Nanosyntax and semantics of relative pronouns

Radek Šimík

13th conference on Syntax, Phonology, and Language Analysis
(SinFonIJJA 13)

Budapest (online)
24 September 2020
Research questions

Main question

What is the morphosyntactic and semantic representation of (cor)relative pronouns and the morphemes that derive them from interrogative pronouns?

(1) a. *koj* ‘who/which’
    
    b. *kojto* ‘who/which.REL’

Subquestions

- What is the distribution of relative morphemes in different constructions and languages?
- How can the distribution be modeled in (nano)syntax?
- What is the relation between relative morphemes and the morphemes deriving indefinites from wh-words?
Motivation and aim

Constructions

Morphology

Syntax–semantics

References
## Motivation and aim

### Constructions

### Morphology

### Syntax–semantics

### References
Motivation: int → ind

We know a lot about how **interrogative pronouns** (aka wh-words or indeterminates) give rise to **indefinite pronouns** and esp. how the syntax–semantics interface works.

<table>
<thead>
<tr>
<th></th>
<th>English where</th>
<th>Czech where</th>
<th>Hungarian who</th>
<th>Japanese who</th>
<th>Chinese what/which</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>where</td>
<td>kde</td>
<td>ki</td>
<td>dare</td>
<td>shénme</td>
</tr>
<tr>
<td>∃</td>
<td>somewhere</td>
<td>někde</td>
<td>valaki</td>
<td>dare-ka</td>
<td>shénme</td>
</tr>
<tr>
<td>∀</td>
<td>everywhere</td>
<td>všude</td>
<td>mindenki</td>
<td>dare-mo</td>
<td>shénme dōu</td>
</tr>
<tr>
<td>NPI/FCI</td>
<td>anywhere</td>
<td>kdekoli</td>
<td>akárki</td>
<td>dare-mo</td>
<td>shénme</td>
</tr>
<tr>
<td>NEG/NCI</td>
<td>nowhere</td>
<td>nikde</td>
<td>senki</td>
<td>dare-mo</td>
<td>shénme</td>
</tr>
<tr>
<td>...</td>
<td></td>
<td>kdesi</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table:** Interrogative pronouns → Indefinite pronouns

Haskelmath 1997; Ramchand 1997; Hagstrom 1998; Kratzer & Shimoyama 2002; Chierchia 2013; Szabolcsi 2015, 2018
Motivation and aim

Constructions

Morphology

Syntax–semantics

References

Motivation: int → rel

But we know little about how interrogative pronouns give rise to relative pronouns.

<table>
<thead>
<tr>
<th></th>
<th>English where</th>
<th>Czech where</th>
<th>Hungarian who</th>
<th>Greek who/which</th>
<th>Slovenian where</th>
<th>Hindi who</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>where</td>
<td>kde</td>
<td>ki</td>
<td>pjos</td>
<td>kje</td>
<td>kis</td>
</tr>
<tr>
<td>R</td>
<td>where</td>
<td>kde</td>
<td>aki</td>
<td>opjos</td>
<td>kjer</td>
<td>jis</td>
</tr>
<tr>
<td>FCI</td>
<td>anywhere</td>
<td>kdekoli</td>
<td>akárki</td>
<td>opjosehípote</td>
<td>kjerkoli</td>
<td>jis bhii</td>
</tr>
</tbody>
</table>

**Table:** Interrogative pronouns → Relative pronouns

Dayal 1997; Giannakidou & Cheng 2006; Rudin 2009; Franks & Rudin 2015
Aims for this talk

Aims

• Demonstrate what interrogative/relative pronoun morphology suggests about the relation among individual relative constructions.
• Provide a **general framework** for analyzing the patterns.
• Data: mainly typological generalizations.
• Only limited space for exploring particular predictions and analyses of particular phenomena.
Motivation and aim

Constructions

Morphology

Syntax–semantics
Constructions to be considered

- **Interrogatives (Q)**
  - Mainly matrix
  - Embedding not considered here (sometimes on a par with FR/HR)

- **Unconditionals (UnC)**
  - Conditional-like structures with ever-morphemes
  - Wh-referent optionally picked up in the consequent

- **Correlatives (CoR)**
  - Conditional-like structures without ever-morphemes
  - Wh-referent obligatorily picked up in the consequent

- **Free relatives (FR)**
  - Wh-clauses used as NPs or PPs
  - Functionally very close to light-headed relatives Citko 2004

- **Headed relatives (HR)**
  - Relatives headed by NPs

- A note on other constructions
Interrogatives (Q)

Matrix interrogative:

(2) János kit mutatott be Marinak?  
János who.ACC introduced PRT Mary.to  
‘Who did János introduce to Mari?’

Embedded interrogative sometimes take the shape of interrogatives (3), other times of (free) relatives, (4).

