

# Detecting word order freezing in old Indo-European languages

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# From pragmatics to syntax

- pragmatic word order → grammatical word order, or:
  - configurationality parameter: off → on ('hard' configurational theories)
  - theme position → subject position; focus position → object position? ('soft' configurational theories)
  - word order configurations signals information status → word order configurations signals grammatical relations (construction grammar)
  - phrase structure rules become associated with functional information (Lexical-functional grammar)

# Word order in Vedic

SOV	37%
OSV	24%
SVO	17%
OVS	9%
VOS	8%
VSO	4 %

Table: *Word orders in RV I*

- Statistically verb-final (61%):
- Exceptions can be described by well-defined syntactic rules
- But strong presence for OSV (24%), which is typologically extremely rare.

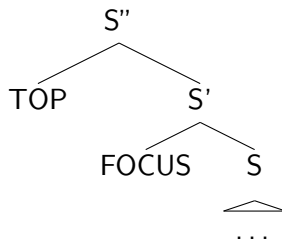
# Word order in Greek

SOV	44.5%
SVO	20.8%
OSV	15.0%
VOS	7.1%
VSO	6.7%
OVS	5.8%

Table: *Word orders in classical Attic*

- Again, about 60% SOV/OSV
- But only about 27.5% of clauses are verb-final (Kieckers)
- The distribution of SOV and OSV is different (37% and 24% in Vedic)
- And the function of the word orders are very different.

# Indo-European Word Order (Hale-Garrett-Kiparsky)



*rátham*<sub>TOP</sub>    *kó*<sub>FOC</sub>    [*nír avartayat*]<sub>S</sub>  
 chariot.ACC who.NOM out rolled.IMP.F.3SG

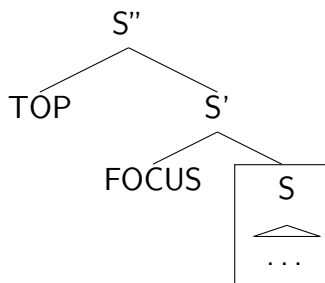
'Who rolled out the chariot?'

# Indo-European Word Order (Hale-Garrett-Kiparsky)

*[sahásraśrīṅgo*                      *vṛṣabhó]*<sub>TOP</sub> *yáh*<sub>FOC</sub>                      *[samudrád ud*  
 thousand-horned.NOM bull.NOM    which.NOM sea.ABL    out  
*ácarat]*<sub>S</sub>,                      *[téna*                      *sahasyéna]*<sub>TOP</sub> *[vayám ní*  
 rose.IMPF.3SG that.INST mighty.INST    we.NOM down  
*jánān*                      *svāpayāmasi]*<sub>S</sub>  
 people.ACC.PL put to sleep.PRS.1PL

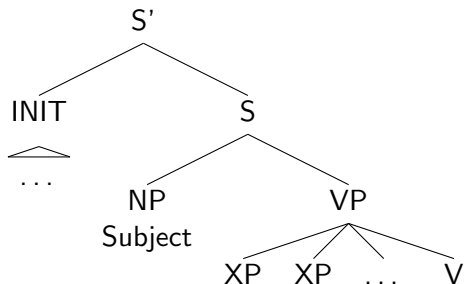
'The thousand-horned bull that rose from the sea, with that mighty one we put the people to sleep.'

# Indo-European Word Order



What's going on inside the box?

# Vedic word order (Schäufele)



- Will explain the frequency of OSV by fronting of the object leaving the subject in situ



# Vedic word order (Schäufele)

*tvām*<sub>FOC</sub> *stómā*<sub>TOP</sub> *avivṛdhan*

you.ACC prayer strengthen.3.PL.AOR

'Dich haben die Lobgesänge erbaut. (Geldner)'

*ní tvām*<sub>FOC</sub> *agne* *mánur*<sub>TOP</sub> *dadhe*

pfx you.ACC Agni.VOC Manu.NOM put.PF.3.SG.MID

*jyótir* *jánāya* *śásvate*

light.ACC.SG man.DAT.SG all.DAT.SG

'Dich, Agni, hat Manu eingesetzt als Licht für alles Volk. (Geldner)'

