

Structure in VP

LING 200B · Ethan Poole · 29 November 2021

1 Introduction

* ARGUMENT STRUCTURE refers to the syntactic frame in which a predicate’s syntactic arguments occur. The goal in this domain is to understand the relationship between argument structure and a predicate’s lexical semantics.¹

• Basic types of predicates

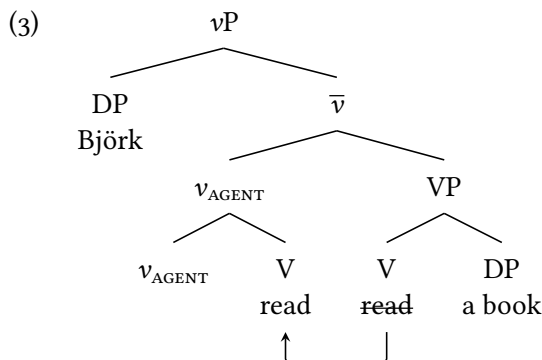
- INTRANSITIVE: Predicate with only one argument, e.g. *laugh*, *arrive*, and *run*.
- TRANSITIVE: Predicate with two arguments, e.g. *kick*, *read*, and *discard*.
- DITRANSITIVE: Predicate with three arguments, e.g. *give* and *assign*.

• Argument-structure alternations

- Oftentimes, predicates can occur in multiple syntactic frames, sometimes with slight variation in meanings:²
 - (1) Alex ran (a race).
 - (2) a. Alex loaded [the wagon] [with hay].
b. Alex loaded [hay] [onto the wagon].
- For the sake of simplicity, we will assume that when a predicate can occur in multiple syntactic argument frames, there are separate lexical entries for that predicate for each frame.
- Ultimately, we will want a more detailed theory of these alternations and of how verbs are constructed.³

• Recap: Transitive predicates

We have already seen that with transitive predicates, the agent is external to the VP and is merged in [Spec, vP]:



(4) Standard simplified functional sequence⁴

$fseq = \langle C > T > v > V \rangle$

⇒ Today, we will see how the split between vP and VP applies to ditransitive and intransitive predicates.

¹ PREDICATES are functions over arguments. Verbs are the canonical predicates, but things like particle verbs e.g. *turn off*, and light-verb constructions, e.g. *take a picture*, are also predicates.

² Levin (1993) is the ultimate descriptive source on these alternations in English.

³ There are many, many papers and books on this topic I recommend Levin (2006) and Ramchand (2008) as starting points.

⁴ You can uncontroversially assume this *fseq*.

2 Ditransitive predicates

- Ditransitive predicates can occur in two syntactic frames:

(5) Double-object frame

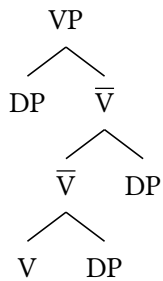
- Rose will **give** [_{DP} Blanche] [_{DP} a cheesecake].
- Could you **pass** [_{DP} me] [_{DP} the salt]?
- I **showed** [_{DP} the agent] [_{DP} my passport].

(6) PP-object frame

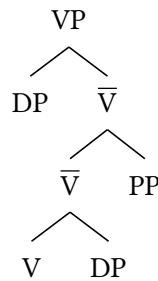
- Rose will **give** [_{DP} a cheesecake] [_{PP} to Blanche].
- Could you **pass** [_{DP} the salt] [_{PP} to me]?
- I **showed** [_{DP} my passport] [_{PP} to the agent].

- Before the introduction of *vP*, we were, more or less, forced into an analysis like the following:

(7) Double-object frame



(8) PP-object frame

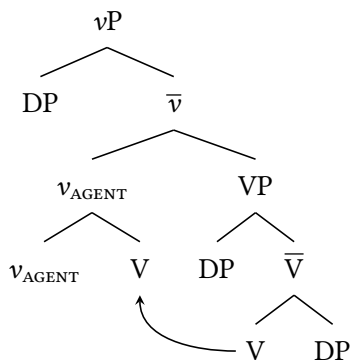


* Analysis

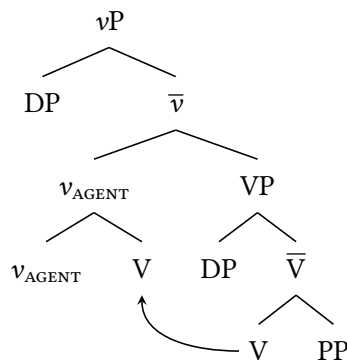
With *vP* shells, we now, in principle, have another option:⁵

⁵ This kind of analysis comes from Larson (1988).

(9) Double-object frame



(10) PP-object frame



- The VP-analysis and vP-analysis of ditransitive predicates predict different constituencies, but unfortunately constituency tests are inconclusive here:

- (11) a. Alex planned to catch the sardines, and [catch the sardines] she did.
 b. **Move entire vP**
 Ben said he would give the cloak to Lee and [give the cloak to Lee] he did.
 c. **Move verb and theme together**
 *Ben said he would give the cloak to Lee and [give the cloak] he did to Lee.
 d. **Move theme and goal together**
 *Ben said he would give the cloak to Lee and [the cloak to Lee] he gave.

