

Syntactic Theory 2

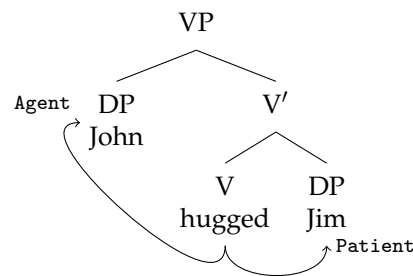
Week 8: Harley (2010) on Argument Structure

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- In Government and Binding, DPs were required to base generate in a theta position, in which they were assigned a **theta-role**. A theta role is the syntactic realization of a **thematic role**, which is a component of the semantic representation:

- (1) a. <hug, [___ DP], <Agent, Theme>
 b.



- (2) a. $[[\text{hug}]] = \lambda x. \lambda y. \lambda e. \text{hug}(e) \wedge \text{Agent}(e, y) \wedge \text{Patient}(e, x)$
 b. $[[\text{VP}]] = \lambda e. \text{hug}(e) \wedge \text{Agent}(e, \text{john}) \wedge \text{Patient}(e, \text{jim})$

- **Theta Criterion:** Each theta role must be assigned to one DP, and each DP must be assigned one theta role

- (3) a. $*[_{\text{TP}} \text{John}_i [_{\text{VP}} t'_i [_{\text{V}'} \text{hug } t_i]]]$
 b. $\lambda e. \text{hug}(e) \wedge \text{Agent}(e, \text{john}) \wedge \text{Patient}(e, \text{john})$

- As Hornstein (1999) points out, the Theta Criterion essentially says that movement into a theta position is banned; but this follows because of GB's commitment to D-Structure – the representation at which theta roles are assigned and that precedes all movement operations
- There is nothing wrong with the semantic representation in (3-a); only the syntactic representation according to the Theta Criterion – i.e., theta roles as syntactic primitives are only used to constrain movement like in (3-b). Otherwise, Theta Theory is redundant with independently-needed thematic roles in the semantic representation (Heim & Kratzer 1995)

- Harley (2010) challenges us with the following proposal – what if the syntax doesn't encode theta roles at all? What would this theory look like? It's not clear that theta roles are “virtually conceptually necessary” in Chomsky's (1995) sense

1 Hale & Keyser (1993, 2002)

- Hale & Keyser's big question was – how many theta roles are there, and why? Why are they reliably tied to particular syntactic positions (i.e., Baker's 1988 UTAH), and how many of these distinctions (i.e., Agent, Experiencer, Theme, Patient, Causer, Goal...) are *syntactically* necessary? Can we get by with just a smaller number of syntactic positions? (cf. Pietroski 2005)
- We draw a distinction between unergative and unaccusative intransitive verbs:

- (4) a. [TP John_i [VP t_i [V ran]]]
 b. [TP John_i [VP [V' fell t_i]]]

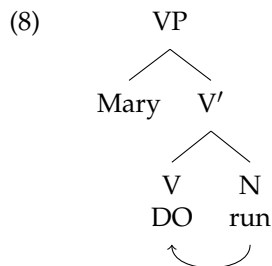
- H&K note that unergative verbs often are multi-morphemic in the languages of the world:

- (5) a. hiil-'a
 laugh-do
 'to laugh'
 b. tu-'a
 whistle-do
 'to whistle' (Jemez)

- (6) a. lo egin
 sleep do
 'to sleep'
 b. barre egin
 laugh do
 'to laugh' (Basque)

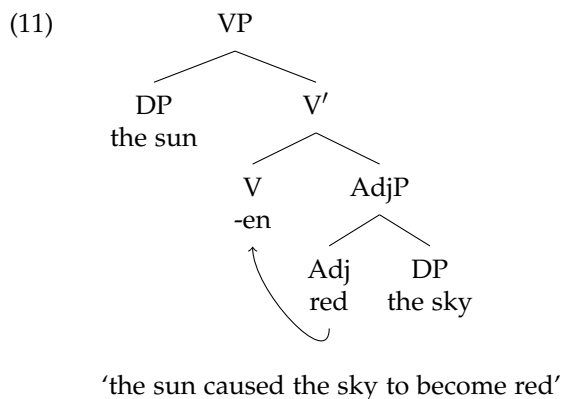
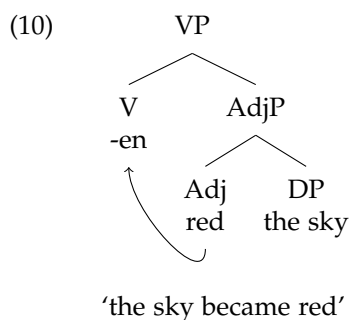
- In English, unergative verbs often alternate with event nouns with zero-derivation:

- (7) laugh, walk, run, work, swim...