(3) János azt kérdezte, hogy Péter melyik egyetemre készül.  
János that.ACC asked COMP Péter which university.to applies  
‘János asked to which university Péter would apply.’

(4) a. No sé lo que te gusta.  
NEG know.1SG REL what you taste.3SG  
‘I don’t know what you like.’

Kwadwo tell-PST person one REL 3SG-go-PST Kumasi who-PST Adwoa  
‘Kwadwo told Adwoa who went to Kumasi.’

Embedded interrogatives are a mixed bag → set aside here.

É. Kiss 2002; Kellert 2017; Zimmermann 2018
Constituent unconditionals are accompanied by the ever-morpheme; the wh-referent need not be picked up in the consequent.

(5) a. Whoever goes to the party, it will be fun.
    b. Whoever goes to the party, they’ll be surprised.

They are sometimes formed using interrogative pronouns.

(6) \{Akárki / *Akáraki\} telefonált, elbeszélgettünk. \textit{Hu}

    EVER.who EVER.REL.who called chatted.1PL

    ‘Whoever called, we chatted.’

and other times using relative pronouns.

(7) a. \{Kdorkoli / *Kdokoli\} (že) pride, bom zadovoljen. \textit{Sln}

    who.REL.EVER who.EVER PRT come.3SG will.be.1SG satisfied

    ‘Whoever comes, I’ll be happy.’

    b. Naj pride \{kdor / *kdo\} (že) pride, bom zadovoljen.

    PRT come.3SG who.REL who PRT come.3SG will.be.1SG satisfied

    ‘Whoever comes, I’ll be happy.’

Rawlins 2013; Szabolcsi 2019; Šimík 2020
Correlatives (CoR)

Correlatives have no ever-morpheme and require that the wh-referent be picked up in the consequent, typically by a demonstrative.

(8) \textit{jo} laRkii khaRii hai vo lambii hai.  \textit{Hindi}
\hspace{1cm} REL.DET girl standing is DEM.DET tall is
\hspace{1cm} ‘The girl who is standing is tall.’

Correlatives make use of rel-pronouns (if existent in the language); int-pronouns are allowed only exceptionally (Hungarian: proverbs):

(9) a. \{Aki_i / Ki_i\} másnak vermet ás, maga_i esik bele. \textit{Hu}
\hspace{1cm} REL.who who other.DAT pit.ACC digs himself falls in.it
\hspace{1cm} ‘Who digs a pit for someone else, falls in it himself.’

b. \{Aki_i / *Ki_i\} megette a tortát, azt_i megbüntetjük. \textit{Hu}
\hspace{1cm} REL.who who eat.PST.3SG the cake.ACC that.ACC punish.1PL
\hspace{1cm} ‘Who has eaten the cake, that we will punish.’

Srivastav 1991; É. Kiss 2002; Lipták 2012
Free relatives (FR)

Free relatives are well-known and well-studied constructions. They come in two varieties, with important morphosyntactic and semantic differences – plain vs. ever FRs (here mostly set aside).

(10) a. I ate what(ever) Dave cooked.
   b. Ich esse, was (auch immer) David kocht.

‘I (will) eat what(ever) David cooks.’

Languages which use relative morphology in correlatives, also use it in free relatives, independently of the plain vs. ever contrast:

(11) Meghívtam {akit csak / *akárki} láttam.

invited.1SG REL.who.ACC only EVER.who saw.1SG
‘I invited whoever I saw.’

Closely related are light-headed relatives (set aside here), which (i) makes use of the same wh-words but (ii) rule out the use of ever-morphemes.

(12) Jan śpiewa to, co (*-kolwiek) Maria śpiewa.

Jan sings that what -EVER Maria sings
‘Jan sings what Mary sings.’

Caponigro 2003; Citko 2004; van Riemsdijk 2017; Šimík to appear
Headed relatives (HR)

Standard relatives headed by a nominal:

(13) a. the city **which** I visited
    b. the city **where** I was born
    c. a man **who** I didn’t recognize
A note on other constructions

Non-wh-relatives

• There are many different relativization strategies across languages (see de Vries 2002; Cinque 2020).

• Using wh-words is just one option, one that possibly comes with consequences (at least in headed relatives).

• Using wh-words for relativization turns out to be a fairly complex – perhaps even unnecessarily complex – process, which could explain why they are so rare cross-linguistically.

Internally headed relatives

• There is no documented case of wh-in-situ in embedded relative clauses and hence also no wh-internal heads.

Modal existential constructions

• Generally use interrogative forms (exception: Hungarian optionally uses relative forms).

• A possible analysis mentioned later.