- Because constituency tests only work in one direction (i.e. *if* the sentence is grammatical, *then* we have evidence for a constituent), these tests do not allow us to distinguish between the two analyses.

⇒ **Crucial evidence: c-command**

- Barss and Lasnik (1986) observe that the indirect object asymmetrically c-commands the direct object in the double-object frame:

(12) **Reflexives**

- a. Emily showed [Benjamin]₁ [himself]₁ in the mirror.
 b. *Emily showed [himself]₁ [Benjamin]₁ in the mirror.

(13) **Variable binding**

- a. I gave [every worker]₁ [their₁ paycheck].
 b. *I gave [their₁ worker] [every paycheck]₁.

(14) **Reciprocals**

- a. I showed [each man] [the other's friend].
 b. *I showed [the other's friend] [each man].

- In the PP-object frame, the object DP also c-commands the PP:

- (15) a. Emily showed [Benjamin]₁ [to himself]₁ in the mirror.
 b. *Emily showed [himself]₁ [to Benjamin]₁ in the mirror.

⇒ This supports the vP-analysis of ditransitives over the VP-analysis.

3 Intransitive predicates

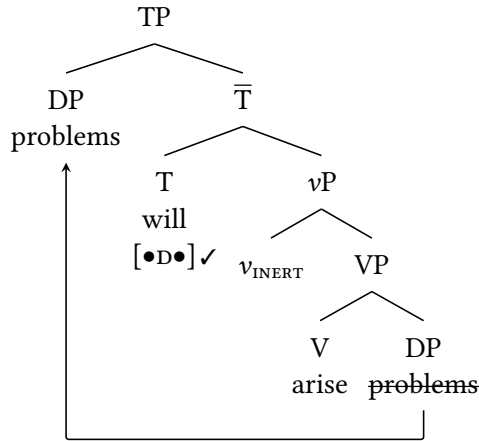
* **Two types of intransitive predicates**

- UNERGATIVE PREDICATES: Argument corresponds to an AGENT.
- UNACCUSATIVE PREDICATES: Argument corresponds to a THEME.

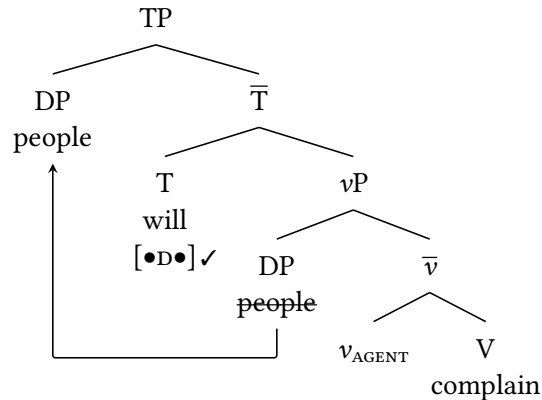
* Unaccusatives and unergatives have distinct syntactic structures:⁶

⁶ For an overview of this topic, see Levin and Rappaport Hovav (1995).

(16) **Unaccusatives**



(17) **Unergatives**



• **Examples**

- Unaccusatives: *arise, occur, remain, arrive, fall, break*
- Unergatives: *complain, groan, salute, dance, hop, jog*

3.1 Understanding the terminology

- The terms ‘unaccusative’ and ‘unergative’ are opaque to say the least. They are loosely related to case alignments.

• **Case alignments**

Broadly speaking, languages divide into two classes with respect to case: nominative–accusative (like English) and ergative–absolutive (like Basque):

(18) **Nominative–accusative case alignment**

- a. Subj_{NOM} V
- b. Subj_{NOM} V Obj_{ACC}

(19) **Ergative–absolutive case alignment**

- a. Subj_{NOM} V
- b. Subj_{ERG} V Obj_{NOM}

- The categorizing distinction between nominative–accusative and ergative–absolutive is whether it is the subject or the object of a *transitive* that behaves like the subject of an *intransitive*.

- ‘Absolutive’ is the same as nominative—the “unmarked” case. The term was first used in Inuit linguistics before being applied more widely, but there is relative consensus nowadays to collapse it with nominative.

- **Some classical examples of ergative languages**

(20) **Dyirbal (Pama–Nyungan; Australia)**

a. **Intransitive**

ɲuma bamaga-n’u NOM
 father.NOM return-NONFUT
 ‘Father returned’

b. **Transitive**

ɲuma **jaja-ɲgu** ɲamba-n ERG–NOM
 father.NOM child-ERG hear-NONFUT
 ‘The child heard father’
 [Dixon 1994]

(21) **Warlpiri (Pama–Nyungan; Australia)**

a. **Intransitive**

kurdu ka wanka-mi NOM
 child AUX speak-NONPAST
 ‘The child is speaking’

b. **Transitive**

ngarrka-ngku ka wawirri panti-rni ERG–NOM
 man-ERG AUX kangaroo spear-NONPAST
 ‘The man is spearing the kangaroo’
 [Hale 1983]

- According to Dixon (1994), about 25% of the world’s languages are ergative languages: Basque, Caucasian languages, Burushaski, some Polynesian, some Papuan, most Pama–Nyungan, Paleo-Siberian, Eskimo-Aleut, Mayan, Carib, and more.