- Why do unergative verbs tend to assign the same kind of semantic role to their single argument? They don't! The "light verb" DO assigns the external theta role. . . and there's only one DO!
- Why can't unergative verbs grow an extra agent (**John laughed the baby*)? Because the Spec,VP position is already filled!
- Inchoative verbs – verbs that mean something like "to become (more) ADJ" – are often morphologically related to an adjective:

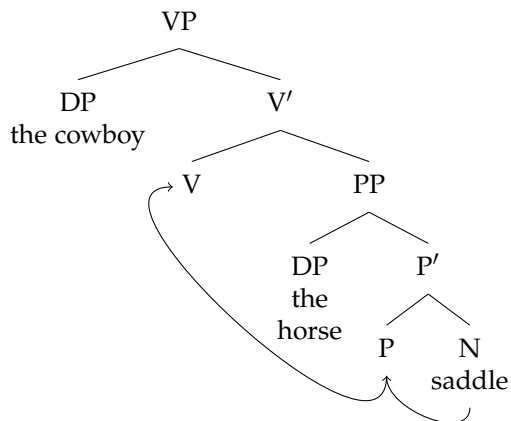
(9) redd-en, fatt-en, soft-en, sharp-en, . . .



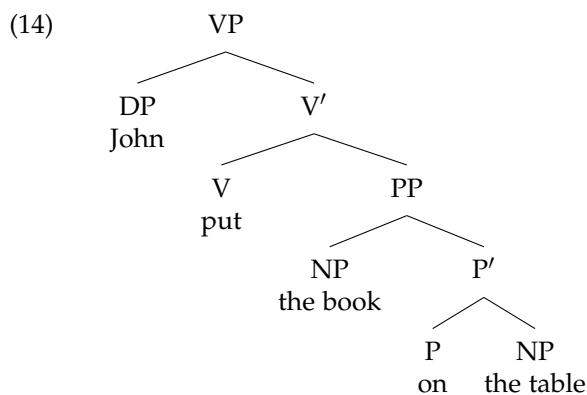
- Generalization: semantic causer = specifier of VP (or, *v*P!)
- There is also a productive class of zero-derived verbs in English that denote a change of location:

(12) bandage, bar, bell, blindfold, bread, butter. . .

- (13)
- The cowboy saddled the horse
 - The cowboy fixed the horse with the saddle



- For H&K, “external subjects” are causers and appear in Spec,VP; “internal subjects” undergo a change of state and are in a specifier inside the VP (i.e., *the horse* above)



- Thus, the small set of possible structural configurations made available by X' theory yield the different kinds of argument structures that are attested:

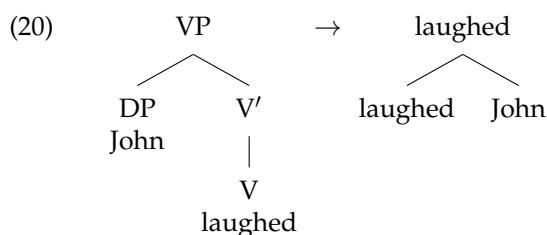
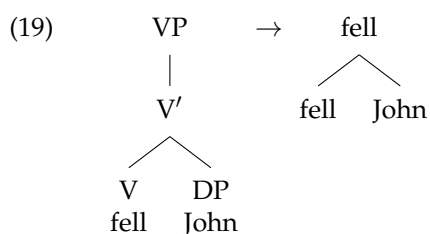
- (15) **Transitives/Unergatives:** [_{VP} V DP]
eat an apple; write a poem; do a dance; make a handout; draw a circle
DO laugh; DO sneeze; DO sleep; DO run; DO dance
- (16) **Verbs of transfer:** [_{VP} V [_{PP} DP [_{P'} P DP]]]
give a book to Sue; put the book on the table; throw a ball to Joe
CAUSE the horse P saddle; CAUSE the books P shelf; CAUSE the bread P butter;
- (17) **Inchoatives:** [_{VP} V [_{AdjP} DP Adj]]
turn the leaves red
BECOME the door open; BECOME the batter stiff

- By now, it's obvious that these light verbs are really *v*, as we've independently described in class

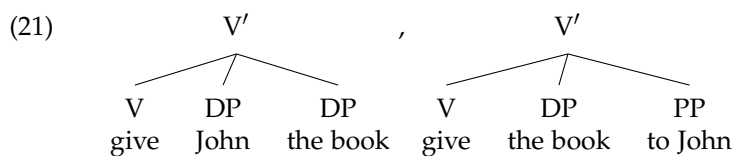
(18) Harley (2010) suggests that *It rains* is essentially an unergative verb lacking the *vP* layer – i.e., it involves an incorporated noun *rain*; similarly, *the plane landed* is a verb of transfer lacking the *vP* layer

