Ling 165B: Syntax II

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Draw a tree structure for the following sentence:

(1)   This blender can liquify whole fruits and vegetables in seconds.

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VP shells and adjunction I

Consider the VP adjunct *again*. In (2), it modifies the VP [Bill sleep] and thus requires the repetition of a sleeping by Bill.

(2)   Bill slept again.

The problem is how to capture the ambiguity of sentences like the following:

(3)   Sally closed the door again.
    a. Sally closed the door, and she had done it before   (repetitive)
    b. Sally closed the door, and the door had closed before (say, by itself)
       (restitutive)

On both interpretations, what makes the sentence appropriate is the existence of some previous situation:

→ On the <u>repetitive reading</u> it's the repetition of an action by the same agent (Sally).

→ On the <u>restitutive reading</u> by contrast, that situation is the door's closing: it had closed before, but Sally had nothing to do with it.
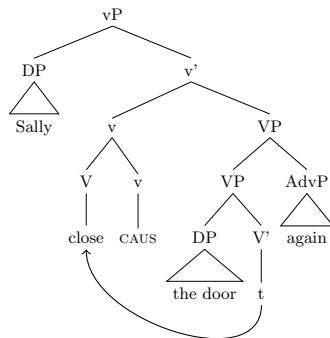
VP shells and adjunction II

Once we adopted a VP-shell analysis, we can easily account for the ambiguity.

This is how it's capture in the textbook

Repetitive Reading
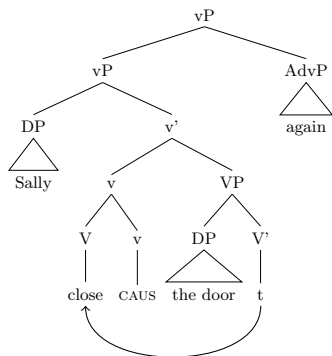
Restitutive Reading

VP shells and adjunction III

The overt counterpart of (3) is also ambiguous:

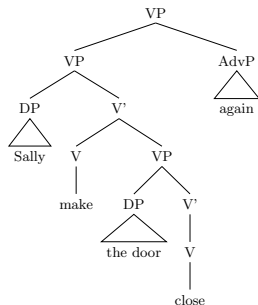(4)   Sally made the door close again.
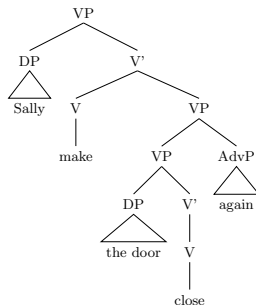   a. it happened again [that Sally made the door close]   (repetitive)
    b. The door closed again; this time, it is due to Sally   (restitutive)

Repetitive Reading

Restitutive Reading

VP shells and adjunction IV

VP shells and the idea that word formation can take place in the syntax helps us derive rather complex and subtle facts about the meaning of sentences!

Do we find the same repetitive/restitutive ambiguity with *give* (analyzed as CAUS+HAV) and *put* (analyzed as CAUS+BE)? It looks like we do!

(5) a. <u>Repetitive</u>: Last year, Mary gave John a book. This year she gave him a book again
     b. <u>Restitutive</u>: Last year, Mary gave John a book. This year Sally gave him a book again.

(6) a. <u>Repetitive</u>: Yesterday, I had to put the broom in the closet, and today I put the broom in the closet again
     b. <u>Restitutive</u>: The broom belongs in the closet and I put it there yesterday, why is it here? Please put it in the closet again.

Draw tree structures for both readings of *Sally gave a book again* and *I will put the broom in the closet again*.

A VP-shell analysis of object control verbs

In the VP shells that we have considered so far, the complements in the lower VP shell have been DPs or PPs. In *persuade*, we have the case of a VP shell where the complement in the lower VP shell is a clause (CP), which can be either finite or nonfinite, as shown below.

(7) a. We persuaded him that he should read the report.
     b. We persuaded him to read the report.

