

# In linguistics, *theories* come and go, but *facts* are in short supply

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**CECIL's III**

PPCU, Hungary, August 2013

## Overview

Three interleaved topics

- ❖ **How to *decide* what is a fact** – e.g. in the case of '*superiority*'
- ❖ **When facts *contradict* theories** – e.g. the syntactic (mis)characterization of *Slavic* languages
- ❖ **When facts become *comprehensible*** – e.g. in the theoretical *coverage & modelling of word order types*

### How to deal with facts in SCIENCE

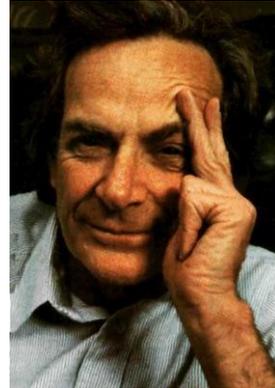
“In general we look for a new law by the following process. **First we guess it.**

Then we **compute the consequences** of the guess to see what would be implied if this law that we guessed is right.

**Then we compare the result** of the computation to *nature*, with *experiment* or *experience*, compare it directly with *observation*, to see if it works,

and ....

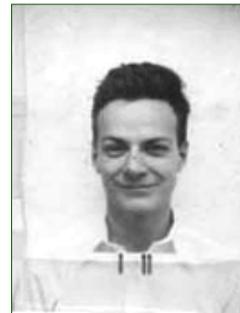
Richard Feynman



Nobel laureate 1965

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“... if it [i.e. the proposed ‘law’] **disagrees** with experiment ...



On Feynman’s identity badge, Los Alamos.

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“... **if it** [i.e. the proposed ‘law’] **disagrees** with experiment it is **wrong**.

**In that simple statement is the key to science.**

*It does not make any difference how **beautiful** the guess is. It does not make any difference how **smart** you are, who made the guess, or what his **name** is - **if it disagrees with experiment it is wrong.**”*



On Feynman’s identity badge, Los Alamos.

[Richard Feynman (1918-1988), in a lecture in 1964]

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❖ **How to *decide* what is a fact** – the case of ‘*superiority*’

### **Data vs. facts**

A **linguistic fact** is a **valid generalization** over a set of **data**. The generalization is the characteristic function for the set of data. The members of the (subset of a potentially infinite) set are representative of the characteristic property of the fact.

**Valid generalizations** are the **result of rigorous data assessment**. Valid generalizations are **objective, reproducible** and put to test in serious **falsification** trials.

**A first, exemplary attempt – 10 years ago:**

Hoji, Hajime (2003). Falsifiability and repeatability in generative grammar: a case study of anaphora and scope dependency in Japanese. *Lingua* 113: 377–446.



❖ **How to decide what is a fact** – the case of ‘*superiority*’

What are the ,facts‘?

**1st fact:** A ,*wh-subject*‘ *in situ* is ungrammatical in English.

- (1) a. I don’t know **who** would be happy that she/\***who** won the prize  
 b. It is unclear **who** thinks (that) she/\***who** saw us

(Chomsky 1981: 236)

- (2) a. You should find out **what** has bothered **who(m)**  
 b. \*You should find out **who(m)<sub>i</sub>**, **what** has bothered **e<sub>i</sub>**

- (3) a. **What** has bothered **who(m)**?  
 b. \***Who(m)** did **what** bother?

[,wh-subject‘ = *wh-pronoun* in the structural subject position]



❖ **How to decide what is a fact** – the case of ‘*superiority*’

What are the ,facts‘?

**2nd fact:** An in-situ **wh-adverbial** of a **type higher** than type **<e>** is ungrammatical in English.

See: Szabolcsi, Anna and Frans Zwarts (1993) ‘Weak islands and an algebraic semantics for scope-taking’. *Natural Language Semantics* 1: 235–85.

- (4) a. **Who** left the party **when**/\***why**?  
 b. **When**/**why** did he/\***who** leave the party?  
 c. What did they fix **where**/\***how often**?  
 d. **Where**/**how often** did they fix **what**?  
 e. **Who** did you tell that he has left **when**/\***why**?

