Argument Structure, *pt.* 2

Intransitive predicates

Intro to Generative Syntax
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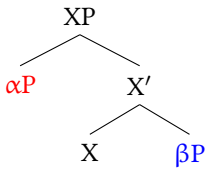
1 Unaccusatives vs. unergatives

- So far: we have looked at **transitive** predicates, i.e. those that select two arguments, one internal and one external.

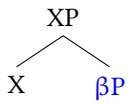
(1) Avery devoured the cake.



- Some predicates, however, take one single argument. They are called **intransitive** predicates.

(2)
a. Jeynaba fell.
b. Jeynaba arrived.
c. Jeynaba melted (in the Summer heat).
d. Jeynaba froze (in place.).
e. Jeynaba laughed.
f. Jeynaba sang.
g. Jeynaba sneezed.
h. Jeynaba called.

- *Questions*: what is the syntax of these predicates? How is the θ-role of the single argument assigned?
  - ▷ These questions are relevant because, given X-Bar Theory, the single argument could be internal (3) or external (4):

(3)


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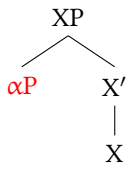


  - ▷ *Preview of punchline*: both (3–4) are indeed attested in natural languages. They correspond to two different types of intransitive predicates, viz.:
    - **Unaccusatives**: sole argument is internal, generated at Compl-XP (3).
    - **Unergatives**: sole argument is external, generated at Spec-XP (4).
  - ▷ *Roadmap*:
    1. Investigate phenomena across different languages that distinguish between internal vs. external arguments in *transitive* predicates.
    2. Use these phenomena as a diagnostic to detect whether the sole argument of an *intransitive* predicate is internal or external.

1.1 *Be* vs. *have* auxiliary selection

- A phenomenon commonly referred to in the distinction between the possible intransitive structures (3–4) is the fact that languages such as Italian, French (5), and German use different auxiliaries for verbs that select only one argument.
- Specifically, these languages use *be* (5a) with some intransitive verbs and *have* (5b) with others.

(5) *French: auxiliary selection*

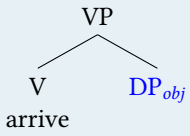
a. Il { *a / **est** } venu.
he has is come
'He came.'

b. Il { **a** / *est } travaillé.
he has is worked
'He worked.'

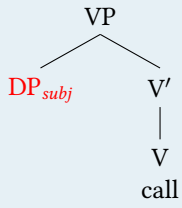
- This is initial suggestion that there must be two types of intransitive verbs in a language like German, so that auxiliary selection is sensitive to this distinction.
  - ▷ But what is the nature of this distinction?
- *Preview of the answer*: there are two types of intransitive predicates, which differ with respect to the position where their sole argument is base-generated.

Definition 1

(6) *Unaccusatives*: only argument is internal, generated at complement position.



(7) *Unergatives*: only argument is external, generated at the Spec position



- Each language has its own diagnostics to distinguish between unaccusative and unergative predicates.

2 English diagnostics

- *Game plan*:
  1. Examine data (§2.1).
     a. First, we will look at some phenomenon that is sensitive to a distinction between internal vs. external argument, as it illustrated by a transitive verb.
     b. Then, we will look at corresponding intransitive sentences that illustrate the same phenomena. We will see that there is a systematic divide between these predicates.
  2. Re-examine the same data, but with a view to provide an analysis of the internal structure of the two types of intransitive predicates (§2.2).
- Constructions to be examined: *(i)* resultatives, *(ii)* adjectival formation, and *(iii)* the licensing of cognate objects.

2.1 Data

2.1.1 Resultatives

- *Resultative* = some phrase that describes that state that results from some other main event, e.g. [*flat*] in (8a), a state that results from the event of Mattie hammering the metal.

(8) a. Mattie hammered the metal [flat].
b. The gardener watered the tulips [flat].
c. The grocer ground the coffee beans [into a fine powder].
d. They painted their house [a hideous shade of green].

- Resultatives are compatible only with some intransitive predicates:

(9) a. … The vase broke [into pieces].
b. … The water froze [solid].

(10) a. … John sang [into pieces].
b. … Mary laughed [solid].

2.1.2 Adjectival formation

- The participial form of verbs can be used as an adjective. In (11b) and (12b), *remain* requires as adjective following it, as is clear from *The dress remained **pretty/acceptable** (despite all the alterations).*

(11) a. Mattie will **lengthen** the dress. (*verb*)
b. The dress remained **lengthened**. (No one dared touch it.) (*adjective*)

(12) a. Mattie will **open** the package. (*verb*)
b. The package remained **opened**. (No one dared touch it.) (*adjective*)

▷ That *lengthened* and *opened* are adjectives is further supported by *un–* prefixation (cf. **un–open*):

(13) a. un–lengthened
b. un–opened

▷ Furthermore, *lengthened* and *opened* precede the NP they modify, just like any adjective in English:

(14) a. the **pretty**/**lengthened** dress
b. the **unexpected**/**unopened** package

- With this background in place, consider the contrasts between adjectives formed by intransitive predicates:

(15) a. The vase **broke**.
b. … the **broken** vase

(16) a. The water **froze**.
b. … the **frozen** water

(17) a. The man **sung**.
b. … the **sung** man

(18) a. The woman **laughed**.
b. … the **laughed** woman

2.1.3 Cognate objects

- We know that transitive verbs have objects:

(19) a. The student devoured **the cake**.
b. The student read **the book**.

