CAS LX 522
Syntax I
Week 5a.
TP, Agree, and our quickly growing tree (5.1-5.3)

Unaccusatives vs. unergatives

- Recall that there are two types of single-argument (intransitive) verbs in terms of the θ-role they assign to their single argument.

- Unaccusatives: Have one, Theme θ-role.
  - Fall, sink, break, close

- Unergatives: Have one, Agent θ-role.
  - Walk, dance, laugh

Unaccusatives

- The ice, the boat, the door; all Themes: NP daughter of VP.
  - The ice melted.
  - The boat sank.
  - The door closed.

- Unaccusatives have a relatively “inert” v, no “causal” meaning.
- There are two kinds of v, the causal one that needs an NP (Agent), and a non-causal one.
- What if we pick the causal v (and provide an Agent NP)?

Unaccusatives vs. unergatives

- Unaccusatives: One Theme. Unergatives: One Agent.
- If we adopt the UTAH, then we are forced to a certain view of the original Merges.
  - If you're going to be a Theme, you need to be NP daughter of VP.
  - If you're going to be an Agent, you need to be NP daughter of vP.
  - (Is it bad to be forced into an analysis?)

Unaccusatives vs. unergatives

- Bill melted the ice.
- Straightforward enough. The causal v adds an Agent.
- Bill was the agent/instigator of a melting that affected the ice.
- Why isn't the unaccusative version Melted the ice, though?
- (English being head-initial, after all)
We will turn to this question more thoroughly next. But to a first approximation, we say that:

- **Sentences need subjects.**
- **Subjects come first.**
  - Since there is only one NP here, it has to be the subject, and it has to come first.
  - We suppose that a movement operation (something like what happens to give when it moves up to v) carries the subject over to the left of the v.
  - As for where it goes (how it is integrated into the structure), we’ll concern ourselves more with that next week.

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**Bill lied.**

- Just to address the last case, the unergatives, consider *Bill lied.*
  - That’s got an Agent, so it’s got a v.
  - So, it would look like this.

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**Auxiliary selection**

1) Molte ragazze telefonano
   - many girls phone
   - ‘Many girls are phoning.’

2) Molte ragazze arrivano
   - many girls arrive
   - ‘Many girls are arriving.’

3) Molte ragazze hanno telefonato
   - many girls have phone[past-part.3sg]
   - ‘Many girls phoned.’

4) Molte ragazze sono arrivate.
   - Many girls are arrive[past-part.3pl]
   - ‘Many girls arrived.’

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**Double objects**

- Just as you can give a book to Chris, so can you give Chris a book.

  - **But…**
  - If we try to analyze *Pat gave Chris a book* in the same way, we run into trouble.

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**Pat gave Chris a book**

- NP, daughter of vP = Agent
- NP, daughter of vP = Theme
- PP, daughter of v = Goal

- See the problem?
- If we believe the UTAH, this can’t be right.

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Two kinds of giving

- The two forms of give are not quite equivalent, though:
  1) Pat gave a book to Chris.
  2) Pat gave Chris a book.
  3) "Pat gave a headache to Chris."
  4) Pat gave Chris a headache.
  5) Try paraphrasing…
  6) "Pat sent Chicago a letter."
  7) Pat taught French to the students.
  8) Pat taught the students French.
To have

- NP, daughter of vP = Agent
- NP, daughter of VP = Theme
- PP, daughter of V = Goal
- NP, daughter of V = Possessee

On beyond v

- Our trees have now expanded beyond being mere VPs to being vPs.
- The Hierarchy of Projections: v > V
  Once you have finished the VP (uninterpretable selection features are checked), if there's a v on the workbench, Merge it.
- The UTAH:
  - NP, daughter of vP: Agent
  - NP, daughter of VP: Theme
  - PP, daughter of V: Goal
  - NP, daughter of V: Possessee
  - But this is only the beginning.

Auxiliaries and modals and verbs

- I ate.
- I could eat.
- I had eaten.
- I was eating.
- I had been eating.
- I could have eaten.
- I could be eating.
- I could have been eating.

So: could, have, be, eat. How do we determine what form each verb takes?

 Auxiliaries and modals and verbs

- I could have been eating.
- *I could be having eaten.
- *I was having cannen eat.
- *I had been canning eat.
- It looks like there's an order: Modal, Perf, Prog, verb.

Suppose:
- Have is of category Perf.
- Be is of category Prog.
- May, might, can, could are of category M.
- They are heads from the lexicon, we will Merge them into the tree above vP. Their order is captured by a new extended Hierarchy of Projections:
  - Modal > Perf > Prog > v > V
- Except not every sentence has these. So:
  - (Modal) > (Perf) > (Prog) > v > V
**Negation**

- Consider the following:
  - I did not eat.
  - I could not eat.
  - I had not eaten.
  - I was not eating.
  - I had not been eating.
  - I could not have been eating.
- Suppose *not* is of category Neg.
- How do we describe where *not* occurs? How can we fit it into our Hierarchy of Projections?

**Where does Neg fit?**

- Suppose that we can fit Neg in our Hierarchy of Projections. Just like the other things we just added.
  - (Modal) > (Perf) > (Prog) > v > V
- Where would it go in the HoP, and how can we explain the word order patterns?
  - I could not have been eating.
  - I had not been eating.
  - I was not eating.
  - I did not eat.
- Remember v and how we explained where the verb is in *Pat gave a book to Chris*?

