Command Relations

- what are they? grammar
- why do we have two command relations? syntax-semantics
- Are they free to vary among themselves? typology

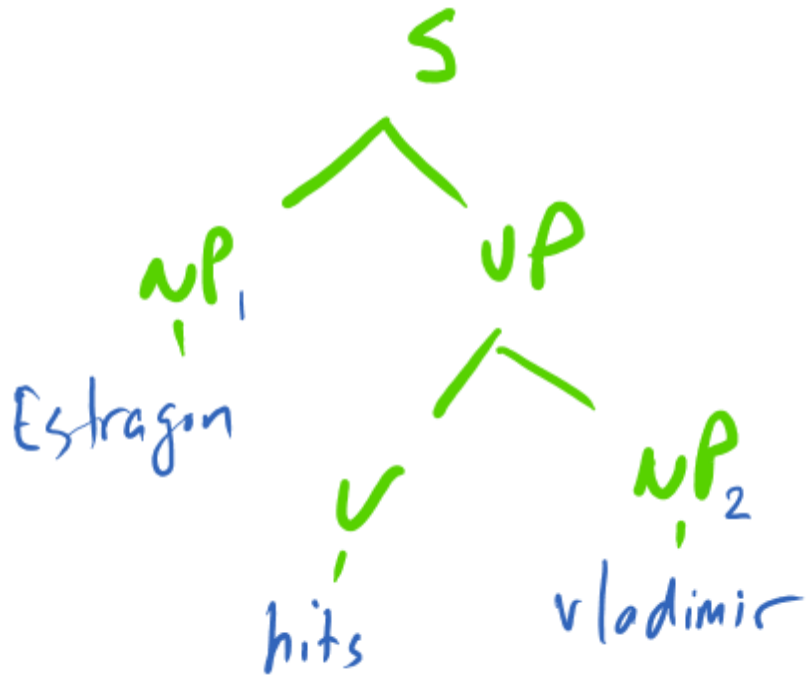
A commands B in general means:

- A can see { what happens to the information in } B.

- And the inverse does not hold.
  - B cannot do these to A.

Syntactic command relations

c-command of precedivism



c-commands	
NP_1	VP
	V
	NP_2
VP	NP_1
V	NP_2
NP_2	V

s-command of Monodic grammar (Bozshin 2015)

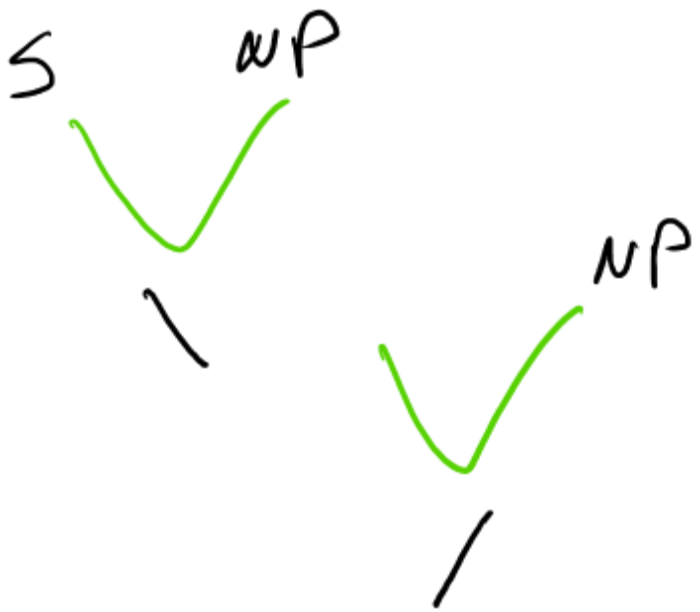
s-command	
NP_1	NP_2

Because this entire structure can be captured by one function

hits :: $(s\backslash NP_1)/NP_2$

- C-command must serve all command-related asymmetries, including
  - binding
  - constituency
  - agreement
  - grammatical relations
  - scope (quantifiers)
- S-Command is <u>syntactic</u> command; it serves syntactic relations
  - constituency (including its scope)
  - agreement
  - grammatical relations
- Binding and quantifier scope is semantically determined syntactically transmitted

Where is s_command in $(s\backslash np)/np$?