- A *cognate object* is an object that expresses the same meaning as the verb. Morphologically, they can be formed by the same $\sqrt{stem}$, e.g.:

(20)

Stem	Verb	Cognate obj
$\sqrt{sing}$	to sing	the song
$\sqrt{break}$	to break	the break

- There is a contrast between whether or not an intransitive predicate can merge with an object formed with the same stem:

(21) a. … The vase broke **a big break**.
b. … The water froze **a big freeze**.

(22) a. … John sang **a song**.
b. … Mary laughed **a hearty laugh**.

2.1.4 Interim summary

- We saw that there must be some distinction between intransitive predicates such as "arrive" and "telephone" in e.g. German (5), so that the "be" vs. "have" auxiliary selection can be sensitive to it.
- A similar conclusion can be drawn from the English data above: there must be two different classes of intransitive predicates (viz. *break*/*freeze* vs. *sing*/*laugh*). Otherwise, how could we explain the systematic distinction of these predicates along a series of diagnostics?

(23)

	Resultative	Adj-formation	Cognate obj
break, *freeze*, …	✓	✓	✗
sing, *laugh*, …	✗	✗	✓

2.2 The rationale behind the tests

- The English constructions above **distinguish between internal and external arguments**.
- The two types of intransitive predicates are different precisely because of the base-generation position of their sole argument.
  - ▷ *Unaccusative*: only internal argument
  - ▷ *Unergative*: only external argument

2.2.1 Resultatives

- In the baseline (24), *the metal* is the internal argument of the transitive verb *hammer*. What is flat as a result of the hammering event is the metal (and not Mattie).

(24) Mattie hammered the metal [flat].
i. … 'The metal is flat as a result of hammering.'
ii. … 'Mattie is flat as a result of hammering.'

➟ A resultative phrase describes that state of the DP denoted by the *internal argument*.

Exercise 1

What are the possible and impossible paraphrases of the sentences below? In other words, what does the [resultative phrase] describe the resulting state of?

(25) a. The gardener watered the tulips [flat].
b. The grocer ground the coffee beans [into a fine powder].
c. They painted their house [a hideous shade of green].

- Turning now to intransitive predicates, we saw that *break* and *freeze* are both compatible with resultatives.

(26) a. The vase broke [into pieces]. … 'The vase is flat as a result of breaking'
b. The water froze [solid]. … 'The water is solid as a result of freezing'

➟ Given that resultatives can only apply to internal arguments, it must be the case that the sole argument of *break* and *freeze* (viz. *the vase* and *the water*) is an internal argument.
Thus, *break* and *freeze* are unaccusative predicates.

- *Sing* and *laugh*, in contrast, are not compatible with resultatives:

(27) a. * John sang [into pieces]. … 'John is into pieces as a result of singing'
b. * Mary laughed [solid]. … 'Mary is solid as a result of laughing'

➟ Given that resultatives **cannot** apply to external arguments, it must be the case that the sole argument of *sing* and *laugh* (viz. *John* and *Mary*) is an external argument.
Thus, *sing* and *laugh* are unergative predicates.

2.2.2 Adjectival formation

- Consider what an adjective formed out of a transitive verb can modify:

(28) The technician will hammer the metal.
a. the hammered metal $[_{NP}\ AP\ [_{NP}\ N]_{int}]$
b. * the hammered technician $[_{NP}\ AP\ [_{NP}\ N]_{ext}]$

▷ We see from the contrast between (28a–28b) that the adjective *hammered* can modify only the internal argument (viz. *the metal*) of the verb it is formed from—it cannot modify the verb's external argument (viz. *the technician*).

Exercise 2

The same holds of other transitive verbs, e.g. *lengthen* and *open*.

(29) a. Mattie will **lengthen** the dress.
b. Mattie will **open** the package.

What are the equivalent $[_{NP}\ AP\ [_{NP}\ N]]$ nominals for these verbs? Are they grammatical or ungrammatical?

- The equivalent $[_{NP}\ AP\ [_{NP}\ N]]$ phrases formed out of the intransitive predicates *break* and *freeze* is well-formed:

(30) a. the broken vase
b. the frozen water

➟ Given that deverbal adjectives can only modify the internal argument of the verb they are formed from, it must be the case that the sole argument of *break* and *freeze* (viz. *the vase* and *the water*) is an internal argument.
Thus, *break* and *freeze* are unaccusative predicates.

- For the intransitive predicates *sing* and *laugh*, on the other hand, we saw that the matching deverbal adjective cannot modify the sole argument of these verbs:

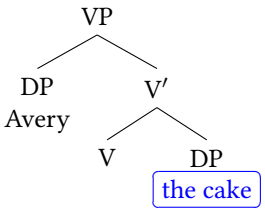
(31) a. * the sung man
b. * the laughed woman

➟ Given that deverbal adjectives cannot modify the external argument of the verb they are formed from, it must be the case that the sole argument of *sing* and *laugh* (viz. *the man* and *the woman*) is an external argument.
Thus, *sing* and *laugh* are unergative predicates.

