

$\left[\begin{array}{l} \textit{word} \\ \text{ORTH} \langle \textit{Grammatik} \rangle \\ \text{SYN CAT SUBCAT} \langle \text{DET} \rangle \\ \text{SEM} \left[\begin{array}{l} \text{IND} \quad \boxed{\text{D}} \\ \text{RESTR} \left\{ \left[\begin{array}{l} \textit{grammar} \\ \text{INST} \quad \boxed{\text{D}} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$	$\left[\begin{array}{l} \textit{word} \\ \text{ORTH} \langle \textit{语法} \rangle \\ \text{SYN CAT SUBCAT} \langle \text{DET} \rangle \\ \text{SEM} \left[\begin{array}{l} \text{IND} \quad \boxed{\text{D}} \\ \text{RESTR} \left\{ \left[\begin{array}{l} \textit{grammar} \\ \text{INST} \quad \boxed{\text{D}} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$	$\left[\begin{array}{l} \textit{word} \\ \text{ORTH} \langle \textit{مستور} \rangle \\ \text{SYN CAT SUBCAT} \langle \text{DET} \rangle \\ \text{SEM} \left[\begin{array}{l} \text{IND} \quad \boxed{\text{D}} \\ \text{RESTR} \left\{ \left[\begin{array}{l} \textit{grammar} \\ \text{INST} \quad \boxed{\text{D}} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$	$\left[\begin{array}{l} \textit{word} \\ \text{ORTH} \langle \textit{ब्रह्मकण्ठ} \rangle \\ \text{SYN CAT SUBCAT} \langle \text{DET} \rangle \\ \text{SEM} \left[\begin{array}{l} \text{IND} \quad \boxed{\text{D}} \\ \text{RESTR} \left\{ \left[\begin{array}{l} \textit{grammar} \\ \text{INST} \quad \boxed{\text{D}} \end{array} \right] \right\} \end{array} \right] \end{array} \right]$
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Nonlocal dependencies: Discussion

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Outline

- empirical points
- feature checking vs. descriptions: the issue of resource consumption
- evaluation of theories: lexical elements vs. rules



Empirical points: Subjacency

- Generalization about talks so far: HPSG is not about theory (like the CxG cliché)



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unlike (most) CxG, HPSG does make a competence/performance distinction
- not talked about here: extraposition



Subjacency

- Baltin 1981: 262; 2006; Rizzi 1982: 57; Chomsky 1986: 38–40: antecedent is t' rather than t .
 - (1) a. [_{NP} Many books [_{PP} with [stories t]] t'] were sold [that I wanted to read].
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- But these are attachment preferences and if you make attachments semantically implausible extrapositions are possible (in German, Müller 2004):

- (2) weil viele Schallplatten mit Geschichten verkauft wurden, die ich noch
 because many records with stories sold were that I still
 lesen wollte
 read wanted
 'because many records with stories were sold that I wanted to read'

Extrapolation is really nonlocal

Müller (1999: 211): There is no upper bound on embedding:

- (3) Karl hat mir [eine Kopie [einer Fälschung [des Bildes [einer Frau —]]]] gegeben,
 Karl has me a copy of.a forgery of.the picture of.a woman given
 [die schon lange tot ist]_i.
 that PART long dead is
 ‘Karl gave me a copy of a forgery of the picture of a woman that has been dead for
 some time.’

See also Müller (2007b); Meurers & Müller (2009) for corpus data and further discussion.



Same is true for English

Uszkoreit (1990: 2333):

- (4) $[_{NP} \text{ Only letters } [_{PP} \text{ from } [_{NP} \text{ those people } _i]]]$ remained unanswered [that had received our earlier reply] $_i$.

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Strunk & Snider 2013: 111:

- (5) a. For example, we understand that Ariva buses have won [NP a number [PP of [NP contracts [PP for [NP routes in London $_i$]]]]] recently, [which will not be run by low floor accessible buses] $_i$.¹
- b. I picked up [NP a copy of [NP a book $_i$]] today, by a law professor, about law, [that is not assigned or in any way required to read] $_i$.²
- c. We drafted [NP a list of [NP basic demands $_i$]] that night [that had to be unconditionally met or we would stop making and delivering pizza and go on strike] $_i$.³

¹ <https://www.scribbr.com/essay/empirical-evidence-for-nonlocal-dependencies-23115444> (2018-03-20)

