

ARGUMENT STRUCTURE, PT. 1

Foundations

Intro to Generative Syntax
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1 θ -ROLE ASSIGNMENT

- Starting point: predicates like verbs require a number of arguments and also require that they have certain syntactic and semantic properties.
 - (1) a. Avery devoured the cake.
 - b. ... Avery devoured.
 - c. ... Avery devoured [that the clock was broken].
- A predicate like *devour* requires two arguments (a subject and object) and also requires that its object be a nominal (and not a clause).



DEFINITION 1

- ▷ **Argument Structure:** the set of arguments that a given predicate requires, along with the syntactic and semantic restrictions that it imposes on them.
- ▷ **θ -role:** some semantic property that a predicate assigns to an argument that it selects, e.g. AGENT, EXPERIENCER, THEME/PATIENT, SUBJECT MATTER, etc.



EXERCISE 1

Explain why the sentences below are ungrammatical, taking into account the demands imposed by the underlined predicate. In addition, provide a new sentence that is minimally from the one given, but which fixes the issue(s) you have identified.

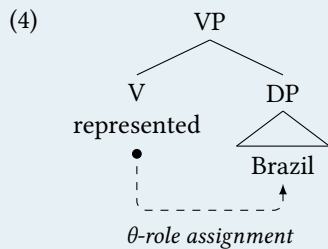
- (2) a. * Rizki high-fived.
- b. * Rizki high-fived that Garik medaled.
- c. # The cake worried about eggflation.
- d. * Rizki persuaded to compete.
- e. * Rizki behaved.
- f. * Rizki likes Garik a book.
- g. # Rizki surprised the cake.

1.1 OBJECT θ -ROLE

- But where exactly do θ -roles come from?

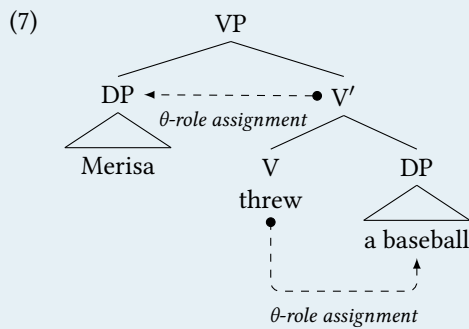
- | | | |
|-----|---|----------------|
| (3) | a. I love Brazil. | SUBJECT MATTER |
| | b. I sent the package to Brazil. | GOAL |
| | c. I represented Brazil (in this painting). | THEME |

- In these sentences, *Brazil* is always in some grammatical object position. But its θ -role changes according to the verb of the sentence.
- We may conclude that the θ -role of an object comes from the predicate that selects it, viz. *love*, *send*, and *represent*.
- θ -role assignment from the verb to its object can be represented as follows:



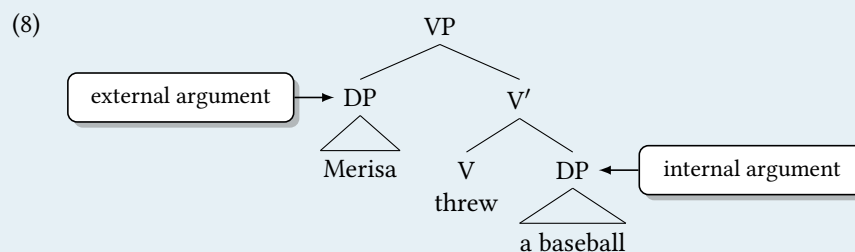
2 SUBJECT θ -ROLE

- What about the subject? Consider now the following sentences:
 - (5) a. Merisa **threw** a baseball.
 - b. Merisa **threw** support behind a candidate.
 - c. Merisa **threw** a party.
 - d. Merisa **threw** a fit.
 - (6) a. Merisa **killed** a cockroach.
 - b. Merisa **killed** the conversation.
 - c. Merisa **killed** a bottle.
 - d. Merisa **killed** an evening watching TV.
 - e. Merisa **killed** the audience.
- Intuitively, the θ -role of the subject changes in each sentence, even though the verb is the same.
 - ▷ E.g. Merisa is doing different things depending on whether she is throwing a baseball or a fit.
 - ▷ Likewise for killing a cockroach and killing the audience.
- These data lead to the conclusion that the θ -role of a subject does not come from the predicate alone, but from the **combination between the predicate and its object**, which is represented as V' if the predicate is a verb.



DEFINITION 2

The thematic object and thematic subject are also called **internal** and **external argument**, respectively.



- Even though the assignment of a θ -role to the internal and external arguments is slightly different, they are still similar in that both happen within the projections of the verb.