**A-ha.**

- Picture this:
  - I ?+might not <might> have been eating.
  - I ?+had not <had> been eating.
  - I ?+was not <was> eating.
- So what is ?, then?
  - He did not eat. He ate.
  - He does not eat. He eats.
- All that *do* seems to be doing there is providing an indication of...tense.

**HoP revisited**

- So, now we know where Neg goes. Above all the other things, but below tense (category T).
  - T > (Neg) > (M) > (Perf) > (Prog) > v > V
- Just as V moves to v, so do Perf, Prog, and M move to T.
- If Neg is there, you can see it happen.
  - They T+shall not <shall> be eating lunch.
  - They T+shall <shall> be eating lunch.

**What does do do?**

- But what about when there’s just a verb and Neg, but no M, Perf, or Prog?
  - I ate lunch.
  - I did not eat lunch.
  - *Eat* clearly does not move to T.
- But *not* “gets in the way”, so tense cannot “see” the verb. Instead, the meaningless verb *do* is pronounced, to “support” tense. “Do-support”
  - We will return to the details in due course…

**So, we have T**

- We’ve just added a category T, tense.
- **The idea**: The tense of a clause (past, present) is the information that T brings to the structure.
- T has features like [T, past] or [T, pres]
  - Or perhaps [T, past] or [T, nonpast].
- These features are interpretable on T.T is where tense “lives.” We see reflections of these tense features on verbs (give, gave, go, went) but they are just reflections. Agreement. The interpretable tense features don’t live on verbs, they live on T.
Pat might eat lunch.

We already know how this is supposed to work, to a point.

Merge eat and lunch, checking the uN feature of eat (and assigning a 0-role to lunch, namely Theme—this is NP daughter of VP).

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Move the V eat up to v.

Merge Pat with v' to check the uN feature and assign a t-role (Agent, this is NP daughter of vP).

So, now what do we do with might?
1) And eat lunch Pat shall.
2) What Pat should do is eat lunch.

It kind of seems like it goes between the subject and the verb, but how?

If we leave everything as it is so far (UTAH, Hierarchy of Projections), the only option is to Merge might with the vP we just built.

So, let's.

• Now, we have one more thing on our workbench (T) and the HoP says that once we finish with M, we Merge it with T.
• And so Merge T, we shall.
Pat might eat lunch.

Then, M moves up to T.

Why? Because M, Perf, and Prog all move up to T. For the same kind of reason that V moves up to v.

Right now we have no way to describe this in our system, except with this “rule from the outside” that stipulates that V moves to v, and (M/Perf/Prog) moves to T.

Pat might eat lunch.

Ok, that's all fine and good, except that the sentence is Pat might eat lunch not Might Pat eat lunch.

How do we get Pat might eat lunch out of this?

Pat might eat lunch.

As previewed last time, the subject moves to this first position in the sentence, around the modal.

“Moving” Pat here means Merging a copy...

Pat might eat lunch.

Great. Why?

Jumping ahead, we're going to say that this is a property of T-type things generally: T needs to have an NP in its specifier.

We can encode this as a (special type of) uninterpretable feature on T: [uN*]. More on that later.

WARNING

• What we’ve done here is not quite the same as what is in the textbook. (But it’s better).

• In the textbook, modals are not treated as their own category, but rather as a kind of T.

• The revision we made here will pay off soon. Keep this difference in mind as you review the textbook on this point. You will see no MPs in the book. But you should see them on the homeworks/tests you turn in.

Side note: “I” vs. “T”

• You may have heard in the past that it tense should be of category I (for Inflection), rather than T (For Tense).

• Rest easy: T and I are (for current purposes) just two names for the same thing.

• Historically, this was called INFL, then I, and now usually called T. But these are just names. I vs. T, Istanbul vs. Constantinople; St. Petersburg vs. Leningrad.
Pat ate lunch

• Now that we have T in the Hierarchy of Projections, we’re stuck with it.

• Yet, where is T in Pat ate lunch or Pat eats lunch?

• It looks like the tense marking is on the verb, we don’t see anything between the subject and the verb where T ought to be.

• Now that we have T, this is where tense features belong. We take this to be the thing that determines the tense of the sentence, even if we sometimes see the marking on the verb.

Pat ate lunch

• Since (most) verbs sound different when in the past and in the present tense, we suppose that there is a [past] or [present] feature on the verb.

• However, to reiterate: tense belongs on T.

• The tense features on the verbs are uninterpretable.

Feature classes

• There are tense features. Like past, like present. There are case features. Like nom, like acc. There are person features. Like 1st, like 2nd. There are gender features. Like masculine, like feminine.

• So, we can think of this as a feature category or feature type that has a value.

  [Gender: masculine]  [Person: 1st]
  [Tense: past]  [Case: nom]

Agree

• T nodes have features of the tense type. Maybe past, maybe present.

• Suppose that v has an uninterpretable feature of the tense type, but unvalued.

• What we’re trying to model here is agreement.

  Agree
  In the configuration X[F: val] … Y[uF: ]
  F checks and values uF, resulting in
  X[F: val] … Y[uF: val].

Unvalued features

• The idea is that a lexical item might have an unvalued feature, which is uninterpretable as it stands and needs to be given a value in order to be interpretable.

  • The statement of Agree on the previous slide is essentially saying just that, formally.

• This gives us two kinds of uninterpretable features (unvalued and regular-old uninterpretable features), and two ways to check them (valuing for unvalued features, checking under sisterhood for the other kind).

  • Unvalued [uF:]. Regular-old [uF].