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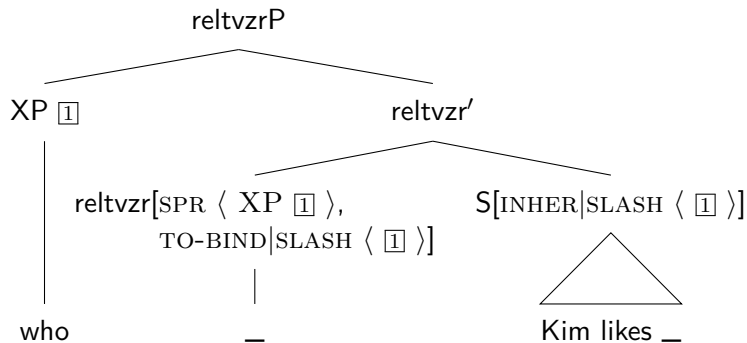
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See also Koster 1978: 52 on Dutch.

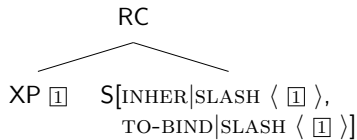
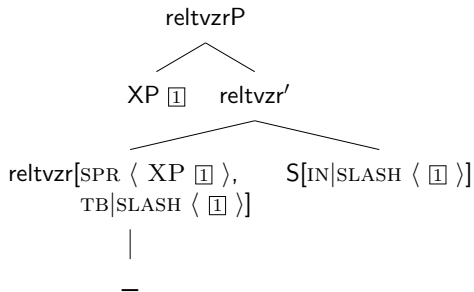
Conclusion on data

It is a good think to question empirical claims from time to time and check what is really going on.

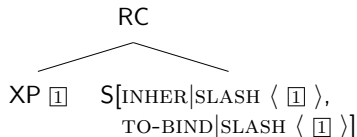
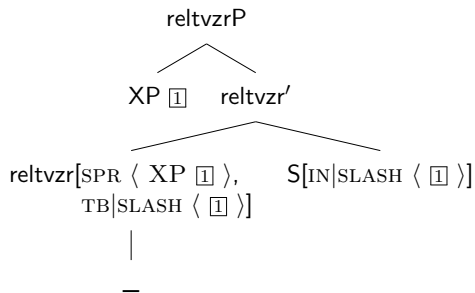
Extraction and islands



Schema for relative clauses



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Since one *SLASH* element is coming up and one is bound, the RC is an island.

In some languages you can extract

Erteschik-Shir (1973: 61): Extraction out of relative clauses is possible:

- (6) a. Det_i er der mange [der kan lide _i].
 that are there many that can like
 'There are many who like that.' (lit.: 'That, there are many who like.')
- b. Det hus_i kender jeg en mand [som har købt _i].
 that house know I a man that has bought
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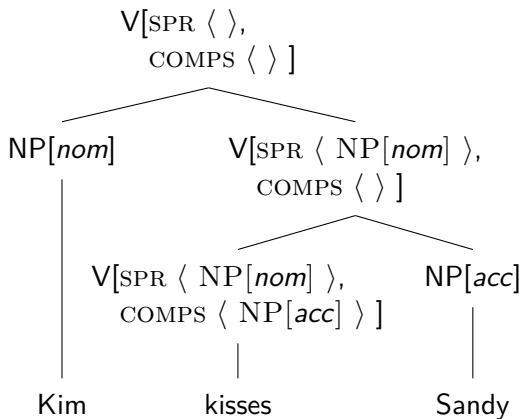
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Is this arbitrary? We could state the constraint on SLASH as a default and allow languages to overwrite it.

Feature checking: Resource driven grammar



Evaluation of theories

- But this is rare! (Ankelien Schippers)
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- But this is rare! (Ankelien Schippers)
 - Your treatment of all the funny stuff is irrelevant/less relevant.
- But rules count, lexical items are free (Gereon Müller).
 - empty operators to do ATB or fillerless UDCs are OK.

Rules vs. empty elements

Empty elements may be eliminated by inserting them into phrase structure rules. (Bar-Hillel et al. 1961; Müller 2014)

(7) a. NP \rightarrow Det \bar{N}

\bar{N} \rightarrow Adj \bar{N}

\bar{N} \rightarrow \bar{N} PP

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b. NP → Det \bar{N}

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