Think of *persuade* as CAUS+agree and draw the VP shell structure of (7-b)

Our model of Morphosyntax and Asymmetry in Coordinated Structures

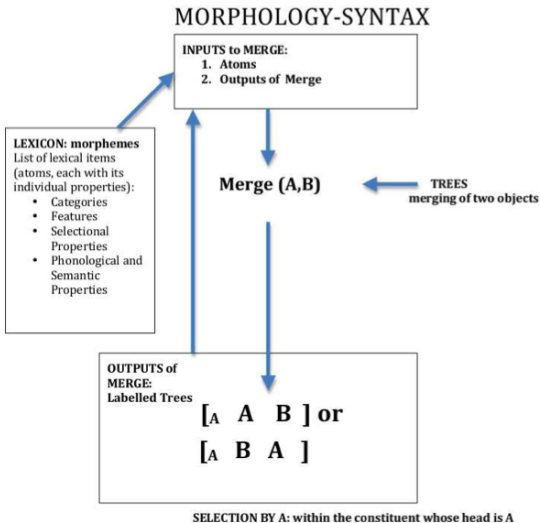## Where we are: our model of Morphosyntax I

As we said last time, we are entertaining the idea that there may be a single computational engine, driving both <u>syntactic</u> and <u>morphological</u> composition.
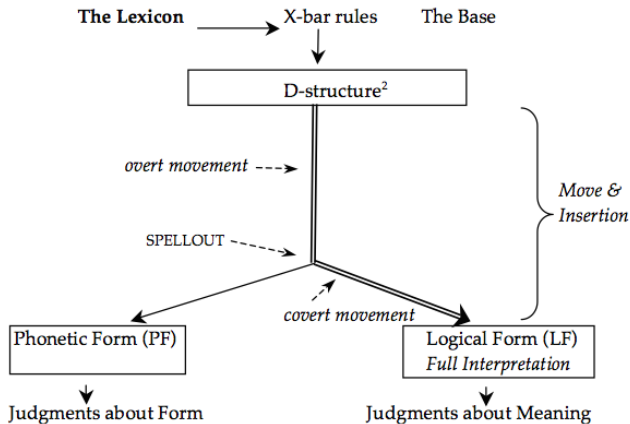
$\rightarrow$ All morphological atoms are also syntactic atoms.

"'Morphemes, whether they are bound or not, are syntactic atoms, entering into tree structure, satisfying X-bar theory... Their lexical properties are locally satisfied within the XP they project, in accordance with the Principle of Locality of Selection, and the resulting morphologically complex items are put together by the general available syntactic means such as Merging (putting to elements together to form a constituent) and Moving (Head movement or other kinds of movement). Thus when we observe a piece of complex morphological structure, what we are seeing is the output of the syntactic structure building algorithm." ISAT, p. 338.

$\rightarrow$ Syntactic Merge is a binary operation: no head takes more than one complement and thus syntactic trees are at most binary branching

$\rightarrow$ Some lexical heads (V, P, N...) are silent

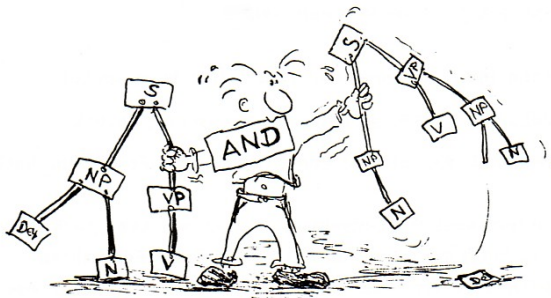$\rightarrow$ Some apparently simple verbs are not mono-morphemic, and are in fact parts of VP shells.

Wait a minute! Not all structures are binary!

How do we account for coordinated structures?

Brief history of coordination I

Early syntactic treatments of coordination assumed a flat structure along the
following lines:
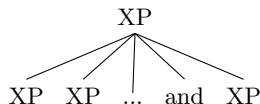
As syntactic frameworks developed which aimed to reflect general properties of
natural language phrase structure, in particular, its hierarchical and endocentric
nature, it was mostly assumed that coordinate structures lay outside these
generalizations and required special treatment. For instance, within early X-bar
syntax, coordination was taken to be an exception to the general X-bar schema,
whose primary motivation was to capture the endocentric relation between a
maximal projection and its (unique) head.