2.2.3 Cognate objects

- *Premises*:
  - ▷ The cognate object is an *object*. We know that objects are base-generated at a complement position:

(32) Avery devoured the cake.



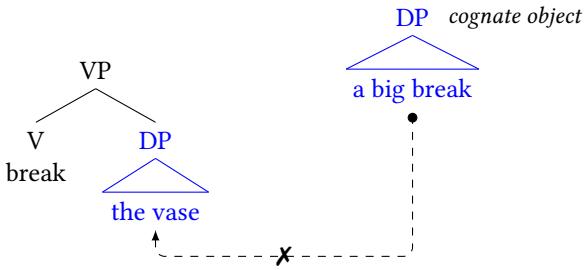
  - ▷ *Assumption*: only one single phrase can occupy any given node in the syntactic structure.
- We saw that the intransitive verbs *break* and *freeze* cannot merge with a cognate object:

(33) a. * The vase broke a big break.
b. * The water froze a big freeze.

➟ Given the assumption that there must be one single constituent per syntactic slot, the cognate objects *a big break* and *a big freeze* must be competing for the syntactic slot that is already occupied by the sole argument of *break* and *freeze* (viz. *the vase* and *the water*).
Because cognate objects should be base-generated at Compl-VP, this must be the position where the sole argument of these predicates is base-generated.
Thus, *break* and *freeze* are unaccusative predicates.

  - ▷ Schematically:

(34)



cognate object cannot be introduced in Compl-VP: this position is already occupied by unaccusative's original object

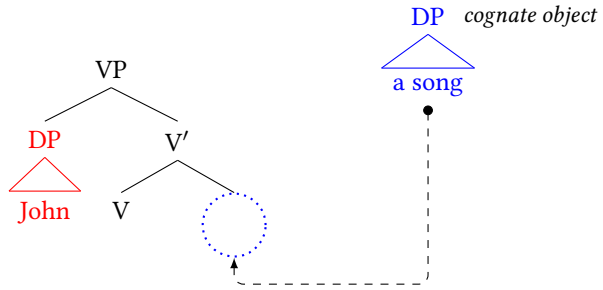
- In contrast, *sing* and *laugh* can merge with a cognate object:

(35) a. John sang a song.
b. Mary laughed a hearty laugh.

➟ Given the assumption that there must be one single constituent per syntactic slot, the cognate objects *a song* and *a hearty laugh* must **not** be competing for the syntactic slot that is already occupied by the sole argument of *sing* and *laugh* (viz. *John* and *Mary*).
Because cognate objects should be base-generated at Compl-VP, the position where the sole argument of these predicates is base-generated must be Spec-VP, the only other option available.
Thus, *sing* and *laugh* are unergative predicates.

▷ Schematically:

(36)



*cognate object **can** be introduced in Compl-VP, since this position is empty—an unergative predicate selects only an external argument*

Exercise 3

These were our premises: (*i*) only one single phrase can occupy any given node in the syntactic structure, and (*ii*) a cognate object occupies a complement position.

a. Describe the sentences below, comparing them with the ungrammatical sentence **The vase break with a break.*

(37) a. The vase broke with a big break.
b. The vase broke.

b. Based on the premises above, explain why (37a) and (37b) are grammatical.
c. Draw diagrams for (37a) and (37b).

3 Intransitive sentences and the EPP

- We can now classify the intransitive sentences we started with as follows:

(38) *Unaccusatives*
a. Jeynaba fell.
b. Jeynaba arrived.
c. Jeynaba melted (in the Summer heat).
d. Jeynaba froze (in place.).

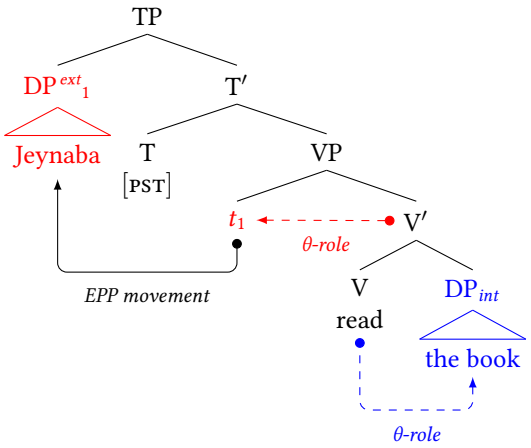
(39) *Unergatives*
a. Jeynaba laughed.
b. Jeynaba sang.
c. Jeynaba sneezed.
d. Jeynaba called.

- Given the resultative, adjectival formation, and cognate object data, we have compelling reason to distinguish between two classes of intransitive predicates:

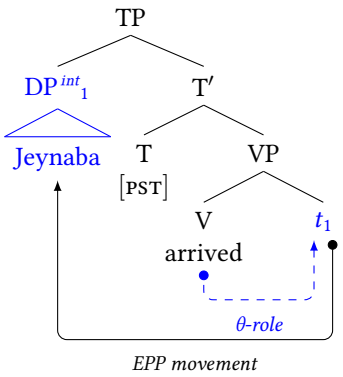
- ▷ *Unaccusatives*: intransitive predicates that select only an internal argument.
- ▷ *Unergatives*: intransitive predicates that select only an external argument.