Ambitious attempt at a unification, though with many parameters to be set, yielding various different relativization strategies: Cinque 2020
Motivation and aim

Constructions

Morphology

Syntax–semantics
Cross-linguistic and cross-constructional paradigm

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>German</th>
<th>Turkish</th>
<th>Hungarian</th>
<th>Bulgarian</th>
<th>Hindi</th>
<th>Greek</th>
<th>Abaza</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q</td>
<td>where</td>
<td>was</td>
<td>kim</td>
<td>ki</td>
<td>koj</td>
<td>kidhar</td>
<td>pjos</td>
<td>j(ə)-</td>
</tr>
<tr>
<td>UnC</td>
<td>where+</td>
<td>was+</td>
<td>kim</td>
<td>ki+</td>
<td>koj(to)+</td>
<td>j/kidhar+</td>
<td>opjos+</td>
<td>j(ə)-</td>
</tr>
<tr>
<td>CoR</td>
<td>was</td>
<td>kim</td>
<td>(a)ki</td>
<td>kojto</td>
<td>jidhar</td>
<td>opjos</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FR</td>
<td>where</td>
<td>was</td>
<td>X</td>
<td>aki</td>
<td>kojto</td>
<td>jidhar</td>
<td>opjos</td>
<td>j(ə)-</td>
</tr>
<tr>
<td>HR</td>
<td>where</td>
<td>das</td>
<td>X</td>
<td>aki</td>
<td>kojto</td>
<td>jidhar</td>
<td>o opíos</td>
<td>j(ə)-</td>
</tr>
</tbody>
</table>

Table: Morphology of interrogative and (cor)relative pronouns

- R-morpheme either affixed on the wh-word (e.g. Bulgarian) or “replacing” the wh-morpheme (Hindi).
- Implicational hierarchy: If R-morpheme surfaces on a pronoun in some construction, it also surfaces on the pronoun in the “lower” construction.
- Gap (potential ABA?): English or Abaza CoR.
- + stands for obligatory additional morphology (e.g. ever-morpheme)

Pancheva Izvorski 2000; É. Kiss 2002; Bhatt 2011; Fuß & Grewendorf 2014; Demirok 2017; Daskalaki to appear; Bacskaï-Atkari & Dékány to appear; Arkadiev & Caponigro to appear
Cross-linguistic and cross-constructional paradigm

The case of Syrian Arabic

<table>
<thead>
<tr>
<th>what</th>
<th>Syrian Arabic</th>
<th>who</th>
<th>where</th>
<th>when</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q Šu</td>
<td>mīn</td>
<td>wēn</td>
<td>aymat</td>
<td></td>
</tr>
<tr>
<td>UnC Šuma</td>
<td>mīnma</td>
<td>wēnma</td>
<td>aymatma</td>
<td></td>
</tr>
<tr>
<td>CoR Šu(ma)</td>
<td>mīnma</td>
<td>wēn</td>
<td>lamma</td>
<td></td>
</tr>
<tr>
<td>FR Šu</td>
<td>illi+RES</td>
<td>mahallma</td>
<td>lamma</td>
<td></td>
</tr>
<tr>
<td>HR illi+RES</td>
<td>illi+RES</td>
<td>mahallma</td>
<td>illi+RES</td>
<td></td>
</tr>
</tbody>
</table>

**Table:** Interrogative and (cor)relative constructions in Syrian Arabic

- The hierarchy is defined not based on language, but based on particular wh-items.
- Syrian also demonstrates the existence of suppletion: wēn ‘where’ (Q/CoR) – mahall ‘place’ (FR/HR).
- The ma morpheme in Syrian Arabic is still to be explored; being highly polysemous/polyfunctional, it might be ambivalent between the ever morpheme (obligatory in unconditionals) and a relativizer (mahallma ≈ place.REL).
- Cf. English what (✗ HR) vs. who (✓ HR).

Pospíšil et al. in prep
Nanosyntax of relative pronouns

• Labels adopted from the clausal spine; cross-categorial $fseq$
• NP provides nominal restriction ($\phi$-features, PLACE, TIME, etc.)
• Foc ($\approx$ Wh) turns the core indefinite to focus
• Top turns the focus to a topical referent
• Force ($\approx$ Rel) encodes embedding (relation to CP-external D)
• The functional heads operate quasi-compositionally: not on metalanguage but on referential indices.
• HRs left aside...