Note: The two facts are *independent* of ‘*movement*’.

## ❖ How to *decide what is a fact* – the case of ‘*superiority*’

What is the *standard explanation*? – account in terms of movement

☞ Chomsky (1973:246): **SUPERIORITY**

"No rule can involve X,Y in the structure [... X ... [... Z ... W Y V ...]...], where the rule applies ambiguously to Z and Y and Z is *superior* to Y."

‘*Superior*’ is defined as follows:

"Category A is superior to category B in the phrase marker if every major category dominating A dominates B as well but not conversely."

In the entirely *derivational setting of the M.P.* (Chomsky 1995), *superiority*’ has been replaced by a *shortest move* requirement:

☞ Chomsky (1995:311): **Minimal link condition (MLC)**

Informally:                    The *attracted* item must be the **closest**.

## ❖ How to *decide what is a fact* – the case of ‘*superiority*’

Is this *derivational account* empirically **adequate**?

**No.** And it *never* was.                    (see Haider (1986). *Linguistic Inquiry* 17: 113-126)

- **There is no continuous relation to the facts:** It does not depend on movement.
- **Insufficient coverage:** see examples (1) and (4a).
- **It overgenerates by incorrectly excluding variants** (5, 6).

### ❖ How to *decide what is a fact* – the case of ‘*superiority*’

Is this *derivational explanation* empirically *adequate*?

**No.**

- There is no continuous relation to the facts.
  - **Insufficient coverage: see examples (1) and (4a).**
  - **It overgenerates by incorrectly excluding variants (5, 6).**
- (1) I don’t know **who** would be happy that she/\***who** won the prize  
(Chomsky 1981: 236)
- (4) a. **Who** left the party **when**/\***why**?  
e. **Who** did you tell that I had left **when**/\***why**?

### ❖ How to *decide what is a fact* – the case of ‘*superiority*’

Is this *derivational explanation* empirically *adequate*?

**No.**

- There is no continuous relation to the facts.
  - **Insufficient coverage: see examples (1) and (4a).**
  - **It overgenerates by incorrectly excluding variants (5, 6).**
- (5) a. **To whom** did you give **what**?  
b. Nobody knows **where** he bought **what**  
c. Nobody knows **what** he bought **where**

*First*, (5a) is acceptable although it obviously violates the MLC.  
*Second*, if the **closest** item must be fronted, either (5b) or (5c) should be deviant, contrary to the facts.

### ❖ How to *decide what is a fact* – the case of ‘*superiority*’

**Superiority** is a **VO phenomenon**. It is absent in **OV** (Haider 1984 LI)

- (6) a. Es ist unklar, *was* damals *wen* gestört hat  
it is unclear **what** then **whom** bothered has
- b. Es ist unklar, *wen* damals *was* gestört hat  
it is unclear **whom** then **what** bothered has
- c. Es ist unklar, *wer* damals *weshalb* weggegangen ist  
it is unclear **who** then **why** left has
- d. Es ist unklar, *weshalb* damals *wer* weggegangen ist  
it is unclear **why** then **who** left has

### ❖ How to *decide what is a fact* – the case of ‘*superiority*’

**Superiority** is a **VO phenomenon**. No superiority in **OV** (e.g. Japanese)  
Here is the essential difference:

- (7) a. [ $wh_1$  [ $fin^\circ$  [ $V^\circ \rightarrow wh_2$ ] $_{VP}$ ]]                      head-initial VP
- b. [... [ $wh_1 \leftarrow [wh_2 \leftarrow V^\circ]$ ] $_{VP}$ ]                      head-final VP

☞ In **VO**, **preverbal** wh-phrases are on the **non-canonical** side; in **OV**, any preverbal wh-phrase is on the **canonical** side.