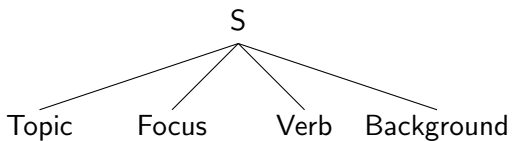
# Vedic word order (Schäufele)

## Multiple fronting

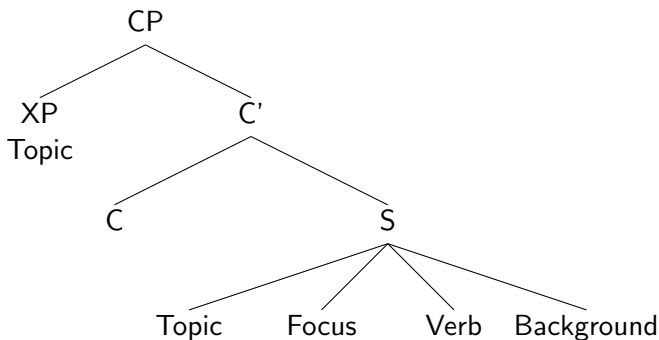
*[ná vépasā            ná tanyatenā]*<sub>TOP</sub> *indram*<sub>TOP</sub> *vrtró*  
 not agitation.INST not thunder.INST Indra.ACC Vrtra.NOM  
*ví    bībhayat*  
 PFX frighten.INJ.3SG

'Neither with his agitation nor with his thunder roar did Vrtra frighten Indra.'

# Greek: Pragmatic positions?



# Greek: Combining syntax and pragmatics



- Pragmatic constraints on word order in S: first element is topic
- External topic position → double topics
- Verbs as topics + theme - rheme structure
- Complementizer + top + foc + verb

# Double topics in Greek

## Verb as frame topic

*oureousi hai men gunaikes orthai, hoi de andres*  
 urinate.3.PL the PTC women straight the PTC men  
*katēmenoi*  
 sitting

'They (sc. Egyptians) urinate, the women standing, the men sitting.'

## Noun as frame topic

*out' anêr tôn proteuontôn oudeis*  
 nor man.NOM.SG the first.GEN.PL none.NOM.SG  
*bareôs êenke* ...  
 be angry.AOR.3SG

'Nor has any of its leading men been angry.'

# The function of OSV

[Arabia abounds in wild animals, especially wild donkeys, antelopes, and ostriches. Donkeys are difficult to catch, but some have succeeded in doing this.]

*strouthon*      *de*   *oudeis*                      *elaben*  
 ostrich.ACC.SG   PTC   nobody.NOM.SG   catch.3.SG.AOR

'NOBODY caught an ostrich.'

# The functions of OSV compared

## Vedic

*tvám*      *stómā* *avivṛdhan*

you.ACC prayer strengthen.3.PL.AOR

'Dich haben die Lobgesänge erbaut. (Geldner)'

'The prayers have strengthened YOU.'

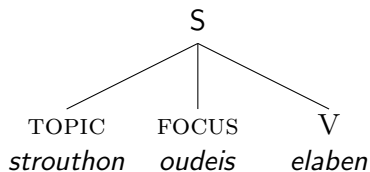
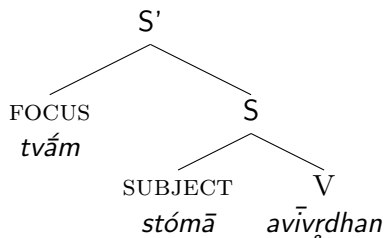
## Greek

*strouthon*      *de* *oudeis*      *elaben*

ostrich.ACC.SG PTC nobody.NOM.SG catch.3.SG.AOR

'NOBODY caught an ostrich.'

# The functions of OSV compared





# Word order from Classical Attic to the New Testament

SOV	44.5%
SVO	20.8%
OSV	15.0%
VOS	7.1%
VSO	6.7%
OVS	5.8%

Table: *Word orders in classical Attic*

SVO	51.5%
SOV	17.8%
VSO	8.1%
OSV	7.7%
OVS	7.7%
VOS	7.1%

Table: *Word orders in NT Greek*

# OSV from classical to hellenistic times

## 'Superfluous' objects

[The archpriests accused him vehemently.]

*ho*                      *de Peilatos*                      *palin epêrôta*  
 ART.NOM.SG PTC Pilate.NOM.SG again asked.IMPF.3SG

*auton*

him.ACC.SG

Pilate again asked him.