2 Other functions of *vP*

- Recall that BPS makes the original analysis of the unergative/unaccusative distinction untenable:



- Introducing the *vP* hypothesis helps resolve this problem, since unergatives will have an argument in the *vP* layer, whereas unaccusatives will have their argument in the VP layer
- (This raises a question about reconciling phase theory with the *vP* hypothesis – do we postulate that unaccusatives lack a *vP*? Or, that they have an inert, non-phase *vP*? How might we tell?)
- What about double object constructions? Traditionally, we've analyzed them as follows:



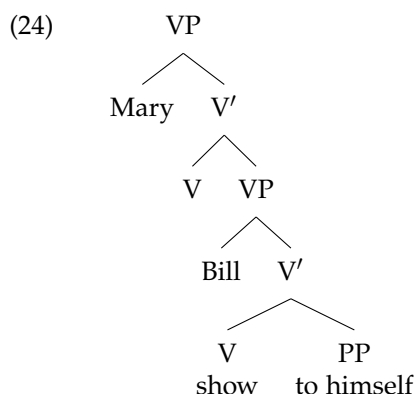
- Merge yields binary branching, and this seems to violate UTAH, since theta roles are assigned to DPs in different positions

- Moreover, the first DP in both structures c-commands the next DP, regardless of whether it's the double object construction or the prepositional dative construction (Barss & Lasnik 1986):

(22) a. Mary showed Bill himself in the mirror
 b. *Mary showed himself Bill in the mirror

(23) a. Mary showed Bill to himself in the mirror
 b. *Mary showed himself to Bill in the mirror

- Larson (1988) proposed that double object constructions are formed with “VP shells”, wherein the Theme is the specifier of a lower VP (much like H&K’s “internal subject”):



- Kratzer (1996) notes that verb-object idioms are plentiful, but verb-subject idioms (to the exclusion of the subject) are not:

(25) a. {Mary, John, Tommy, Tammy} took {a chance, a piss, a drink, a look}
 b. {Mary, John, Tommy, Tammy} killed {a bug, a conversation, an evening, a bottle}

- This is because the agent is merged with *v* (for Kratzer, Voice), and is thus an argument of some CAUSE predicate, whereas the object and the verb combine together to denote the kind of event:

(26) $[[v']] = \lambda x.\lambda e.\text{Agent}(e, x) \wedge \text{drink-taking}(e)$

- In effect, then, the *v*P hypothesis says that there are (at least) two predicates for any clause that has a causative interpretation. There’s supporting evidence for this from the ambiguity of some adverbs.

(27) John made Mary happy again
 a. John [made [Mary happy] again]
 b. John [made [Mary happy again]]

(28) John opened the door again

- a. John [_{vP} *v*_{CAUSE} [_{AdjP} open the door] again]
- b. John [_{vP} *v*_{CAUSE} [_{AdjP} open the door again]]

- We see evidence of an internal “have” predicate with transfer of possession sentences as well:

(29) Mary gave the book to Susan again

- a. Mary [_{vP} *v*_{CAUSE} [_{PP} the book [_{P'} to_{HAVE} Susan]] again]
- b. Mary [_{vP} *v*_{CAUSE} [_{PP} the book [_{P'} to_{HAVE} Susan] again]]

(30) a. Mary gave Bill the car until 3 o'clock
b. Mary lent her hat to Bill for 2 hours

- ... and a stative predicate with inchoative verbs:

(31) John opened the window for five minutes

- Thus, we seem to find strong evidence for thematic roles being configurationally defined, with functional heads

- At this point, we seem to have a theory wherein external arguments receive their semantics by combining with a *v* which introduces a “causer” predicate, and then morphological and syntactic operations in the lower part of the predicate derive further distinctions

- A parallel literature has examined the role that arguments play in delineating the **event structure** of a clause, for instance, whether the meaning of the predicate has a natural end point (=telos):

(32) a. John shot the bear *for an hour / in a split-second
b. John shot at the bear for an hour / ?*in a split-second

(33) a. John ate cookies for an hour / *in an hour
b. John ate the cookies for an hour / in an hour

(34) a. John pushed the cart in the parking lot for an hour / *in an hour
b. John pushed the cart to the edge of the parking lot *for an hour / in an hour

- Theories that encode these semantic distinctions lead to a very different picture of the *vP*/*VP* (Borer 2005; Ramchand 2008; Travis 2010)

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