- **Term: Unaccusative**

- Intransitive predicate whose single argument is a theme.
- In a transitive, this argument would have accusative case.
- But it does not have *accusative* case (because it is intransitive), therefore it is *unaccusative*.

- **Term: Unergative**

- Intransitive predicate whose single argument is an agent.
- In a transitive, this argument would have ergative case.
- But it does not have *ergative* case (because it is intransitive), therefore it is *unergative*.

3.2 Transitivity alternations

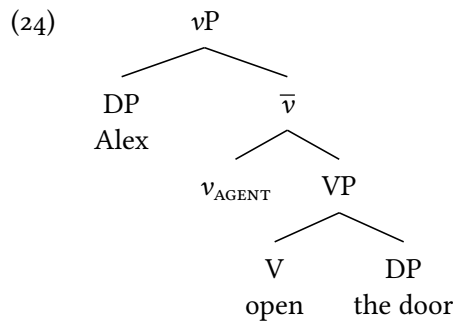
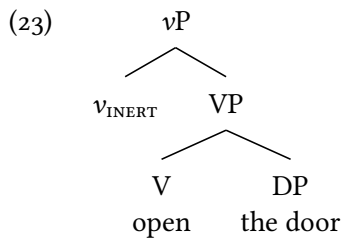
- A large number of English verbs occur in both a transitive frame and an intransitive frame:⁷

- (22) a. The door opened.
 b. Alex opened the door.

⁷ Other examples: *bounce, break, fracture, roll, sink*. See Keyser and Roeper (1984) for a long list.

* **Analysis**

We can capture these alternations by saying that these verbs always take an internal argument. They may then combine with either a *v* head that introduces an agent or one that does not:



- Evidence that there is no agent whatsoever in unaccusative predicates comes from the incompatibility of *by*-phrases, compatibility with adverbs like *all by itself*, and control:

- (25) a. *The boat sank by the Navy.
 b. The boat sank all by itself.
 c. *The building burned [PRO to collect the insurance].
 (vs. The building was burned [PRO to collect the insurance].)

3.3 Unaccusativity diagnostics

- In most cases, it is less obvious where the subject is base-generated. However, there is other evidence that it begins its life in *vP* for unergative predicates and in *VP* for unaccusative predicates.

- (26) a. **Unergative**
 Maria laughed.
 b. **Non-alternating unaccusative**
 Maria arrived.

⇒ **About these diagnostics**

Different tests apply in different languages. It is also not entirely clear what exactly each test picks up on: either a syntactic difference between the two classes or a semantic one.

❶ *Expletive constructions*

Unaccusatives, but not unergatives can occur in expletive constructions with *there*:

(27) **Unaccusatives**

- a. There have **arisen** *several complications*.
- b. There could have **occurred** *a diplomatic incident*.
- c. There **remains** *little hope of finding survivors*.

(28) **Unergatives**

- a. *There **complained** *many passengers*.
- b. *There **groaned** *a toothless patient*.
- c. *There **salutes** *a guard at the gate*.

❷ *Quantifier stranding*

In West Ulster English, quantifiers can be stranded after an unaccusative predicate:⁸ ⁸ McCloskey (2000)

(29) **Baseline**

- a. ^D **What all** did you get ___ for Christmas?
- b. ^D **What** did you get [___ **all**] for Christmas?

(30) ^D **What** happened [___ **all**] at the party last night?

❸ *Imperatives*

In Belfast English, unaccusatives can have postverbal subjects in imperatives, but other verbs cannot:

- (31) a. ^D Leave **you** now!
b. ^D Arrive **you** before 6 o'clock!
- (32) a. *Read **you** that book!
b. *Always laugh **you** at his jokes!

❹ *Auxiliary selection*

Crosslinguistically, in languages with two perfect auxiliaries (akin to *be* and *have*), unaccusatives generally occur with the auxiliary corresponding to *be*:⁹

(33) **Elizabethan English**

- a. Is the duke gone? Then is your cause gone too.
- b. She is fallen into a pit of ink.
- c. How chance thou art returned so soon?

(34) **German**

- a. *gegangen sein* 'to have gone', *angekommen sein* 'to have arrived'
- b. *gearbeitet haben* 'to have worked'

⁹ The complete picture of auxiliary selection is somewhat more complex, but this is a general tendency.

(35) **Italian**

- a. Gianni è arrivato
Gianni is arrived
- b. Gianni a lavorato
Gianni has worked

⑤ **Adjectives and reduced relatives**

The perfect participle of unaccusatives, but not unergatives can be used adjectively and to form reduced relatives:

(36) **Unaccusatives**

- a. They arrested a businessman recently **returned** from Russia.
- b. Several facts recently **come** to light point to new generalizations.
- c. She is something of a **fallen** hero.

(37) **Unergatives**

- a. *The **yawned** student eventually fell asleep in class.
- b. *The man **overdosed** was recovering.

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