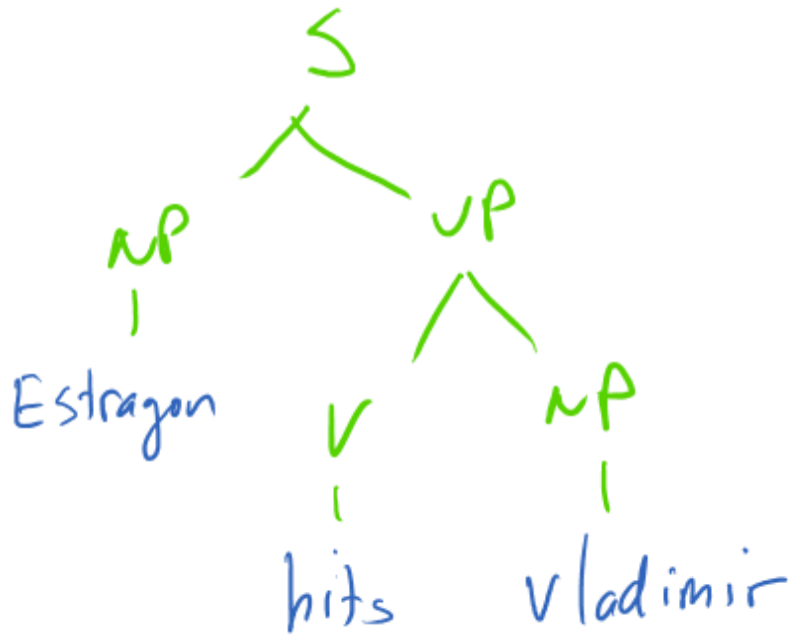


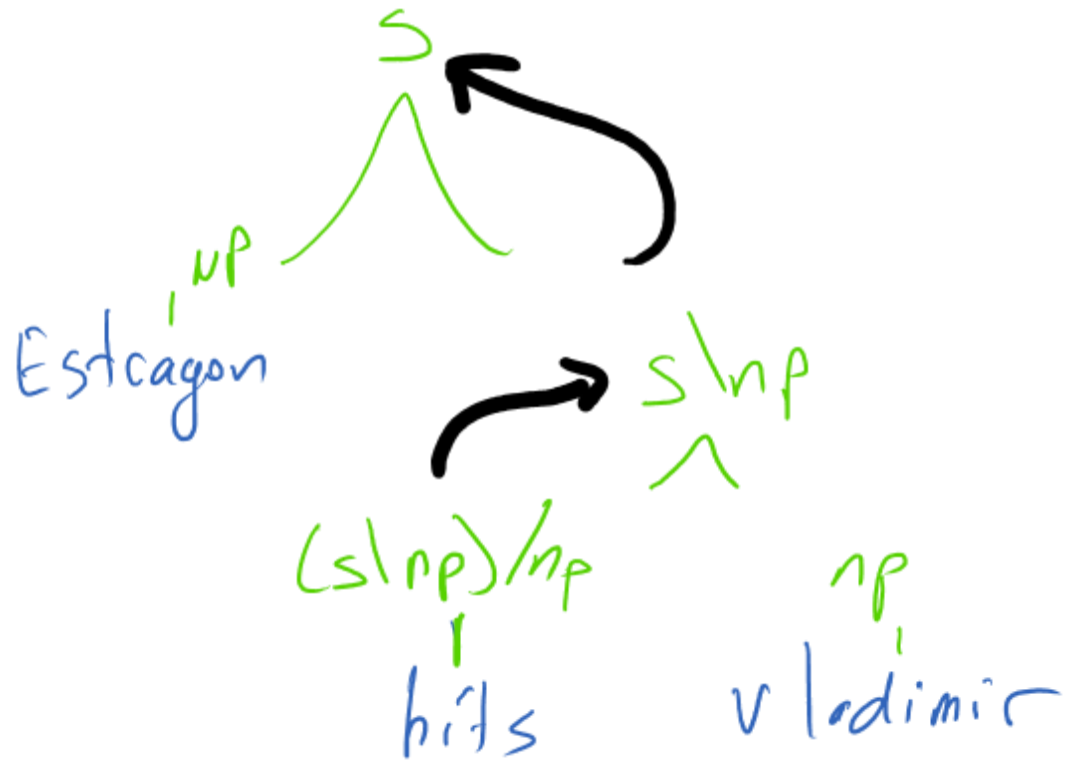
s_command

NP_1 | NP_2

s_command is a "later-than" relation. It MUST be a relation between arguments, not any phrase label.

