

# CAS LX 522 Syntax I

# 9

## UTAH (4.3-4.4)

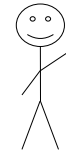


## We give trees to ditransitives

- You may recall our discussion of  $\theta$ -theory, where we triumphantly classified verbs as coming in (at least) three types:
  - Intransitive (1  $\theta$ -role)
  - Transitive (2  $\theta$ -roles)
  - Ditransitive (3  $\theta$ -roles)
- Theta roles go to obligatory arguments, not to adjuncts.

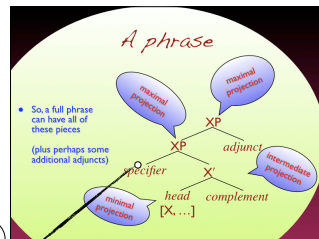
*Verbs and participants*

<ul style="list-style-type: none"> <li>Intransitive (1-place): <i>Sleep</i></li> <li>1) Bill slept.</li> <li>2) *Bill slept the book.</li> </ul>	<ul style="list-style-type: none"> <li>Ditransitive (3-place): <i>Put</i></li> <li>5) *Bill put.</li> <li>6) *Bill put the book.</li> <li>7) Bill put the book on the table.</li> </ul>
<ul style="list-style-type: none"> <li>Transitive (2-pl-cc): <i>Hit</i></li> <li>3) *Bill hit.</li> <li>4) Bill hit the pillow.</li> </ul>	<ul style="list-style-type: none"> <li>Weather (0-place): <i>Rain</i></li> <li>8) It rained.</li> </ul>



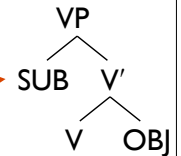
## We give trees to ditransitives

- You may also recall that we believe that trees are binary branching, where:
  - Syntactic objects are formed by Merge.
  - There's just one complement and one specifier.



## We give trees to ditransitives

- Fantastic, except that these things just don't fit together.
- We know what to do with transitive verbs.
- But what do we do with ditransitive verbs? We're out of space!

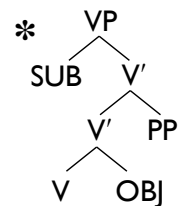


## Problems continue...

- I showed Mary to herself.
  - \*I showed herself to Mary.
  - I introduced nobody to anybody.
  - \*I introduced anybody to nobody.
- This tells us something about the relationship between the direct and to-object in the structure. (What?)

## Problems continue...

- The OBJ c-commands the PP. **But how could we draw a tree like that?**
- Even if we allowed adjuncts to get  $\theta$ -roles, the most natural structure would be to make the PP an adjunct, like this, but that doesn't meet the c-command requirements.



## Some clues from idioms

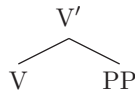
- Often idiomatic meanings are associated with the verb+object complex—the meaning derives both from the verb and the object together.
- Suppose that this is due being Merged into the structure together initially.
  - 1) Bill threw a baseball.
  - 2) Bill threw his support behind the candidate.
  - 3) Bill threw the boxing match.

## Idioms in ditransitives

- In ditransitives, it seems like this happens with the *PP*.
  - Beethoven gave the Fifth Symphony to the world.
  - Beethoven gave the Fifth Symphony to his patron.
  - Lasorda sent his starting pitcher to the showers.
  - Lasorda sent his starting pitcher to Amsterdam.
  - Mary took Felix to task.
  - Mary took Felix to the cleaners.
  - Mary took Felix to his doctor's appointment.

## So V and PP are sisters...

- Larson (1988) took this as evidence that the V is a sister to the PP “originally.”
- Yet, we see that on the surface the OBJ comes between the verb and the PP.
  - 1) Mary sent a letter to Bill.
- Where is the OBJ? It must c-command the PP, remember. Why is the V to the left of the OBJ when we hear it?