☞ In **VO**, subjects are in a pre-VP spec-position; in **OV**, subjects stay in their VP-internal base position (see later: canonical **identification**)

**For a detailed explication see:**

Haider, H. 2010, chapter 3, section 3.4.1

Haider, H. 2004. The superiority conspiracy. In: *The Minimal Link Condition*. Arthur Stepanov, G. Fanselow & R. Vogel (eds.). Berlin: Mouton de Gruyter. (147-175)

**Would you risk a bet on what follows? (data assessment)**

Send a questionnaire to **22** native Dutch **syntacticians** and collect their judgements on **superiority data** (10 average Dutch sentences, each with the second wh-item in situ).

Would you risk a **bet** on the percentage of **uniform** judgements per item?

,Ungrammaticality‘ = **rejection** above the 80% level? (i.e. by 18 of 22)

,Rater‘**s coherence**‘ = **uniformity** above the 80% level?

- **What is your guess on the % level of shared judgements?**
- **Would you bet *for* or *against* the 80% level?**

Haider, Hubert 2009. The thin line between facts and fiction. In: Featherston, Sam & Winkler, Susanne (eds.) *The Fruits of Empirical Linguistics*. Volume 1: Process. Berlin: de Gruyter. p. 75-102).

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**Questionnaire data on Dutch superiority, gathered and shared by Gisbert Fanselow**

**22 Raters = Dutch professional syntacticians**



- **Each clause accepted by 36% up to 100%**
- **No clause dismissed by more than 74%**
- **55% accept the critical clauses 2 & 7**

	1	5	6	4	3	9	7	2	8	10
	ik weet niet wat gekocht heeft	ik weet niet, wie wat an wie gegeven heeft	ik weet wie wat gekocht heeft	ik weet niet wat wie aan wie gegeven heeft	ik weet niet wat welke leraar gekocht heeft	wie weet wat wie gekocht heeft voor zijn zusje	wie weet wat wie gekocht heeft	ik weet niet wat wie gekocht heeft	ik weet niet wat wie gekocht heeft voor zijn zusje	wie weten al welke boeken deze studenten hebben gekocht, maar wij weten nog niet, wat wie precies heeft gekocht
1	+	+	+	+	+	+	+	+	+	+
2	+	+	+	+	+	+	+	+	+	+
3	+	+	+	+	+	+	+	+	+	+
4	+	+	+	+	+	+	+	+	+	+
5	+	+	+	+	+	0	+	+	+	0
6	+	+	+	+	0	+	+	+	0	+
7	+	+	+	+	0	+	+	0	0	+
8	+	+	+	+	+	+	0	0	0	0
9	+	+	+	+	+	0	0	0	0	+
10	+	+	+	+	+	+	+	+	+	+
11	+	+	+	+	+	+	+	+	+	0
12	+	+	+	+	+	+	+	+	+	+
13	+	+	+	0	+	+	+	+	+	+
14	+	+	+	0	0	0	0	0	+	0
15	+	+	+	0	+	0	0	0	+	+
16	+	+	+	0	0	+	+	+	+	+
17	+	+	+	0	+	+	+	+	+	+
18	+	+	+	0	+	+	+	+	+	0
19	+	+	+	0	0	+	+	+	+	0
20	+	+	+	0	+	+	+	+	+	0
21	+	+	+	+	+	+	+	+	+	+
22	+	+	+	+	+	+	+	+	+	+

,Professional‘ introspection - a **reliable** way of data assessment?

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### Consequences we have to draw:

1. **Never** trust a syntactician's data judgements. (S)he is always prejudiced because (s)he is theoretically biased.
2. You must stay sceptical on syntacticians' judgements of **critical** data. You should **carefully assess** these data or call for careful assessment.
3. You **always** find a subgroup (>1) of syntacticians who (dis)agree with your own data judgements.
4. Data assessment needs **reliable** procedures (Look what psychologists do already for at least a century!).
5. Eclectically collecting **introspective** judgements is **NO** reliable procedure for assessing critical data, obviously.

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### ❖ How to *decide what is a fact* – the case of '*superiority*'

- **Superiority** is a *VO phenomenon*.
- **Superiority** must not be confounded with **processing effects** (8b).