The phrase structure on the left is determinable by a single function using s-command; compare C-command.



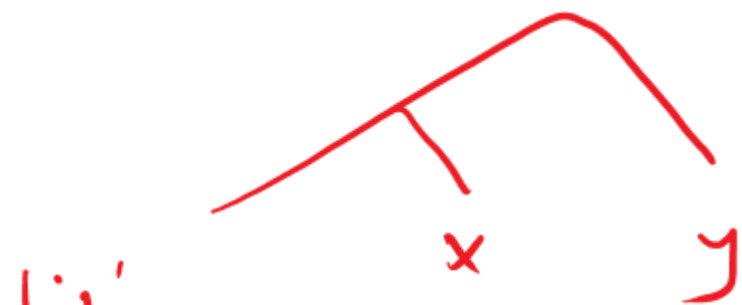


Can semantic command be driven by the same function?

- called I-command in Bozsahin (2013).

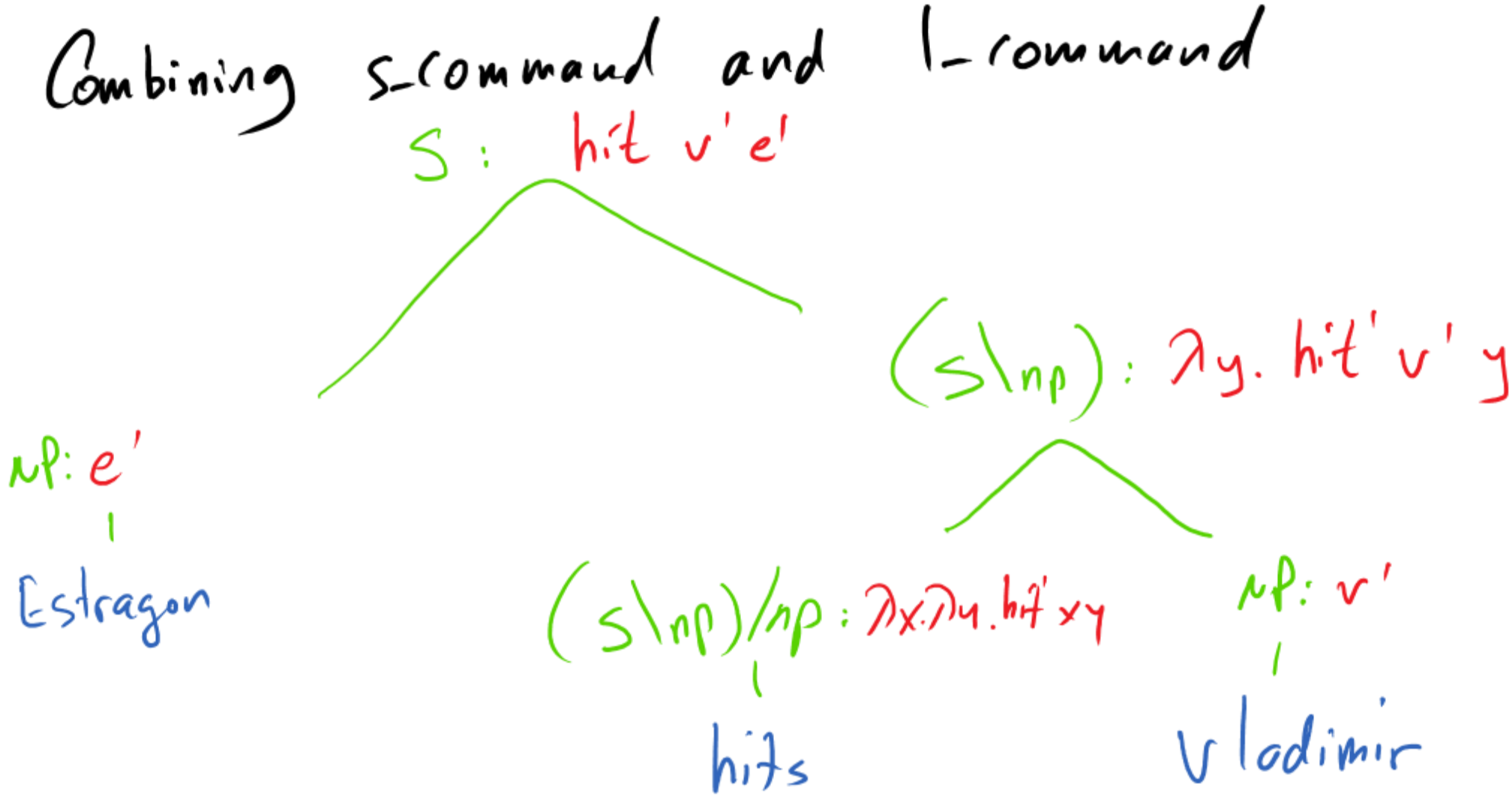
hits :: $(s\backslash np)/np$: $\lambda x.\lambda y.hit'\ x\ y$