## Where's the V? The OBJ?

- We can paraphrase *John gave a book to Mary* as *John caused a book to go to Mary*.
- Chichewa:
  - Mtsikana ana-chit-**its**-a kuti mtsuku u-**gw**-e  
girl agr-do-**cause**-asp that waterpot agr-**fall**-asp  
'The girl made the waterpot fall.'
  - Mtsikana anau-**gw**-**its**-a kuti mtsuku  
girl agr-**fall**-**cause**-asp that waterpot  
'The girl made the waterpot fall.'
- Suppose that in both cases Merge puts things together in the same way initially:
  - [[that waterpot] fall]

## Causatives

- [[that waterpot] fall]
- Then it's merged with *cause* (basically transitive: needs a causer and a causee):
  - [cause [[that waterpot] fall]]
- And then it's Merged with the Agent
  - [girl [cause [[that waterpot] fall]]]
- At which point, one *can move fall* over to *cause*.
  - [girl [cause+**fall** [[that waterpot] <fall> ]]]

## Ditransitives again

- The proposal will be that English ditransitives are really a lot like Chichewa causatives.
- Starting with
  - [[the book] [go [to Mary]]]
- Merging *cause* and an Agent
  - [John [cause [[the book] [go [to Mary]]]]]
- One then moves *go* over to *cause* to get:
  - [John [cause+go [[the book] [<go> [to Mary]]]]]
  - John “gave” the book to Mary.

## Un peu de français

- If you've tried to learn any French at all, you've come across this phenomenon:

- de 'of' le 'the (masc.)'
- à 'at' la 'the (fem.)'

- à la bibliothèque 'to the library (fem.)'
- \*à le cinéma 'to the movies (masc.)'
- au cinéma 'to the movies (masc.)'
- de la mayonnaise 'of mayonnaise (fem.)'
- \*de le lait 'of milk (masc.)'
- du lait 'of milk (masc.)'

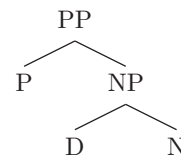
## Un peu de français

- This is usually taught as:

- au = à + le
- du = de + le
- If your underlying **intent** is à 'at' + le 'the', say *au*.

- So is *au* a preposition or an article?

- There's no reason to believe that *au cinéma* has a different syntactic structure from *à la bibliothèque*.
- This is just about how it is pronounced.
- *Au* = à + le. *Give* = cause + go.



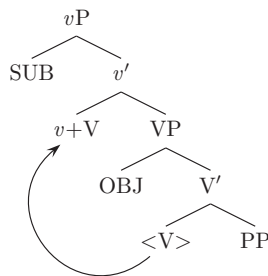
## Where's the V? The OBJ?

- Larson's proposal was basically this. Logically, if we're going to have binary branching and three positions for argument XPs (SUB, OBJ, PP), we need to have another XP above the VP.

- Since the subject is in the specifier of the higher XP, that must be a VP too.

- Ditransitive verbs really *come in two parts*. They are in a "VP shell" structure.

- Furthermore, the higher part seems to correlate with a meaning of causation.

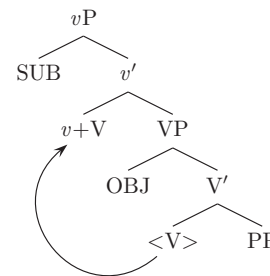


## Where's the V? The OBJ?

- The higher verb is a "light verb" (we'll write it as *vP* to signify that)—its contribution is to assign the  $\theta$ -role to the subject. The lower verb assigns the  $\theta$ -roles to the OBJ and the PP.

- That is, *V* has [*uP*, *uN*] features, and *v* has a [*uN*] feature.

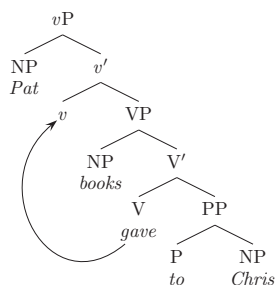
- Hierarchy of Projections** (so far): *v* > *V* ("V comes with v")



## Where we are

- We've just come up with an analysis of sentences with ditransitive verbs, such as *Pat gave books to Chris* that accords with the constraints of the syntactic system we have developed so far.

- Merge is binary
- $\theta$ -roles are assigned to specifiers and complements.
- The solution is to assume a two-tiered structure, with a little *v* in addition to the VP.



