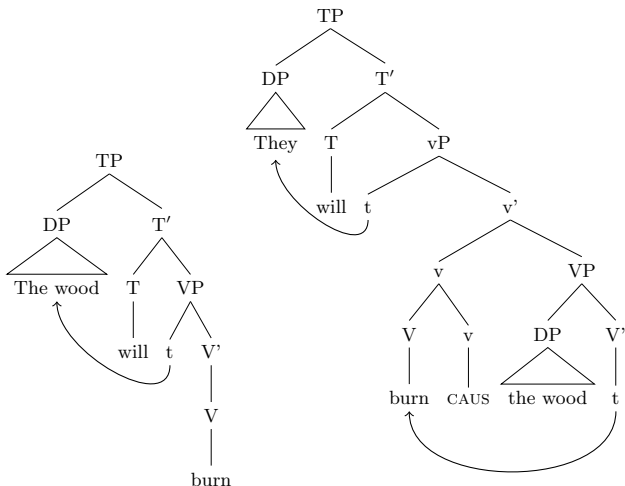
Not only As: anticausative verbs. III

→ the CAUS V is referred to as 'little v'.

→ Because what looks like a single verb (causative *burn*) seems to be associated simultaneously with two VPs, this type of structure is said to have a <u>VP shell</u> structure, with a causative *v* shell combining with an (inchoative) VP.

Silent CAUS and pronounced causatives I

To some extent, silent CAUS and overt causative *make* behave similarly:

(34) a. I clean$_i$-CAUS [$_{AP}$ the table t$_i$]   (35) a. I made [$_{AP}$ the table clean]
     b. I wet$_i$-CAUS [$_{AP}$ the towel t$_i$]   b. I made [$_{AP}$ the towel wet]
     c. I burn$_i$-CAUS [$_{VP}$ the wood t$_i$]   c. I made [$_{VP}$ the wood burn]

However they don't behave in the exact same way. CAUS is more "picky" regarding the kind of APs or VPs that it allows as complements:

(36) a. I made [$_{AP}$ John happy]
     b.*I [[happy$_i$-CAUS]-ed] [$_{AP}$ John t$_i$]

(37) a. They made [$_{VP}$ John laugh]
     b.*They [[laugh$_i$-CAUS]-ed] [$_{VP}$ John t$_i$]

Identifying *v* CAUS as an exact but silent equivalent of *make* overgeneralizes: it predicts that too many forms are possible.

Silent CAUS and pronounced causatives II

The causative/anticausative alternation seems to be typical of change of state verbs (and not of other types of transitive verbs):

(38) a. They ate the rice
   b.*The rice ate (*meaning: the rice got into an eaten state*)
   c.*They [[eat$_i$-CAUS]-ed] [VP John t$_i$ the rice]

How do we encode this?

One way of encoding this is by modifying the lexical entry for CAUS accordingly, to indicate that it selects a VP or an AP complement of a certain (semantic) kind only (e.g. it must indicate change of state of a particular kind):

CAUS   v $\underline{DP_{agent/cause}}$ AP/VP with certain semantic properties...

Draw tree structures for the following sentences:

(39) a. The ball may drop.
     b. The children might drop the ball.

Causative Errors in English-speaking Children I

Starting at the age of 2, children use noncausative intransitive verbs ((40)), transitive verbs ((41)), adjectives ((42)) and locative particles with a causative meaning ((43)) (data form Bowerman (1974)):

(40) <u>Intransitives</u>
    a. I come it it closer so it won't fall. (= make it come closer; bring it closer) (Christy, 2;3)
    b. I want to stay this rubber band on. (= let it stay on; leave it on)   (Christy, 3;7)
    c. I'm singing him. (= making him sing)   (Christy, 3;1)

(41) <u>Transitives</u>
    a. No, mommy, don't eat her yet, she's smelly! (= feed her)   (Christy, 3;8)
    b. Yawny Baby-you can push her mouth open to drink her. (= make her drink)   (Eva, 3;7)
    c. Don't giggle me. (= make me giggle/laugh)   (Eva, 3;0)

(42) <u>Adjectives</u>
    a. Don't tight this 'cause I tight this. (= tighten)   (Eva, 2;4)
    b. I'm gonna sharp this pencil. (= sharpen)   (Christy, 3;1)

(43) <u>Locative Particles</u>
    a. I wanta...wanta...wanta round it. (= make it go around; turn it)   (Christy, 3;0)
    b. Up your legs! (= make your legs go up; put your legs up)   (Christy, 3;1)

Causative Errors in English-speaking Children II

According to Boweman, children's causative errors are a case of *overgeneralization* which follows the realization that verbs like *open* contain a null feature CAUSE denoting causation.

Inference made by children:

Since:

- *The door opens.* is a grammatical sentence.

- *Daddy makes the door open* is a grammatical sentence, with a causative meaning.

- *Daddy opens the door* is also a grammatical sentence with the same meaning of *Daddy makes the door open.*

- *The dog eats* is a grammatical sentence.

- *Daddy makes the dog eat* is a grammatical sentence, with a causative meaning.

It follows:

- *Daddy eats the dog* is also a grammatical sentence with the same meaning of *Daddy makes the dog eat.*

Atkinson (2010) suggests that children make causative errors because they have not acquired the selectional restrictions on the causative v.