OR



$\equiv (hit'\ x)\ y$

Combining s_command and l_command



$(\lambda x.\lambda y.\, hit'\ x\ y)\ v' = \lambda y.\, hit'\ v'\ y$

$(\lambda y.\, hit'\ v'\ y)\ e' = hit'\ v'\ e'$

When the function is more complex, we can see s_command and l_command doing their own work TOGETHER without external help:

persuades :: $(s\backslash np)/vp/np$: $\lambda x.\lambda p.\lambda y.$ persuade' $(px)xy$

Compare

expects :: $(s\backslash np)/vp/np$: $\lambda x.\lambda p\ \lambda y.$ expect' $(px)\ y$

- Categorial typology ≅ Possible command variations

- Variants: substantive categories that differ intra-linguistically and cross-linguistically.

- Invariants: Structure of analysis (for monadic grammar, function composition).

Q: Are s_command and l_command free to vary within themselves?

A: We need to look at world's languages for that

- This is an empirically testable question.
  (from Bogsahin 2025; chapter 2)
  - see the book for example sources

- Verb-medial languages:
  - (I): SVO — English
  - (II): OVS — Hixkaryana
- Verb-peripheral languages:
  - Verb-final languages:
    - (III): SOV — Turkish (cased), Lalchota (caseless)
    - (IV): OSV — Dyirbal
  - Verb-initial languages
    - (V): VSO — Welsh
    - (VI): VOS — Malagasy

Clause typology by verbal category:

(I) Let's start with SVO basic order

$hits :: (s\backslash np)/np : \lambda x.\lambda y.hit' x y$ English

More precisely

$hits :: (s\backslash np_{3s})/np : \lambda x.\lambda y.hit' x y$

np_{3s} short for $NP_{agr=3s}$

There are SVO languages without agreement.

Lǐsì chén-guò yì.tiáo chuán.

Lisi sink_ASP one ship

'One of Lisi's ships sank.' Xu (2004) Mandarin Chinese

chén :: (s\np)/np : λx.λy. cause' (sink' x one') y ∧ link' x y

↳ no agreement

(II) OVS languages

yokheku :: (s/np)\np : λx.λy.send x y Hixkaryana

Derbyshire (1977)

Yawaka yokheku Waraka rohyaka oroke

Axe he_sent_it W to_me yesterday

'Waraka sent the axe to me yesterday.'

NB. subject and object agreement appear as affixes on the verb

OVS without agreement? Probably the closest is Nadëb (Brazil)

Salãap ki-gúk kalapé hã

measles thematic-aspect-fall-multiple children dative

'The children caught measles.'

Lit. 'measles fell on the children.'

Nadëb

Weir (1986) ex. (5a)

- Could be OSV, NB. the thematic marker in OVS. Weir says OSV.

(III): SOV languages

oku :: $(s\backslash np_{nom})\backslash NP_{acc}$: $\lambda x.\lambda y.\ read'\ x\ y$

↳ short for case=acc

Ayşe kitabı oku-du. Turkish

Ayşe book-ACC read-PAST.3S

A.NOM

'Ayşe read the book.'

– SOV without case? Lakhota (Siouan)

Dakota

Wašíču ki mathó ki ϕ-ϕ-kté.
whiteman the bear the 3sg-3sg-kill
u A

'the whiteman killed the bear.'