- (8) a. **Was**<sub>i</sub> hat sie **wen** gebeten [e<sub>i</sub> für sie zu erledigen]? [German]  
 what has she whom asked [for her to take-care-of]
- b. \***Wen**<sub>i</sub> hat sie **wen** gebeten [e<sub>i</sub> darüber zu informieren]?  
 whom has she whom asked about-it to inform

A variant with an item fronted **across** a **non-distinct** item of the same functional category (e.g. wh-item) is always much more difficult to parse than the variant without crossing. This situation may reduce **acceptability**, but it does not cause **ungrammaticality**.

Fanselow, Gisbert & C.Féry 2008. Missing superiority effects: Long movement in German (and other languages). In: Witkos, Jacek & G.Fanselow eds. *Elements of Slavic and Germanic Grammars. A comparative view*. Frankfurt: Lang (67-87).

## ❖ How to *decide what is a fact* – the case of ‘*superiority*’

### An interim summary (I)

	P.I.	Sup.	Expected reaction
English	-	-	‘perfect’
	+	+	‘unacceptable’
	+	-	‘knotty’
German	-	-	‘perfect’
	+	-	‘knotty’
Japanese	-	-	‘perfect’

P.I. = processing impediment (**crossing**) – a **parsing** effect

Sup. = superiority – a constraint of **grammar**

## ❖ How to *decide what is a fact* – the case of ‘*superiority*’

### An interim summary (II)

- Facts are **facts**, and theoretical interpretations are **guesses**. Keep the facts always distinct from the guesses (also in your writing).
- The specific grammatical properties of a given fact may be **language** specific, **type** specific, or **universal**: Keep in mind that **English** is **not** the **fruitfly** of **grammar theory** (*drosophila grammatica*).
- Do not accept claims on alleged facts in the absence of explicit data **assessment** criteria. **Informant consent** (naïve or professional) is not a valid criterion.

## Next topic, same problem:

### ❖ How to *decide* what is a fact – “Slavic is (not) VO” ?

#### The ‘Slavic slides’ are based on:

H.Haider & L.Szucsich (in press; downloadable) Scrambling and V-positioning in Slavic languages – exceptionally VO or regular T3? In: *The German Middle Field in a Comparative and Diachronic Perspective*. Roland Hinterhölzl, Kristine Bentzen, Augustin Speyer & Luka Szucsich (eds.) Berlin: Mouton de Gruyter.

### ❖ How to *decide* what is a fact – Slavic is (not) VO.

“It is generally acknowledged that Russian is an SVO language in **neutral contexts**” [John F. Baylin. 2002. In Zybatow, G. (et als eds.) *Current issues in Formal Slavic linguistics*. Frankfurt: Lang. (p. 280-293)].

- |        |                                               |           |
|--------|-----------------------------------------------|-----------|
| (1) a. | Mat’ <i>podarila</i> mal’čiku jabloko         | (Russian) |
|        | mother gave (a) boy (an) apple                |           |
|        | b. Mutter <i>gab</i> einem Jungen einen Apfel | (German)  |
|        | c. Mother <i>gave</i> a boy an apple          | (English) |

☞ Evidently, the **word order** in (1a-c) is identical.

☞ It is less evident, how the respective **structures** differ.

### ❖ How to *decide* what is a fact – Slavic is (not) VO.

☞ Different word orders, because of different structures:

- (2) a. Mat' *podarila jabloko* mal'čiku<sub>Dat</sub>  
 b. Mutter gab **den Apfel** einem Jungen<sub>Dat</sub>  
 c. \*Mother gave the **apple** a boy

- In German, VP-internal DP-arguments may be scrambled.
- In Russian, VP-internal DP-arguments may be scrambled.
- In English, VP-internal DP-arguments must not be scrambled.

☞ In **OV**, VP-internal (DP-)arguments may be scrambled.

☞ In **VO**, VP-internal DP-arguments must not be scrambled.

### ❖ How to *decide* what is a fact – Slavic is (not) VO.

☞ Different word orders, because of different structures:

- (3) a. Mat' **jabloko** *podarila* mal'čiku  
 b. \*Mother **an apple** gave a boy

- In **Russian**, VP-internal DP-arguments may **precede** the head verb of the VP.
- In **English**, VP-internal DP-arguments must **not precede** the head verb of the VP.
- In **VO languages**, VP-internal DP-arguments must not be scrambled (nor *object-shifted*) across the head verb of the VP.