- *But*: despite the difference in base-generation of the sole argument of the intransitive predicate, the sentences in (38–39) have the same superficial form: they are all *DP–V* sentences.
- This similarity is derivative: **it is the result of the DP movement that can be resorted to in order for the EPP to be complied with**.
  - ▷ *Recall*: EPP is a principle that requires that the grammatical subject position, viz. Spec-TP, be filled.
  - ▷ The EPP can be satisfied via movement (of the highest DP), but nothing is said about the θ-role or the base-generation position of that DP.

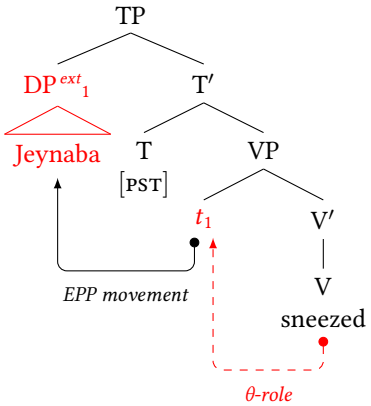
(40) Jeynaba read the book. (*Transitive: DP_{EXT} satisfies EPP*)



(41) Jeynaba arrived. (*Unaccusative: DP_{INT} satisfies EPP*)

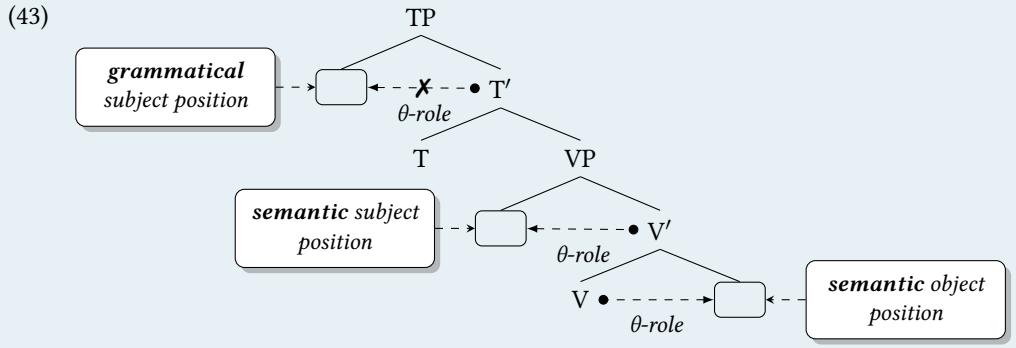


(42) Jeynaba sneezed. (*Unergative: DP_{EXT} satisfies EPP*)



- It is crucial to distinguish between semantic and grammatical positions in the clausal structure:

(43)



Exercise 4

Using at least two diagnostics above, explain why *arrive* is an unaccusative verb, while *sneeze* is an unergative verb.

(44) a. Jeynaba arrived. b. Jeynaba sneezed.

Draw a tree for each sentence.

4 Crosslinguistic diagnostics

4.1 Absolute participles in Brazilian Portuguese

- In Brazilian Portuguese, there is a type of clause called 'absolute participle' (45b), where the verb occurs in participial form (i.e. *lido* 'read'). It is adjoined to the main clause and has a temporal or causal reading.

(45) a. A Ana leu o livro.
the Ana read.PST the book
'Ana read the book.'

b. [Li-do o livro], a Ana começou a responder o questionário.
read-PART.M the book the Ana began to answer.INF the questionnaire
'After reading the book, Ana began to answer the questionnaire.'

c. * [Li-da a Ana], ...
read-PART.F the Ana
Intended: 'After Ana read ....'

  - ▷ Absolute participles target internal arguments (e.g. *o livro* 'the book' in (45b)).
  - ▷ (45c) is ungrammatical because *Ana* is the external argument of *read*.

- With this background in mind, consider what happens with intransitive predicates:

(46) a. [Chega-da a Ana], ...
arrive-PART.F the Ana
'After Ana arrived, ...'

b. * [Telefona-da a Ana], ...
telephone-PART.F the Ana
Intended: 'After Ana telephones ....'

Exercise 5

Formulate a hypothesis as to why (46a) is grammatical, but (46b) is not and state explicitly why absolute participles can be used as an unaccusative vs. unergative diagnostic in Brazilian Portuguese.

- Given that absolute participles in Brazilian Portuguese can only target internal arguments, …
  - ▷ … the only argument of *chegar* 'arrive' in (46a) must be internal, rendering this sentence grammatical.
    - ➟ *Chegar* 'arrive' must be an unaccusative predicate.
  - ▷ … the only argument of *telefonar* 'telephone' in (46b) must be external, rendering this sentence ungrammatical.
    - ➟ *Telefonar* 'telephone' must be an unergative predicate.
- *Conclusion*: absolute participles can be used to distinguish between unaccusatives and unergatives in Brazilian Portuguese because it differentiates between internal and external arguments.

4.2 *Ne*-cliticization in Italian

- In Italian, the pronoun *ne* can be used with the quantifier *molti* 'many' in order to express partitivity, i.e. to pick out a subset of a previously mentioned referent. Roughly, *ne* can be translated as 'of them.'
- (47a) is a baseline example where *molti* 'many' quantifies over *studenti* 'students.' In (47b), there is no nominal expression that *molti* quantifies over—instead, the pronoun *ne* occurs.