# OSV from classical to hellenistic times

## Old functions intact

[He is worthy that you should come and save his servant]

*agapai*            *gar to ethnos êmôn*      *kai tēn sunagagôgēn*  
 love.3.SG.PRS for our people.ACC.SG and the synagoge.ACC.SG  
*autos*            *ôikodomêsen*      *êmin*  
 he.NOM.SG built.AOR.3.SG us.DAT

'For he loves our nation, and it was HE who built our synagogue.'

# OSV from classical to hellenistic times

	pre-verbal	post-verbal	most common position	n
subject	94.5%	5.5%	1st	85
object	10.3%	89.7%	3rd	844

Table: Distribution of the personal pronoun *autos*

- Data from the PROIEL corpus of New Testament Greek ([www.hf.uio.no/ifikk/proiel](http://www.hf.uio.no/ifikk/proiel))

# Summing up on Greek and Vedic word order

- S-external positions: adjoined TOPIC - FOCUS (Greek is innovative)
- S-internally: first element is topic in Greek, subject in Vedic

# A question of priority

Is today's syntax yesterday's pragmatics?

# Unidirectionality of word order changes

## Hopper & Traugott

Word order changes are not unidirectional. Therefore, they should not be identified with grammaticalization in the narrowest sense.

SOV  $\rightarrow$  SVO much more common than SVO  $\rightarrow$  SOV, but perhaps not with the regularity that we would expect in grammaticalization. But why would it be grammaticalization anyway?

# Unidirectionality of word order changes

- 1 VP → NP V  
OBJ
- 2 VP → V NP  
OBJ



# Unidirectionality of word order changes

## The Greek rule

$$S \rightarrow XP^* \quad V \quad XP^*$$

## The Vedic rules

$$\textcircled{1} \quad S \rightarrow \left( \begin{array}{c} NP \\ SUB \end{array} \right) \quad VP$$

$$\textcircled{2} \quad VP \rightarrow XP^* \quad V$$

# From clefts to focus in Zoque (Faarlund 2007)

*Judüm=te m-pat-u-pü te tumin?*  
 where=COP 2-find-COMPL-REL the money

'Where was it that you found the money?'

*Judüm=te m-pat-u te tumin?*  
 where=FOC 2-find-COMPL the money

'Where exactly did you find the money?'

- Could look like a piece of syntax (copula) that became something pragmatic (focus)
- But actually it became a morphological marker of focus: distinction between meaning and form is crucial

# From pragmatics to syntax

Li & Thompson

Subjects are grammaticalized topics

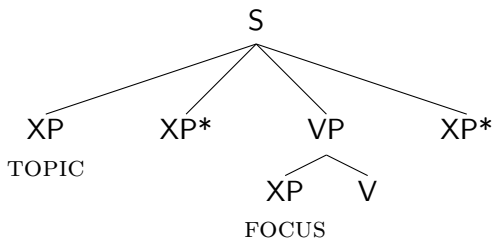
more accurately:

Subject marking is grammaticalized topic marking

- This applies to both morphological and constructional subject marking

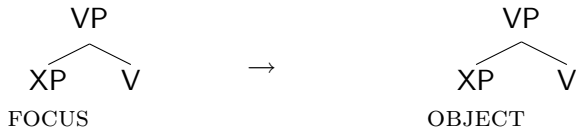
# Emergent grammaticalization of the object position?

Schäufele notes a strong tendency for the verb to appear in direct pre-verbal position in Vedic. Could this be the emerging gzn of the focus position?



# Emergent grammaticalization of the object position?

- The pre-verbal position is reserved for foci in Greek (Dik etc.) and Old Hittite (Goedegebuure)
- The pre-verbal position preferably hosts objects in Vedic and Latin



- But exceptions to the rule are not well enough understood at the moment.

# Conclusions

- Gzn theory can suggest plausible paths of change, whereas typology remains essentially synchronic and static
- Once we take function into account, it becomes unlikely that PIE had a fixed syntactic word order (verb-final and subject-initial clauses), even if all old languages are SOV
- Flexible syntactic frameworks like LFG permits us to study the evolution of configurationality on a per rule basis, and not as a on/off-parameter.