### ❖ How to *decide* what is a fact – **Slavic is (not) VO**

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	<b>VO</b>	<b>OV</b>
▪ Scrambling	<b>no</b>	<b>yes</b>
▪ Superiority	<b>yes</b>	<b>no</b>
▪ Edge effect	<b>yes</b>	<b>no</b>
▪ Opacity of preverbal phrases	<b>yes</b>	<b>no</b>
▪ Variable V-Aux-order	<b>no</b>	<b>yes</b>

**Simple task:** Check the Slavic languages for these properties.

### ❖ How to *decide* what is a fact – **Slavic is (not) VO**

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	<b>VO</b>	<b>OV</b>
▪ Scrambling	<b>no</b>	<b>yes</b>
▪ <b>Slavic</b>		<b>yes</b>

“Free word order” of nominal arguments relative to the verb is the hallmark of Slavic languages.

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Superiority? **No**

- a) **Kdo** **co** doporučil komisi? **Czech**  
**who**<sub>NOM</sub> **what**<sub>AKK</sub> recommended (to the) committee<sub>DAT</sub>
- b) **Co kdo** doporučil komisi?
- a) **Ko** je **koga** vidio? **Bosnian/Croatian/Serbian**  
**who** is **whom** seen
- b) **Koga** je **ko** vidio?

Note on an **intervening** factor: there may be order restrictions for a **series** of **pronouns** in **multiple-wh movement** languages. This must not be equivocated with superiority.

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where 'head-initial' (VO) differs from 'head-final' (OV):

▪ **Edge effect** head-initial: **yes** head-final: **no**

- i. He has [much more **often** (\***than I (thought)**)] won
- ii. a [much more **frequent** (\***than I thought**)] phenomenon
- i. [ ..... [<sub>XP</sub> ... X° (\* **ZP**) ] [<sub>YP</sub> Y° .... ]]] **edge effect**
- ii. [ ..... [<sub>XP</sub> ... X° (**ZP**) ] [<sub>YP</sub> .... Y° ]]]

H.Haider 2004. Pre- and postverbal adverbials in VO and OV.  
*Lingua* 114 (6): 779-807.

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

▪ Edge effect    head-initial: **yes**    head-final: **no**

- a. Prošlom godu [<sub>VP</sub> [<sub>AdvP</sub> **gorazdo bol’še** (**čem Igor’**)] [Rus.]  
[ **vyigrala** tol’ko Maša ]]
- b. Last year only Mary has [[<sub>AdvP</sub> **much more** (**\*than Igor**)] **won**]

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

▪ Edge effect    head-initial: **yes**    head-final: **no**

- c. Prošle godine je [<sub>VP</sub> [<sub>AdvP</sub> **mного više** (**od Želimira**)] [B/C/S]  
[<sub>VP</sub> **radila samo Branka** ]]  
Last year, only Branka has worked much more than Želimir
- d.?<sup>?</sup> W zeszłym roku [<sub>VP</sub> [<sub>AdvP</sub> **dużo więcej** (**niż Jarek**)] [Po]  
[<sub>VP</sub> **pracowała tylko Katarzyna** ]]  
Last year, only Katarzyna has worked much more than Jarek

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	VO	OV
▪ Opacity of preverbal phrases	yes	no

**CED** (condition on extraction domains; J. Huang 1982)

- i. \*Who<sub>i</sub> does [a picture of t<sub>i</sub>] hang on the wall?
- ii. Who<sub>i</sub> did she describe [a picture of t<sub>i</sub>]
- iii. Who did she talk [about t<sub>i</sub>]?
- iv. Who would [about t<sub>i</sub>] she never talk?
- v. I am sure that [about these topics] she would never talk