(47) a. Gianni inviterà molti studenti.
Gianni invite.FUT.3SG many students
'Gianni will invite many students.'

b. Gianni **ne**=inviterà molti.
Gianni PARTV=invite.FUT.3SG many
'Gianni will invite many of them.'

- *Ne* has particular morphophonological properties: being a stress-less pronoun, it must attach to the left of an inflected verb. In (47b), *ne* attaches to *inviterà* 'will invite.' The "attaching" of a pronoun that does not bear stress to an appropriate host (e.g. an inflected verb) is referred to as *cliticization* and it is denoted with '='.
- Additionally, *ne* has particular syntactic properties. While (47b) is a grammatical sentence, (48b) is not.

(48) a. Molti studenti inviteranno Gianni.
many students invite.FUT.3PL Gianni
'Many students will invite Gianni.'

b. * Molti **ne**=inviteranno Gianni.
many PARTV=invite.FUT.3PL Gianni
Intended: 'Many of them will invite Gianni.'

Exercise 6

Given the nature of the verb *invitare* 'invite,' formulate a generalization that captures the distinction between (47b) and (48b).

- The restrictions on the distribution of *ne* can be used as a diagnostic that distinguishes between unaccusative and unergative predicates in Italian. Consider the following contrast:[1]

[1]The linear order of the sentences in (49–50) was altered to simplify the exercise. In any case, nothing hinges in the linear order of the sentences.

(49) a. Molti navi affonderono.
many ships sink.FUT.3PL
'Many ships will sink.'

b. Molti **ne**=affondarono.
many PARTV=sink.FUT.3PL
'Many of them will sink.'

(50) a. Molti studenti telefoneranno.
many students telephone.FUT.3PL
'Many students will call.'

b. * Molti **ne**=telefoneranno.
many PARTV=telephone.FUT.3PL
Intended: 'Many of them will call.'

Exercise 7

Based on the generalization you formulated about the contrast between (47b) and (48b), explain how *ne* cliticization can be used as an Italian-specific diagnostic to distinguish between unaccusative and unergative predicates in this language.

4.3 Interim summary

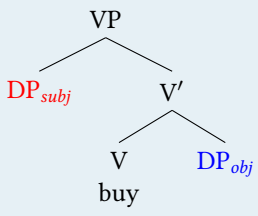
- Our starting point was sentences like those in (2), repeated below, where verbs select a single argument.

(51) a. Jeynaba fell.
b. Jeynaba arrived.
c. Jeynaba melted (in the Summer heat).
d. Jeynaba froze (in place.).
e. Jeynaba laughed.
f. Jeynaba sang.
g. Jeynaba sneezed.
h. Jeynaba called.

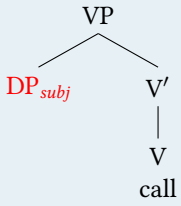
- These sentences look the same, so we could hypothesize that they have the same syntax.
- However, further inspection suggested otherwise. Specifically, we examined diagnostics from different languages that are sensitive to an external vs. internal argument distinction.
- Net result: we now have three types of predicates, classified with respect to their argument structure.

1. *Transitive*: two arguments, a subject (usually an AGENT or EXPERIENCER), generated at Spec-VP, and an object (usually a THEME), generated at complement-VP.
2. *Intransitive*:
   - ▷ *Unergative*: only argument is a subject (usually an AGENT or EXPERIENCER), generated at Spec-VP.
   - ▷ *Unaccusative*: only argument is an object (usually a THEME), generated at complement-VP.

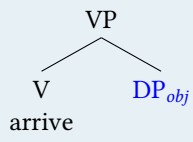
(52) *Transitive*



(53) *Unergative*



(54) *Unaccusative*

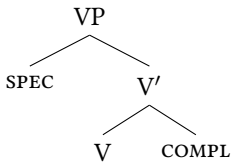


- *Important*: the EPP requires that Spec-TP be filled. The highest DP base-generated inside the VP moves to this position so that this principle can be complied with (see diagrams in §3).

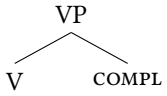
5 Non-verbal predicates

- Recall: X-Bar Theory provides a framework for the structure of phrases of any category.
  - ▷ Spec-XP and Compl-XP are filled according to the argument structure of some given X.
- So far, we focused only on verbal predicates (i.e. X = V).

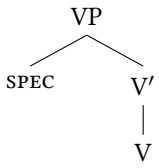
(55) *Transitive*



(56) *Unaccusative*



(57) *Unergative*



- However, other categories such as adjective (58) and noun (59) can also take arguments.

(58) Solfrid is **proud** of Faatu.

(59) the **claim**/**belief**/**announcement** [$_{CP}$ that investments would be reduced].