DEFINITION 3

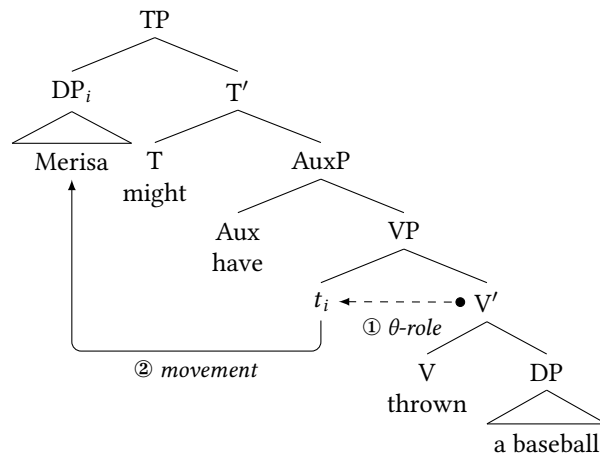
(9) VP-internal Subject Hypothesis

The subject of a predicate (e.g. a verb like *throw*) is generated within the projections of the verb.

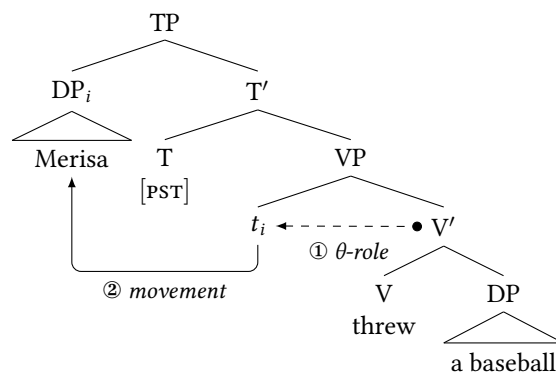
- More generally, the subject of any predicate X (verbal or not) is generated within the projections XP of X .
- Why is the VP-internal Subject Hypothesis relevant?

(10) Merisa might have thrown a baseball.

- In this sentence, the subject (viz. *she*) is quite far away from the verb that selects it (viz. *throw*): *might* and *have* intervene between them.
 - If the VP-Internal Subject Hypothesis (9) is correct, there must have been a previous stage in the derivation where *she* was inside the projections of *throw* before it landed in the position where it is pronounced.
- (11) The discrepancy between the position where some constituent is interpreted (i.e. where it receives a θ -role role) and the position where it is pronounced is reconciled by **movement**.



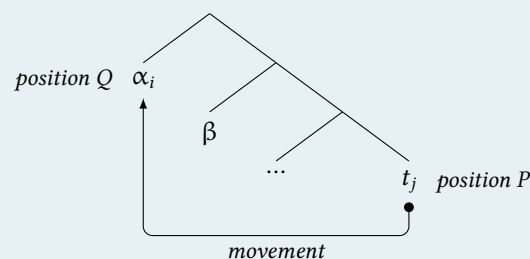
- (12) For uniformity, let us assume that the movement from a VP-internal position to Spec-TP always takes place, even if there is no phonological effect to such operation (as in e.g. *Merisa threw a baseball*).



- Movement can be formalized as follows:

DEFINITION 4

- (13) a. A constituent α can be generated in a syntactic position P , but be displaced to a higher position Q , where it is pronounced.



- b. After movement, P is replaced with a *trace* t , which is an unpronounced position.
- c. t indicates the position a constituent has moved from. This can be indicated by a subscripted index (e.g. i). The moved constituent and each t generated by the movement have the same index.
(I.e. in the tree above, $i=j$.)
- d. Before movement, α would be pronounced after β . A consequence of movement is that α will now be pronounced before β .
- e. Q c-commands P , i.e. the moved constituent c-commands its trace.¹

2.1 EVIDENCE IN SUPPORT OF VISH

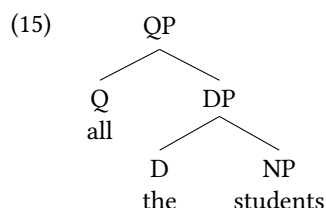
- Is there any empirical evidence in favor of this hypothesis? Yes, from:
 - Quantifier floating (see §2.1.1 right below)
 - Across the Board Movement (ATB) (see textbook, §4.3.2)