### ❖ How to *decide* what is a fact – Slavic is (not) VO

	VO	OV
▪ Opacity of preverbal phrases	yes	no

#### Extraction out of subjects

- i. *S kem by* ty xotel čtoby govorit' bylo by odno udovol'stvie? [Russian]  
with whom you wanted [that [to-speak --] were one pleasure]  
'With whom would you want [that [to speak \_] were sheer pleasure?]'  
(A. Stepanov 2007: 93)
- ii. *Mit wem* würde [darüber diskutieren zu dürfen] dich mehr freuen?  
with whom would to-be-allowed to discuss about it you please more  
With whom would it please you more to be allowed to discuss about it?  
[German]

### ❖ How to *decide* what is a fact – Slavic is (not) VO

	VO	OV
▪ Opacity of preverbal phrases	yes	no

#### Extraction out of a preverbal object

- i. Kakuju<sub>i</sub> Ivan [-<sub>i</sub> mašinu] *kupil* svoej žene? Russian  
 which<sub>i</sub> Ivan [-<sub>i</sub> car] *bought* his wife  
 ‘Which car did Ivan buy his wife?’
- ii. Japonskiju<sub>i</sub> Ivan [-<sub>i</sub> mašinu] *kupil* svoej žene.  
 Japanese<sub>i</sub> Ivan [-<sub>i</sub> car] *bought* for his wife  
 ‘A Japanese car, Ivan bought for his wife.’

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	VO	OV
▪ Variable <b>V-Aux</b> -order	no	yes

- i. that he *will have observed* it
- ii. dass er es **beobachtet haben wird** [German]
- iii. dass er es **wird beobachtet haben**
- iv. dass er es **beobachtet wird haben**

In VO, the relative order is strict. In OV language with V-movement, the 1-2-3 order typically is in variation with other orders (e.g. Afrikaans, Dutch, Frisian, German); see Haider (2010).

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	VO	OV
▪ Variable <b>V-Aux</b> -order	<b>no</b>	<b>yes</b>

- a. **Byl** bych **koupil** knihy. Czech  
 been would-1sg bought books  
 ‘I would have bought books.’
- b. **Koupil** bych **byl** knihy.

Embick & Izvorski (1997)

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	VO	OV
▪ Variable <b>V-Aux</b> -order	<b>no</b>	<b>yes</b>

- a. Kiedy **widzialesz** królika? Polish  
 when saw-PART-2S rabbit  
 ‘When did you see the rabbit?’
- b. Kiedyś **widzial** królika?

Embick & Izvorski (1997)

### ❖ How to *decide* what is a fact – Slavic is (not) VO

Where ‘head-initial’ (VO) differs from ‘head-final’ (OV):

	VO	OV
▪ Variable <b>V-Aux-order</b>	<b>no</b>	<b>yes</b>

Ako **pročel** e knjigata ...  
if read is book-the  
‘If he has read the book...’

Bulgarian

Kad **sreo** budeš Petra...  
when met will Peter  
‘When you meet Peter...’

Bosnian/Croatian/Serbian

Embick & Izvorski (1997)

### ❖ How to *decide* what is a fact – Slavic is (not) VO

#### Interim Summary

	VO	OV	Slavic
▪ Scrambling	<b>no</b>	<b>yes</b>	<b>yes</b>
▪ Superiority	<b>yes</b>	<b>no</b>	<b>no</b>
▪ Edge effect	<b>yes</b>	<b>no</b>	<b>no</b>
▪ Opacity of preverbal phrases	<b>yes</b>	<b>no</b>	<b>no</b>
▪ Variable V-Aux-order	<b>no</b>	<b>yes</b>	<b>yes</b>

**We conclude:** Slavic does not share the VO-properties.



## SOV, SVO and the 'third' type

### 1. SOV

directionality: ←

$$[X \leftarrow [Y \leftarrow [Z \leftarrow V^{\circ}]]]_{VP}$$

### 2. SVO

directionality: →

$$[X [V^{\circ}_i \rightarrow [Y [e_i \rightarrow Z]]]]_{VP}$$

### 3. The *third* type

directionality: {←, →}

$$[X \leftarrow [Y \leftarrow [Z \leftarrow V^{\circ}]]]_{VP}$$

= SOV ←

$$\leftarrow [X \leftarrow [Y \leftarrow [V^{\circ} \rightarrow Z]]]_{VP}$$

←/→

$$\leftarrow [X \leftarrow [V^{\circ}_i \rightarrow [Y [e_i \rightarrow Z]]]]_{VP}$$