Brief history of coordination II

However, more recent treatments of coordination within Chomskyan grammar (Principles and Parameters theory and Minimalism) have argued for its analysis as a Conjunction Phrase with the familiar asymmetric, single-headed structure of the X-bar schema (Johannessen, 1993, 1998; Kayne, 1994; Radford, 1993). The conjunction (and) is the head of the phrase and the conjuncts occupy the specifier and complement positions:

```
              ConjP
             /     \
           XP      Conj'
                   /    \
                Conj    YP
                  |
                 and
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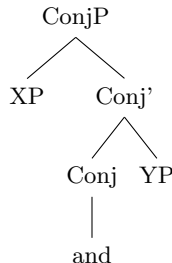
This sort of analysis seems to be supported by certain cases of 'unbalanced' coordination where the conjuncts (XP, YP) differ in some of their grammatical properties, for instance, in agreement, case, and/or binding properties.

Asymmetry in coordinated structures I

There is well established syntactic and prosodic evidence that the conjunctive element forms a constituent with the following conjunct; so most current analyses across different syntactic frameworks exhibit at least that degree of asymmetry:
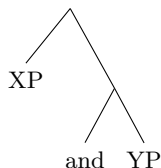
Asymmetry in coordinated structures II

Ross (1967) showed that there is syntactic evidence for the constituency of the conjunction and the second conjunct:

(8) a. John left, and he didn't even say good-bye.
     b. John left. And he didn't even say good-bye.
     c.*John left and. He didn't even say good-bye.

Same for intonational pauses.

Extraposition facts support the same conclusion:

(9) a. John bought a book yesterday, <u>and a newspaper</u>.
     b.*John bought a newspaper yesterday <u>a book and</u>

Asymmetry in coordinated structures III

Moreover, there are binding asymmetries between the first and second conjuncts. The first conjunct can bind the second conjunct, but not vice versa.

(10) a. Every man$_i$ and his$_i$ dog went to mow a meadow
     b.*His$_i$ dog and every man$_i$ went to mow a meadow

An R-expression in the first conjunct can be co-referential with a pronoun in the second but not vice-versa.

(11) a. John$_i$'s dog and he$_i$/him$_i$ went for a walk.
     b.*He$_i$ and John$_i$'s dog went for a walk

    "We can conclude that the structure is asymmetrical, and there is an intervening branching node between the conjuncts"   Munn
    (1993)

The coordinate structure constraint I

Recall:

> **Coordinate Structure Constraint**:
> No conjunct or element contained within a conjunct of a coordination can
> be moved out of this coordination.

→ This constraint bans the movement of either conjunct:

(12) a. You ate [$_{DP}$ [$_{DP}$ some chicken] and [$_{DP}$ rice]]
   b. You ate [$_{DP}$ [$_{DP}$ <u>what</u>] and [$_{DP}$ rice]]
   c.*<u>What</u>$_i$ did you eat [$_{DP}$ t$_i$ and [$_{DP}$ rice]]?

(13) a. You ate [$_{DP}$ [$_{DP}$ some chicken] and [$_{DP}$ rice]]
   b. You ate [$_{DP}$ [$_{DP}$ some chicken] and [$_{DP}$ <u>what</u>]]
   c.*<u>What</u>$_i$ did you eat [$_{DP}$ [$_{DP}$ some chicken] and t$_i$]?

The coordinate structure constraint II

→ It also bans the movement of some wh-phrase from inside one of the conjuncts:

(14) a. You [$_{VP}$ [$_{VP}$ ate some pie] and [$_{VP}$ drank some coffee]]
b. You [$_{VP}$ [$_{VP}$ ate <u>what</u>] and [$_{VP}$ drank some coffee]]
c.*<u>What</u>$_i$ did you [$_{VP}$ [$_{VP}$ eat t$_i$] and [$_{VP}$ drink some coffee]]?

(15) a. You [$_{VP}$ [$_{VP}$ ate some pie] and [$_{VP}$ drank some coffee]]
b. You [$_{VP}$ [$_{VP}$ ate some pie] and [$_{VP}$ drank <u>what</u>]]
c.*<u>What</u>$_i$ did you [$_{VP}$ [$_{VP}$ eat some pie] and [$_{VP}$ drink t$_i$]]?

Does the asymmetric structure we assumed help us to account for this constraint?
Can you think of a way of subsuming the CSC under subjacency?

Back to Binding Theory

We will look at two problems:

(i) one we had already encounter previously: anaphor in subject position that are incorrectly predicted to be fine.

(ii) how to incorporate shells into our treatment of Principle A and B

The anaphor agreement effect I

> Principle A
> An anaphor must be bound, and it must be bound in its domain.
>
> The domain of a DP anaphor is the smallest XP which has a subject and which has a DP c-commanding the anaphor.

Our formulation of Principle A left us with the following problem:

Sentence	Actual Status	Predicted Status
They said that themselves were leaving	*	✓
They said that each other were leaving	*	✓

Sometimes, we want to allow the anaphor to seek an antecedent outside of the tensed clause containing them:

(16) The boys bet that pictures of each other/themselves would be selected

What is the right generalization?

The anaphor agreement effect II

