

# CAS LX 522 Syntax I

# 8

## UTAH (4.3-4.4)

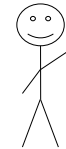


## We give trees to diffransitives

- 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.

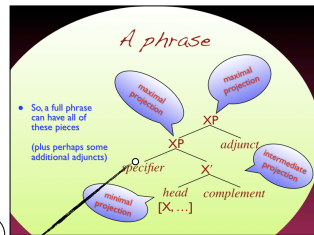
*Verbs and participants*

<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>Transitive (2-pl-ice): <i>Hit</i></li> <li>3) *Bill hit.</li> <li>4) Bill hit the pillow.</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> <li>Weather (0-place): <i>Rain</i></li> <li>8) It rained.</li> </ul>
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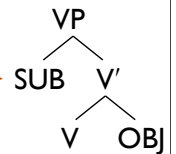
## We give trees to diffransitives

- 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 diffransitives

- 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!

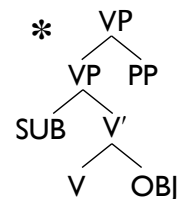


## Problems continue...

- 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

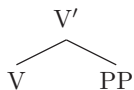
- Often idiomatic meanings are associated with the verb+object complex—the meaning derives both from the verb and the object together.
- Suppose that this is due being Merged into the structure together initially.
  - 1) Bill threw a baseball.
  - 2) Bill threw his support behind the candidate.
  - 3)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

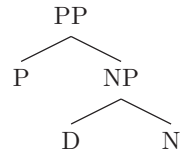
- The proposal will be that English ditransitives are really a lot like Chichewa causatives.
- Starting with
  - [[the book] [go [to Mary]]]
- Merging *cause* and an Agent
  - [John [cause [[the book] [go [to Mary]]]]]
- One then moves *go* over to *cause* to get:
  - [John [cause+go [[the book] [<go>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

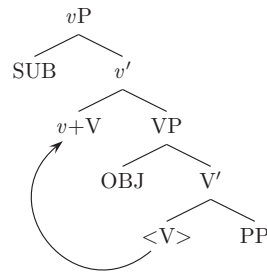
## Un peu de français

- 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*.



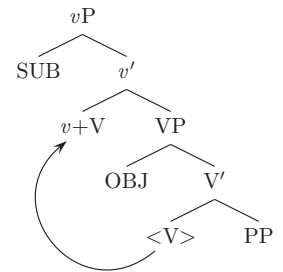
## Where's the V? The OBJ?

- 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.



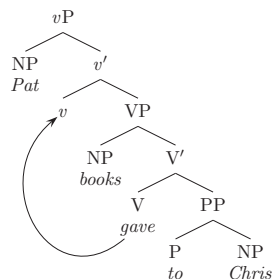
## Where's the V? The OBJ?

- The higher verb is a "light verb" (we'll write it as *v*P 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 [*u*P, *u*N] features, and *v* has a [*u*N] feature.
- Hierarchy of Projections** (so far): *v* > *V* ("V comes with *v*")



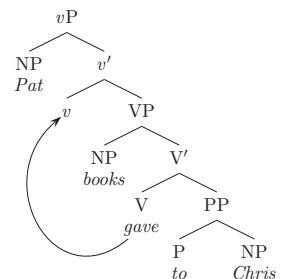
## Where we are

- 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.



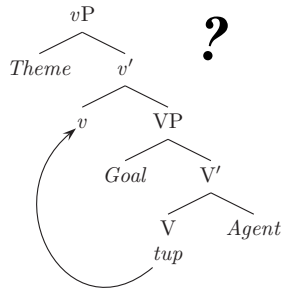
## Where we are

- 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 *v*P) 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?



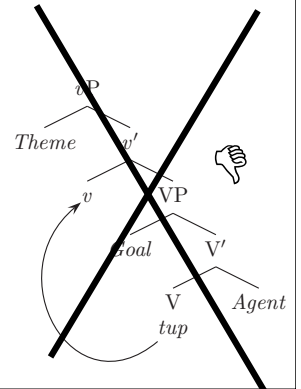
# Uniformity of Theta Assignment

- 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 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.

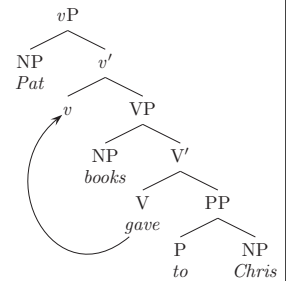
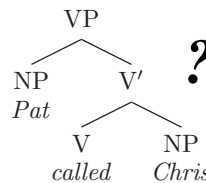


# UTAH

- **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.