## Where we are

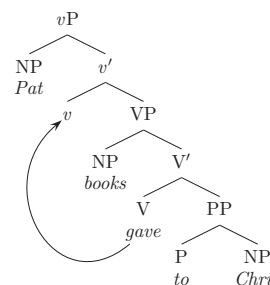
- The three  $\theta$ -roles for *give* are assigned like this:

- The PP gets a Goal  $\theta$ -role.
- The lower NP gets a Theme  $\theta$ -role.
- The highest NP (in the specifier of *vP*) gets an Agent  $\theta$ -role.

- But how did we know that?

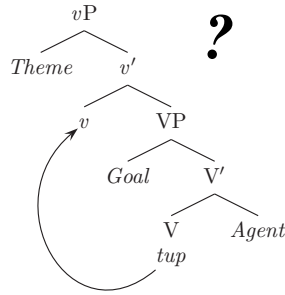
- More importantly, how do kids come to know that?

- Do they memorize this list for each verb they learn?



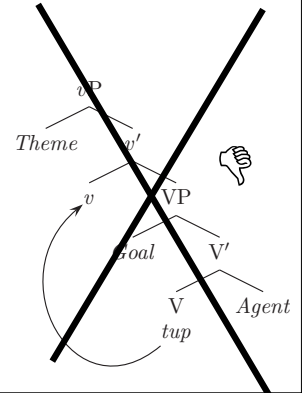
# Uniformity of Theta Assignment

- If kids are really memorizing which  $\theta$ -role goes where for each verb, there should be some verbs that do it in other ways.
- For example, there might be a ditransitive verb with Theme in the specifier of  $vP$ , Goal in the specifier of VP, and Agent in the complement of VP.
- E.g., *to tup*:  
Books *tup* on the shelf Chris  
'Chris put books on the shelf.'



# UTAH

- But that just never happens.
- It seems that all verbs have  $\theta$ -role assignment that looks pretty much the same.
- If there's an Agent, it's the first (uppermost) NP.
- If there's a Theme it's down close to the verb.
- Given that things *seem* to be relatively uniform, it has been proposed that this is a fundamental property of the syntactic system. Each  $\theta$ -role has a consistent place in the structure.

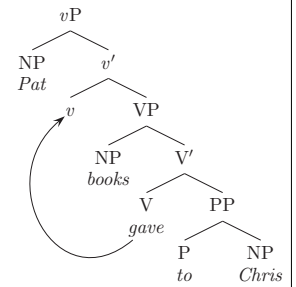
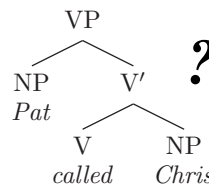


# UTAH

- **The Uniformity of Theta-Assignment Hypothesis (UTAH):** Identical thematic relationships between predicates and their arguments are represented syntactically by identical structural relationships when items are Merged.
- That is, all Agents are structurally in the same place (when first Merged). All Patients are structurally in the same place, etc.
- We can take this to be a property of the *interpretation*. When a structure is interpreted, the  $\theta$ -role an argument gets depends on where it was first Merged.

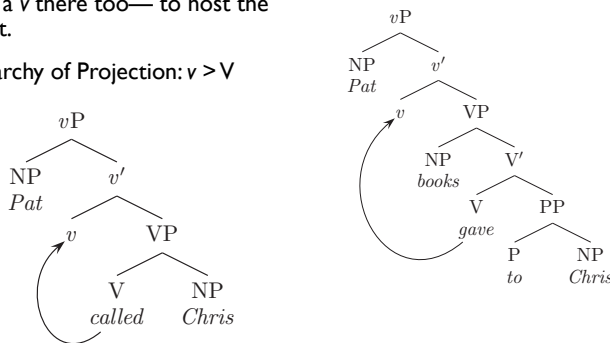
# $\theta$ -roles and structure

- Great. So, the Agent (*Pat*) in *Pat gave books to Chris* is in the specifier of  $vP$ . Because that's where Agents go.
- But.. What about structures like the ones we had before for things like *Pat called Chris*?