Looking at other languages, we note that what seems to matter is whether or not an anaphor triggers (normal visible) agreement on T (as it does in English).

→ When it does, as in English, Icelandic or Italian, anaphors that appear as subject of tensed clauses are excluded.

→ When it does not, as in Khmer, Vietnamese, Chinese, Korean, and Thai, they are fine (and allowed to seek an antecedent outside its clause).

(17) **The Anaphor Agreement Effect** (Rizzi, 1990b): Anaphors are prohibited from positions triggering agreement (on T)

The anaphor agreement effect III

Here is some evidence from Italian:

(18) a. A loro importa solo di se stessi
      to them matters.3SG only of themselves
      'All that matters to them is themselves'
   b. A voi importa solo di voi stessi
      to you matters3SG only of yourselves
      'All that matters to you is yourselves'

(19) a.*A loro interessano solo se stessi
      to them interest.3PL only themselves
      'They are interested only in themselves'
   b.*A voi importate solo voi stessi
      to you.PL interest.2PL only yourselves
      'All that matters to you is yourselves'

The anaphor agreement effect IV

On the other hand, we find grammatical nominative anaphors in languages without agreement:

(20) Mét   teě ̂-pii neěq$_i$ két   thaa kluUn$_i$ ciU kounsUh.
     friend both   person think that self   be student
     "The two friends$_i$ reasoned that they(self)$_i$ are students.'   Khmer, Huffman (1970)

(21) Zhangsan$_i$ shuo ziji$_i$ hui lai.
     Zhangsan   say   self will come
     'Zhangsan$_i$ said he(self)$_i$ will come'   Chinese, Huang (1982)

This data on nominative anaphors supports Rizzi's position that anaphors are incompatible with agreement.

What about languages which have object agreement?

The anaphor agreement effect V

There are many familiar examples of languages without object agreement that allow anaphors in object position. English is such a language.

(22) He likes himself

Some languages have object agreement. It turns out that they do not allow agreeing objects to be anaphors! Inuit is such a language. Let's have a closer look!

The anaphor agreement effect VI

In <u>Inuit</u>, in standard transitive clauses, the verb agrees with both the subject and the object.

(23) Angutip   arnaq   taku-vaa.
     man(ERG) woman(ABS) see-IND.3SG.3SG
     'The man sees the woman'   Bok-Bennema 1991

When the object is an anaphor, this pattern with portmanteau subject-object agreement is ungrammatical:

(24)*Hansiup   immi   asap-puq.
     Hansi(ERG) himself(ABS) wash-IND.3SG.3SG
     'Hansi washed himself'   Bok-Bennema 1991

Instead, Inuit avoids violating the anaphor agreement effect by realizing constructions with reflexive objects as intransitive constructions, either with no (surface) object at all, or with the object in oblique Case, not triggering object agreement.

(25) Asap-puq.   (26) Angut immi-nut   taku-vuq
     wash-IND.3SG   man   himself-DAT see-IND.3SG
     'He washed himself'   'The man sees himself.'

The anaphor agreement effect VII

Naturally, we would like to know why such an effect holds.

We will leave this question open here.

Binding Theory and VP shells I

We now turn to the consequences of adopting the theory of VP shells to the functioning of the binding theory.

Let's consider anaphors first!

(27) They$_i$ showed him each other/themselves$_i$

What is the predicted status of (27) in a tree structure without VP shell?

What is the predicted status of (27) in a tree structure with VP shell?

Binding Theory and VP shells II

In order to account for the binding facts we just saw, we need to change the definition of domain of anaphors one more time:

(28) The domain of a DP anaphor is the smallest XP with a subject and
    a. which has a DP c-commanding the anaphor, and
    b. which contains the antecedent of every head trace it contains.

Explain how this revised version of the domain of anaphors solves the problem

State whether the right prediction is made for the following well-formed example:

(29) I showed [the girls]$_k$ [[each other]$_k$'s cousins]

Binding Theory and VP shells III

What about pronouns?

(30) a.*They$_i$ showed them$_i$ a book
     b.*They$_i$ showed her to them$_i$

What is the predicted status of the examples in (30) if we assume tree structures without VP shell?

What is the predicted status once we adopt VP shell?

Binding Theory and VP shells IV

It turned out that we need to revise the definition of domain of pronouns as well:

(31) The domain of a DP pronoun is the smallest XP with a subject
    a. which contains the DP, and
    b. which contains the antecedent of every head trace it contains.

Explain how this revised version of the domain of pronouns solves the problem

State whether the right prediction is made for the following well-formed example:

(32) I gave Mary$_k$ her$_k$ book (back)

Thank you all!