- Just like verbal predicates impose requirements on their arguments, so do their adjectival and nominal counterparts:

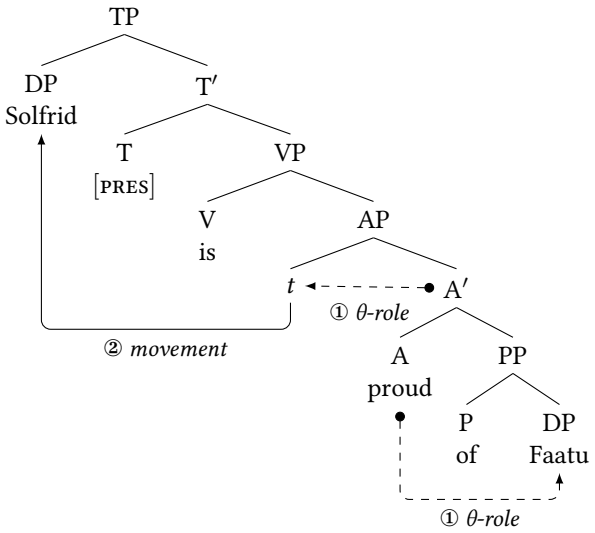
(60) a. (*Solfrid) is worried about Faatu. (*'Solfrid' is obligatory.*)

b. The chair is worried about investment cuts. (*'The chair' must be* [ANIMATE].)

5.1 Adjectival predicates

- Any predicate, verbal or non-verbal, can select both an external argument and an internal argument.
- *Proud* in (58), for example, is a transitive adjectival predicate that takes an EXPERIENCER (viz. *Solfrid*) as its external argument and a THEME (viz. *Faatu*) as its internal argument.
- Just as in a verbal predicate sentence, the highest DP undergoes movement to Spec-TP, so that the EPP can be satisfied.

(61)



5.1.1 The copula *be* in English

- (61) contains additional structure that a verbal predicate sentence does not contain, viz. an additional VP headed by *be*.
- The verb *be* in this case is called a **copula**: it is functional verb that precedes certain non-verbal predicates (e.g. adjectives) and which may carry grammatical features such as tense and agreement.[2]
- The copula *be* merges with the AP and does not have a Spec position.
- In fact, the **copula *be* does not assign any θ-role**:

(62) a. … The director is distraught.
b. … The bookcase is distraught.
c. … The bookcase is sturdy.

5.1.2 Copula *be* vs. progressive *be*

- The copula *be* (63b) should not be confused with the auxiliary of the same form *be* (63a).

(63) a. Guifang is$_{\text{AUX}}$ training right now. be_{AUX} + V–*ing*
b. Guifang is$_{\text{COP}}$ strong. be_{COP} + ADJ

  - ▷ The auxiliary *be* merges with a verb and requires that it be in progressive form, i.e. the *–ing* form *training* in (63a)—this is a selectional requirement imposed by the auxiliary *be*.
    - ○ The auxiliary *be* heads TP if it is the highest auxiliary. Otherwise, it heads an AuxP.
  - ▷ The copula *be* merges with an adjective such as *strong*.
    - ○ The copula *be* always heads a VP.

- The copula *be* can co-occur with the auxiliary *be* used in the progressive.

(64) a. You are$_{\text{AUX}}$ running. be_{AUX} + V–*ing*
b. You are$_{\text{COP}}$ unreasonable. be_{COP} + ADJ
c. You are$_{\text{AUX}}$ being$_{\text{COP}}$ unreasonable. be_{AUX} + [be_{COP}–*ing* + ADJ]

> **Exercise 8**
>
> Draw a tree for (65). Assume that the argument of *obnoxious* is base-generated at a Spec position.
>
> (65) The dude might have been being obnoxious.

5.1.3 Icelandic adjectives

- *Two-fold goal*: *(i)* provide additional morphosyntactic evidence that adjectives can assign θ-roles, just like their verbal counterparts, and *(ii)* provide support for the X-Bar-theoretic expectation that any predicate can be unaccusative or unergative, including adjectives.
- *Background*: In Icelandic, the form of nominal expressions and the choice of the predicate that selects them can co-vary. In both (66a–66b), the subject is a [1PL] pronoun (i.e. 'we'). However, the pronoun has a nominative form in (66a), but a dative form in (66b).

(66) a. **Við** lásum bókina.
1PL.NOM read.1PL the.book.ACC
'We read the book.'

b. **Okkur** vantaði bókina.
1PL.DAT lacked.3SG the.book.ACC
'We lacked the book.'

  - ▷ The choice between *við* (NOM) and *okkur* (DAT) is correlated with a difference in the predicate that selects them, viz. *lásum* 'read' (66a) and *vantaði* 'lack' (66b), respectively.

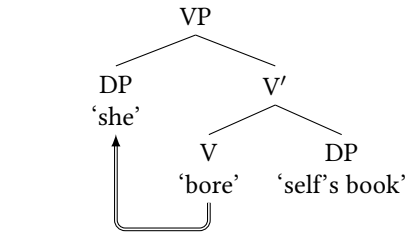
[2] The copula *be* can also precede DP predicates, e.g.: *The director is a competent person.*

- ▷ When an Icelandic predicate imposes a particular case morphology on one of its arguments (here, the external argument), it is said to assign it **quirky case**.
- ▷ Importantly, **quirky case is considered to be assigned along with a θ-role**. The ability to assign quirky case is a property that some predicates in Icelandic are idiosyncratically endowed with.
  - ○ 'Read' (66a) is not able to assign quirky case.
  - ○ 'Lack' (66b) is idiosyncratically endowed with this ability.
- ▷ Quirky cases in Icelandic: dative (see (66b) and, also, (68–69) below) and genitive (67).