Lakhota

van Valin Jr. (1987)

ex. (8a)

kte' :: (s\np)\np : λx. λy. kill' xy

why SOV?

(IV): OSV languages

Yabu numa-ŋgu bura-n Dyirbal

mother-ABS father-ERG see-NONFUT Dixon 1994:10

'Father saw mother.'

numa banaga-n$^{\jmath}$u

Father-ABS return-NONFUT

'Father returned.'

bura-n :: $(s\backslash_{ap}Pabs)\backslash_{NP}erg$

: $\lambda y.\lambda x.see'xy$

Why is the following OSV?

bura-n :: $(s\backslash np_{abs})\backslash np_{erg}$: $\lambda y.\exists x.see' x y$

- Are there OSV languages without case?
  - Typology research suggests there is no language with
    - OSV basic order
    - no agreement
    - no case

- Are we so sure about that?

m̩^{33}ka^{55} m̩^{33}ko^{44} ndu^{21}

Muga Mugo beat

(1) `Muga beat Mugo'

(2) `Mugo beat Muga'

Liangshan Nuosu (Southwest China)

Gerner (2004)

.... and ran away ↝ muga (only (1) is available)

.... and cried ↝ muga (only (2) is available)

IN RESULTATIVES

$$\text{ndu} :: (S_{ms} \backslash NP) / NP : \lambda x.\lambda y.\text{beat}' y\, x$$

$$\text{ndu} :: (S \backslash NP) \backslash NP : \lambda x.\lambda y.\text{beat}' x\, y$$

(v̄): VSO languages

Mi newidith Sión ei feddwl.

PRT change.FUT.3s Sion 3MS mind.INF

'Sión will change his mind.'

Welsh

Borsley et. al 2007: 52

newidith :: $(s/np)/np_{3s}$: $\lambda y.\lambda x.change' x y$

Are there VSO ergative languages?

Wada	bube-un	na	Pihu	ka	dangi=na
PERF	hit-TR	ERG	Pihu	ABS	friend=3s.GEN

Seediq (Austronesian, from Taiwan)

Aldridge 2008:986

'Pihu hit his friend.'

bube-un :: $(S/NP_{abs})/NP_{erg}$: $\lambda y.\lambda x.\ hit'\ x\ y$

(VI): VOS languages

manenjika ny fiolahy Rabe

chase the thief Rabe

'Rabe is chasing the thief.'

Malagasy
(Madagascar)
Keenan 2008: 469

man-enjika :: (s/np)/np
: λx. λy. chase' xy

We have seen that:

- all six orders are realized as basic in some language.
- Syntactic command relations are free to vary (subject commands later than the object, for example.)
- Semantic command (I_command) relations vary depending on S_command.
- All kinds of correspondences have been attested.

All? what about other options for verb-medial languages?

hits :: $(s\backslash np_{3s})/np$: $\lambda x.\lambda y.\ hit'\ x\ y$

why not:

hits :: $(s/np)\backslash np_{3s}$: $\lambda x.\lambda y.\ hit'\ y\ x$

BOTH are SVO!

$(s\backslash np_{3s})/np$ seems best for accusative English because its intransitives are SV, that is, $s\backslash np_{3s}$.

Estragon hits Vladimir.

Estragon laughs.

Estragon hits Vladimir and laughs.

Päri is ergative and verb-medial. Syntactic subject is first in the clause:

Ùbúr á-pùot dháág-è.
Ubur-ABS C-beat woman-ERG
'The woman beat Ubur.'

Päri (Nilotic)
Andersen 1988:292

ùbúr á-túuk'
Ubur-ABS C-play
'Ubur played.'

pùot :: (S/nPerg)\nPabs
: λx. λy. beat' xy

túuk :: S\nPabs
: λx. play x

⇒ (s/np)\np seems better for Päri.

- A similar argument can be made for the other kind of verb-mediality: OVS

recall Hixkaryana (OVS)

yokhe ku :: $(S/NP)\backslash NP$: $\lambda x.\lambda y.\ send'\ x\ y$

- why not $(S\backslash NP)/NP$: $\lambda x.\lambda y.\ verb'\ y\ x$,
which would also be OVS?
EXERCISE!