2.1.1 QUANTIFIER FLOATING

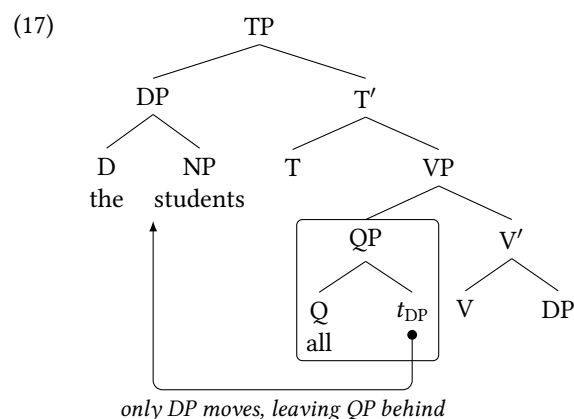
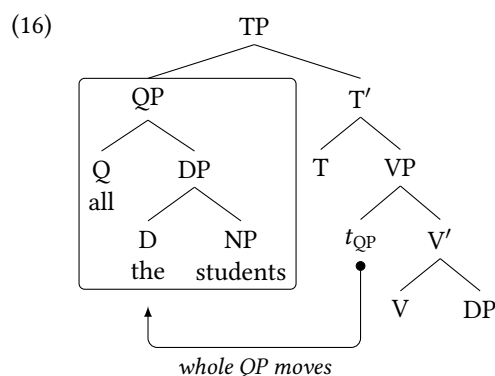
- (14) a. All the students have read the book.
 b. The students have all read the book.²

- In (14b), the quantifier *all* quantifies over *the students*, just as in (14a). In other words, both sentences are true in the same scenarios.
- However, in (14b), *all* is pronounced separately from the nominal it quantifies over.
- Desideratum: we want to account for why these sentences have a similar meaning, despite the difference in the position of *all*.
- The VP-internal Subject Hypothesis allows to do exactly that.
- In both sentences, *all the students* is generated in Spec-VP, the external argument position. It receives a θ -role in this position.
- Afterwards, either the entire QP or part of it moves to the subject position.

- ▷ QP is a Quantifier Phrase. Assume the following structure, where Q takes a DP as its complement:



- Assuming this structure, the derivation of (14a–14b) goes as follows:



- The VP-internal Subject Hypothesis is fundamental in capturing the relationship between these two sentences:
 - They are underlyingly identical, in that the QP *all the students* is generated inside the VP, according to the VP-Internal Subject Hypothesis.
 - Movement creates different linear orders.

¹C-command will be formalized when we discuss Binding in chapter 6. Basically, the idea is that, if α c-commands β , then either α and β are sisters, or β is dominated by α 's sister.

²There is some linguistic variation in quantifier floating in English, which I will have to overlook here.

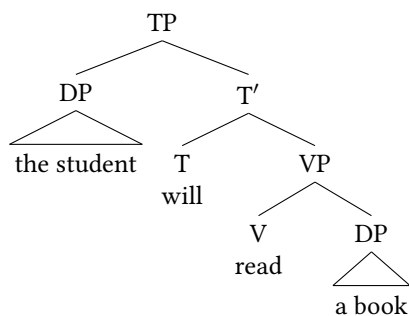
- (17) is an example of **quantifier floating**: the DP that the quantifier (here, *all*) quantifies over moves, leaving the quantifier behind.
- ‘Quantifier floating’ refers to the fact that the quantifier is stranded by the movement of its complement.

➡ Quantifier floating is an argument in favor of **VISH** because the floated or stranded quantifier marks the position where the subject was generated.

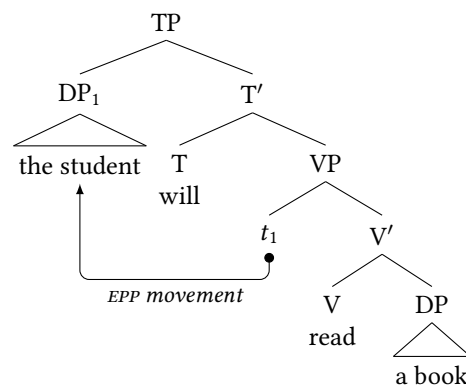
3 SUMMARY

- Internal arguments are assigned a θ -role by the verb, while external arguments are assigned a θ -role by the combination between the verb and its complement.
- Both arguments, however, are assigned a θ -role inside the projections of the verb.
- This gives rise to the VP-Internal Subject Hypothesis, evidenced by e.g. quantifier floating (and ATB movement).

(18) Trees up until chapter 3, ‘X-Bar Theory’



(19) Trees now, assuming **VISH**



EXERCISE 2

Describe the differences between (18–19) regarding:

- The base-generation position of object and subject;
- Relatedly: where they receive a θ -role;
- The syntactic operations involved in the derivation.