(67) Ég mun sakna **hans**.
I will miss him.GEN
'I will miss him.'

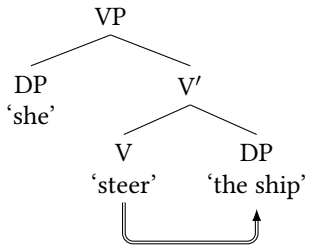
- ▷ Quirky case can be assigned to both external and internal arguments:

(68) *Quirky case assigned to subject*
Henni leiðist bókin sín.
she.DAT bores the.book.NOM self's
'She finds her own book boring.'



EXPERIENCER θ-role + quirky DAT

(69) *Quirky case assigned to object*
Hún stýrði **skipinu**.
she.NOM steered ship.the.DAT
'She steered the ship.'



THEME θ-role + quirky DAT

- With this background in place, consider now what happens with some adjectives in Icelandic. We see in (70a–70b) that the adjective 'cold' can combine with a subject that is nominative (70a) or dative (70b).

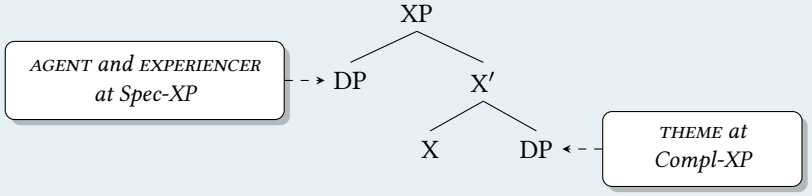
(70) a. **Ég** er kaldur.
1SG.NOM am cold.NOM
'I am cool/cold to touch.'

b. **Mér** er kalt.
1SG.DAT is cold.DFLT
'I am feeling cold.'

- The translation indicates that the overall meaning of the sentence is different in correlation with the case morphology of the subject:
  - ▷ The subject of 'cold' in Icelandic is interpreted as a 'passive' entity that emits cold when it is marked with nominative case (70a).
  - ▷ However, it is interpreted as some type of experiencer when it is marked with dative case (70b).
- *Assumption about the position of arguments* (see more on this in §6 below):

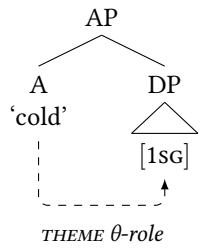
  - ▷ If an argument denotes an entity that undergoes the event denoted by the predicate or one that does not have control over that event, it is a THEME generated at Compl-XP.
  - ▷ EXPERIENCERS and AGENTS are generated at a higher position, Spec-XP.

(71)

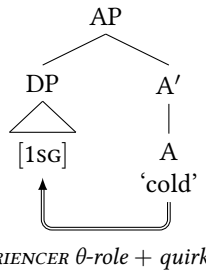


- Given this assumption about the base-generation position of arguments and the fact that DAT is an instance of quirky case in Icelandic, the APs of (70a–70b) can be represented as follows:

(72) a.



b.



- *Conclusion*: the derivation of the adjectival predicate 'cold' in (72b) is exactly identical to that of the verbal predicate 'bore' in (68): a particular θ-role is assigned along with a quirky case, as a consequence of an idiosyncratic specification of 'cold.'[3]

  ➟ Quirky case assignment in Icelandic provides indirect morphosyntactic evidence that adjectives have argument structure too.

Exercise 9

Explain the contrast between the two sentences below:

(73) a. **Ofninn** er kaldur.
the.radiator.NOM is cold.NOM
'The radiator is cool/cold to touch'

b. # **Ofninum** er kalt.
the.radiator.DAT is cold.DFLT
Literally: 'The radiator is feeling cold.'

5.2 Nominal predicates (with a CP complement)

- Just like verbs and adjectives, nouns can also select arguments and assign a θ-role to them.
- Recall that verbs (74a) can select clauses as their complement (or, more precisely, their internal argument). Nouns (74b) can also take a clause as their complement:

(74) a. [$_{TP}$ Seb [$_{VP}$ **claimed** [$_{CP}$ that Loredana will have finished the book]]].
b. [$_{DP}$ the [$_{NP}$ **claim** [$_{CP}$ that Loredana will have finished the book]]]

- There are a few verb–noun cognate pairs that subcategorize for a CP, e.g.:

(75) a. believe–belief
b. announce–announcement
c. state–statement

Exercise 10

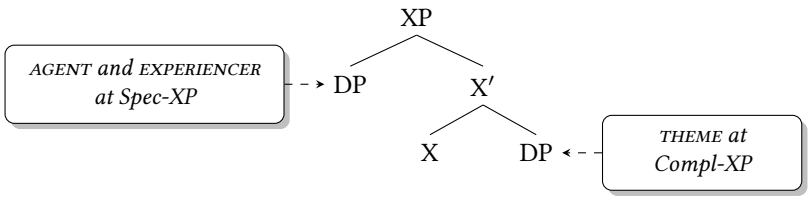
Draw trees for the sentences (74a–74b).

[3] A difference is that 'bore' has a fixed argument structure and it always assigns quirky DAT to its subject, but 'cold' has two arguments structures, one with a THEME object and another with an EXPERIENCER subject. Only in the latter case does 'cold' assign quirky DAT to its subject.