←/→

$$[X [V^{\circ}_i \rightarrow [Y [e_i \rightarrow Z]]]]$$

= SVO →

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## T<sub>3</sub>

= canonical directionality is **underspecified** (flexible)

Hence, T<sub>3</sub> comprises **three** sub-patterns:

- a.  $[XP \leftarrow [YP \leftarrow [ZP \leftarrow V]]]$  uniformly „←“ (OV)
- b.  $[XP \leftarrow [YP \leftarrow [V \rightarrow ZP]]]$  „→“ and „←“
- c.  $[XP \leftarrow [V_i [YP \rightarrow [e_i \rightarrow ZP]]]]$  „→“ and „←“
- d.  $[XP [V \rightarrow [YP [e \rightarrow ZP]]]]$  uniformly „→“ (VO)

### Prediction

T<sub>3</sub> shares the **OV-properties** resulting from „←“

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### OV, VO and the **Third** type

	OV	VO	3 <sup>rd</sup>
XP YP ZP <b>V</b>	<input checked="" type="checkbox"/>	*	<input checked="" type="checkbox"/>
XP YP <b>V</b> ZP	*	*	<input checked="" type="checkbox"/>
XP <b>V</b> YP ZP	*	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Scrambling	+	-	+
Edge effect	-	+	-
Aux-V-variation	+	-	+
Functional subject	-	+	+/-
Subject-effects	-	+	-

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### **T<sub>3</sub> languages**

- (All) historical Indo-European languages (e.g. Latin, Old English, Old Norse, Sanskrit, ...)
- Slavic languages
- **Hungarian: T<sub>3</sub>-VP** + two functional layers above it
- Most of the languages that are classified as **exceptional SVO languages**.

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What is special about the SVO subjects?

**SVO** requires a *functional subject* position (Haider 2010: 69).

- a.  $[_{VP} DP_{Subj.} [_{V'} V^\circ \rightarrow \dots ]]$  **SVO** V-projection  
 b.  $[_{VP} DP_{Subj.} \leftarrow [_{V'} \dots \leftarrow V^\circ ]]$  **SOV** V-projection  
 c.  $[_{FP} DP_i [F^\circ \rightarrow [_{VP} -_i [_{V'} V^\circ \rightarrow \dots ]]]_{VP}]$  external licensing in **SVO**

**Note:**

The ill-understood **EPP property** is a property of SVO clauses.

**EPP** = extended projection principle "*is the structural requirement that certain configurations ... must have subjects*" [Chomsky, Noam (1981:27)].

## Results

1. ‚Superiority‘ phenomena are **SVO effects**:
  - i. An SVO subject is in a spec-position
  - ii. SVO does not provide preverbal slots for wh-adverbials
  - iii. The rest is a parsing obstruction, due to crossing
2. **Slavic languages** are **typical T3 languages**, rather than highly exceptional SVO languages.
3. The **existence of T3 languages** is a consequence of the directionality requirement (canonical licensing) that yields OV and VO. **T3 is the underspecified setting.**

## Précis

1. „When you are studying any matter, ask yourself **what are the facts** and **what is the truth** that the facts bear out. Never let yourself be diverted by what you wish to believe.“ *B. Russell*
2. **Without assessment** you merely have data, no facts. **Honor the facts!** Don't waste facts for merely illustrating a trendy theoretical claim. You cannot prove a claim by merely illustrating it.
3. **Be aware** that mainstream **grammar theories** have been developed on data from a handful of VO languages. If your language is not VO, it is most likely not covered satisfactorily.
4. **Most of what** *we believe today* will turn out to be wrong in some time. Let's find out what is **not** wrong. How? By the scientific method, that is, by rigorously challenging our hypotheses.