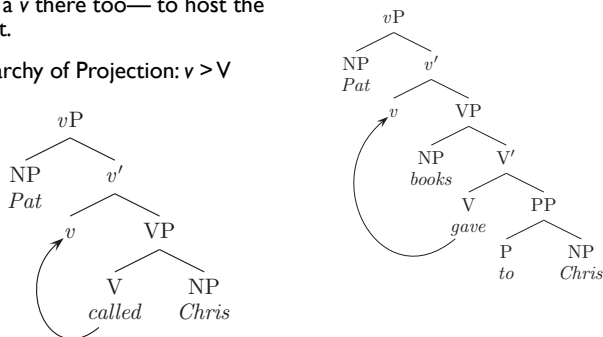
# $\theta$ -roles and structure

- 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*?



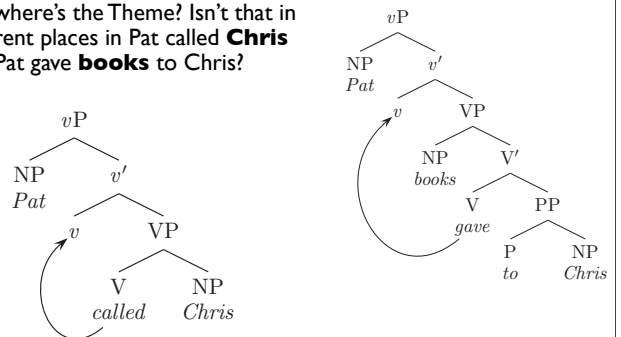
# $\theta$ -roles and structure

- 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:  $v > V$



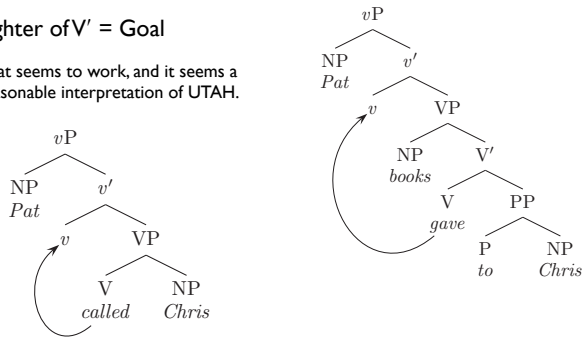
# $\theta$ -roles and structure

- 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**?



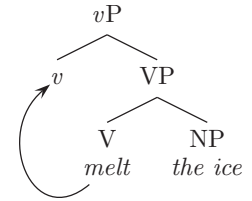
## θ-roles and structure

- 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.

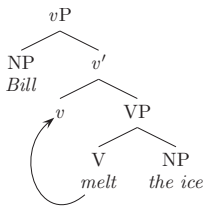


## Unaccusatives

- 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)?



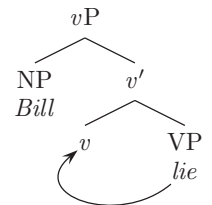
## Transitives



- *Bill melted the ice.*
- The causal v adds an Agent.
- Bill was the agent/instigator of a melting that affected the ice.

## Unergatives

- *Bill lied.*
- That’s got an Agent, and Agents must be NP daughter of v.
- So, it would look like this.

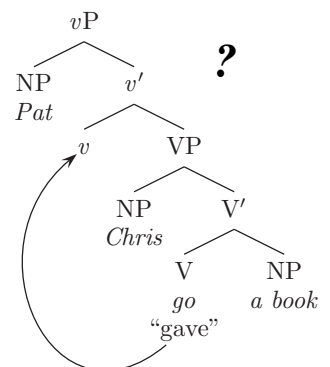


## Double object constructions

- Pat gave a book to Chris.
  - Agent: Pat; Theme: a book; Goal: to Chris
- Pat gave Chris a book.
  - Agent: Pat, Theme: ? a book?, Goal: ? Chris?
- Don’t these mean the same thing?

## Pat gave Chris a book

- NP, daughter of vP = Agent
- NP, daughter of VP = Theme
- PP, daughter of V' = Goal
- The word order suggests this structure.
- UTAH (so far) doesn’t tell us what theta role a book gets.
- And in what sense is Chris a Theme of a going?

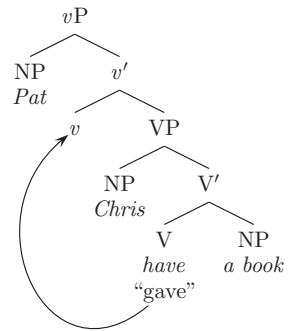
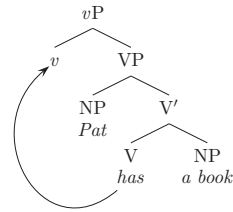


## Two kinds of giving

- 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



## 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.