6 The Uniformity of Theta-role Assignment Hypothesis

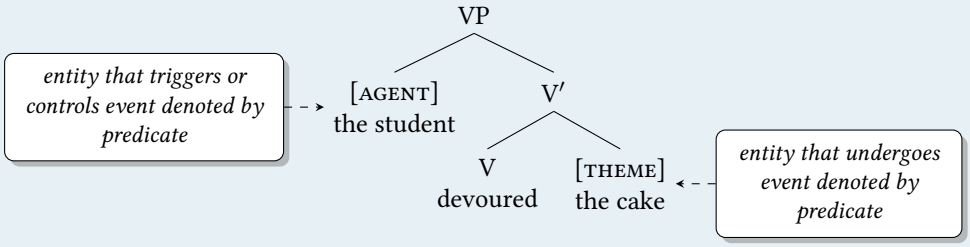
- We assumed above that particular θ-roles are assigned to particular positions:

(76)

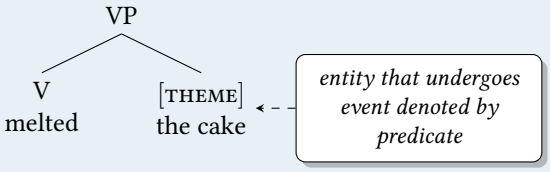


- This is what is behind the positions where the arguments of transitives and intransitive predicates are base-generated:

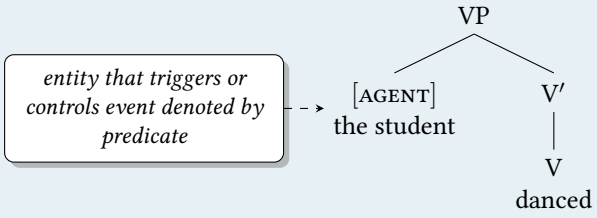
(77) a. *Transitive predicate*: [AGENT, THEME]



b. *Unaccusative predicate*: [THEME]



c. *Unergative predicate*: AGENT



- The correlation between a given θ-role and the syntactic position it is assigned to is known as **Uniformity of Theta-Assignment Hypothesis** (UTAH):

Definition 2

(78) *Uniformity of Theta-Assignment Hypothesis*

Identical thematic relationships between items are represented by identical structural relationships at the point at which they are first merged.

6.1 Beware of semantic roles

- The interpretation of an argument can be a useful cue to its position, if we assume UTAH (78) to be true.
  - ▷ If an argument α is interpreted as an AGENT that controls the event ➟ α is base-generated at Spec,XP.
  - ▷ If an argument α is interpreted as a THEME that undergoes the event ➟ α is base-generated at Compl,XP.
- *But*: it is not always reliable, *unless we have explicit evidence about interpretation.*
- This is particularly the case of predicates that can have an unaccusative or unergative interpretation, such as Icelandic 'cold,' discussed in §5.1.3.
- An additional example from Russian:

(79) a. v bassejne **nikakoj rebenok** ne plavaet (*Russian*)
in pool no.NOM child.NOM NEG floats
'No child floats.'

b. v bassejne **nikakoqo rebenka** ne plavaet
in pool no.GEN child.GEN NEG floats
'No child floats.'

  - ▷ In both (79a–79b), the predicate is the intransitive verb 'float.' However, the subject of 'float' is nominative in (79a), but genitive in (79b).
  - ▷ In a hypothetical scenario where you are investigating why there is such a difference in the case of the subject of 'float' and you do not not have further information about the interpretation of 'no child' in (79a–79b), you could not rely on θ-role information to determine whether 'float' in these sentences is an unaccusative or unergative predicate.
- But suppose you had the following additional data:

(80) a. Anna ne **kupila žurnal**.
Anna.NOM NEG bought magazine.ACC
'Anna did not buy the magazine.'

b. Anna ne **kupila žurnala**.
Anna.NOM NEG bought magazine.GEN
'Anna did not buy (a/any) magazine.'

(81) a. **Nikto** ne čitaet ètu knigu.
nobody.NOM not reads that book.ACC
'Nobody is reading that book.'

b. * **Nikogo** ne čitaet ètu knigu.
nobody.GEN not reads that book.ACC
Intended: 'Nobody is reading that book.'

  - ▷ In both (80–81), the verb is transitive (viz. 'buy' and 'read,' respectively).
  - ▷ The sentences differ in the position of the genitive DP: the object 'magazine' in (80) and the subject 'nobody' in (81).
    - ➟ *Generalization*: given the grammaticality contrast between (80b–81b), we can conclude that a genitive DP is only possible in the object position.
- With this generalization in place, we can go back to (79). Specifically, since (79b) is grammatical, it must be the case that the genitive DP 'no child' in this sentence must have been base-generated in an object position.
  - ➟ An intransitive predicate that only has an object is unaccusative.

> ❗ We arrived at this conclusion without making reference to the θ-role of 'no child.'

Exercise 11

Based on the generalization above, explain the contrast between the two sentences below and classify the intransitive predicate 'work' in Russian.

(82) a. na zavode **nikakie ženščiny** ne rabotajut
at factory no.NOM women.NOM NEG work
'No woman works in this factory.'

b. * na zavode **nikakix ženščin** ne rabotaet
at factory no.GEN women.GEN NEG works
Intended: 'No woman works in this factory.'