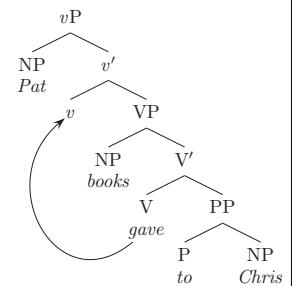
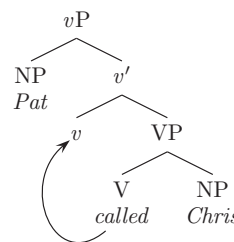
# $\theta$ -roles and structure

- Well, if we're serious about working within the constraints of UTAH, we need a *v* there too— to host the Agent.
- Hierarchy of Projection:  $v > V$



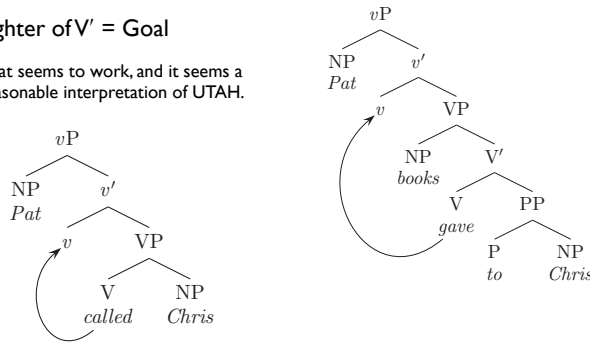
# $\theta$ -roles and structure

- Specifier of  $vP$  = Agent
- But *where's the Theme?* Isn't that in different places in *Pat called Chris* and *Pat gave books to Chris*?



## θ-roles and structure

- NP, daughter of vP = Agent
- NP, daughter of VP = Theme
- PP, daughter of V' = Goal
  - That seems to work, and it seems a reasonable interpretation of UTAH.



## Unaccusatives vs. unergatives

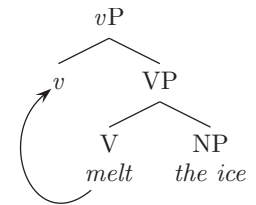
- Recall that there are two types of single-argument (intransitive) verbs in terms of the θ-role they assign to their single argument.
- **Unaccusatives:** Have one, **Theme** θ-role.
  - *Fall, sink, break, close*
- **Unergatives:** Have one, **Agent** θ-role.
  - *Walk, dance, laugh*

## Unaccusatives vs. unergatives

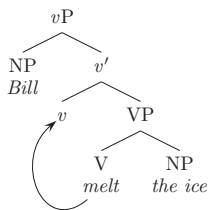
- Unaccusatives: One **Theme**. Unergatives: One **Agent**.
- If we adopt the UTAH, then we are forced to a certain view of the original Merges.
  - If you're going to be a Theme, you need to be NP daughter of VP.
  - If you're going to be an Agent, you need to be NP daughter of vP.
- (Is it bad to be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

## Unaccusatives

- 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)?

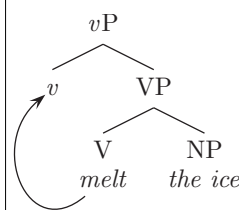


## VP shells



- *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)

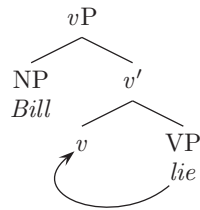
## Preview



- 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 vP.
  - As for where it goes (how it is integrated into the structure), we'll concern ourselves more with that next week.

## 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.

## Auxiliary selection

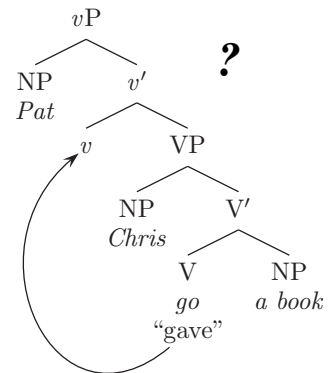
- 1) Molte ragazze telefonano  
many girls phone  
'Many girls are phoning.'
- 2) Molte ragazze arrivano  
many girls arrive  
'Many girls are arriving.'
- 3) Molte ragazze hanno telefonato  
many girls have phone[past-part.3sg]  
'Many girls phoned.'
- 4) Molte ragazze sono arrivate.  
Many girls are arrive[past-part.3pl]  
'Many girls arrived.'

## 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.

## 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.



## 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.
- Try paraphrasing...
  - 5) Pat sent a letter to Chicago.
  - 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