![Diagram]

**Figure:** Structure of interrogative/(cor)relative pronouns
Nanosyntactic lexical entries and spellout

- The usual nanosyntactic spellout principles apply (phrasal spellout, superset, elsewhere; Starke 2009)
- Precise technical implementation left aside

English (German, Czech)
\[ \text{Force}_R \text{P} \leftrightarrow \text{where} \]
\[ \text{Force}_R \quad \text{Top}_R \text{P} \]
\[ \text{Top}_R \quad \text{Foc}_I \text{P} \]
\[ \text{Foc}_I \quad \text{NP} \]

Hindi
\[ \text{Force}_R \text{P} \leftrightarrow \text{jidhar} \]
\[ \text{Force}_R \quad \text{Top}_R \text{P} \]
\[ \text{Top}_R \quad \text{Foc}_I \text{P} \]
\[ \text{Foc}_I \quad \text{NP} \]

Syrian (Turkish, Chinese)
\[ \text{Force}_R \text{P} \leftrightarrow \text{mahallma} \]
\[ \text{Force}_R \quad \text{Top}_R \text{P} \leftrightarrow \text{wēn} \]
\[ \text{Top}_R \quad \text{Foc}_I \text{P} \]
\[ \text{Foc}_I \quad \text{NP} \]

Bulgarian (Hungarian, Greek)
\[ \text{Force}_R \text{P} \leftrightarrow \text{-to} \]
\[ \text{Force}_R \quad \text{Top}_R \text{P} \]
\[ \text{Top}_R \quad \text{Foc}_I \text{P} \leftrightarrow \text{koj} \]
\[ \text{Foc}_I \quad \text{NP} \]
Diachronic evidence

At least some diachronic evidence suggests that free and headed relative wh-based pronouns do not develop directly from interrogative ones, but via unconditional and then correlative ones.

- Mitrenina (2012): The case of Russian *kotoryj* ‘which’: interrogative → “pseudo-correlative” (between unconditional and correlative) → relative; replaced by *kakoj* in the interrogative function
- Gisborne & Truswell (2018): English

There are also accounts that assume a “direct” interrogative → free/light-headed relative → headed relative development.

- Heine & Kuteva (2006): embedded interrogative → free relative → headed relative
- Bacskaï-Atkari & Dékány (to appear): Hungarian *az NP* ‘that NP’ → *az ki* ‘that who’ → *aki* ‘REL.who’
Motivation and aim

Constructions

Morphology

Syntax–semantics
Background theory: int → ind

- Wh-indeterminates are non-quantificational restricted variables (here and elsewhere: focus variables).
- Wh-affixes/morphemes indicate a relation, possibly long-distance, with a higher propositional quantifier, possibly more of them.

\[(14)\]

a. \([Q] \ldots \text{where} \ldots\]
b. \([\exists] \ldots \text{somewhere} \ldots\]
c. \([\forall] \ldots \text{EXH} \ldots \text{wherever}/\text{anywhere} \ldots\]
d. \(\lnot[\exists] \ldots \text{nowhere} \ldots\)

- The theory could be combined with a choice-functional approach to wh-based indeterminates. Yanovich 2005; Cable 2010

Beghelli & Stowell 1997; Kratzer & Shimoyama 2002; Aloni 2003, 2007; Butler 2004; Zeijlstra 2004; Beck 2006 (often different technical implementations)

Related: wh-indefinites are existential quantifiers associated with exhaustification over propositional alternatives (Chierchia 2013; Szabolcsi 2019; Fălăuş & Nicolae 2020)
Application to (cor)relatives

Building on the insights from the int → ind theory, illustrated here in (15-a,b), I propose a similar account of (cor)relative pronouns, where the functional heads (Top, Force) are in a relationship with a c-commanding quantificational head, either propositional (CoR-Op) or determiner (Det).

(15) a. Questions
\[ [Q] \ldots [\text{FocP where}] \ldots \]

b. Unconditionals
\[ [\forall] \text{Cond-Op} \ [A \ [Q_{\text{EXH}} \ [\text{FocP where}]\text{ever} \ldots ] \ [C \ldots ]] \]

c. Correlatives
\[ \text{CoR-Op} \ [A \ldots [\text{TopP aki}] \ldots ] \ [C \ldots [\text{DemP az}] \ldots ] \]

d. (Free) relatives
\[ \text{Det} \ [\text{ForceP aki} \ldots ] \]
Interrogative pronoun

- The NP (here PLACE) is Heim’s (1982) indefinite (restricted variable).
- FocI turns an ordinary index to a focus index, interpreted by the designated assignment $h$; it is like the standard F-marker, but gets rid of the ordinary meaning (a “subcompositional” process).
- The resulting meaning is identical to the one proposed by Beck (2006) for interrogative wh-words, which builds on Kratzer’s (1991) and Wold’s (1996) theory of focus interpretation; the meaning is the focus value; ordinary value is undefined.

$$Foc_I P_{F3}$$

\[ h(3) : \text{PLACE}(h(3)) \Rightarrow \text{`where'} \]

\[ g(3) \text{ undefined} \]

Figure: Representation of the interrogative pronoun
Interrogative clause

\[ \lambda p \exists x \ p = \text{GO}(\text{DAVE, } x) \]

\[ \text{Q}_3 \]

\[ \text{VP} \]

\[ \text{GO}(\text{DAVE, } h(3)) \land \text{PLACE}(h(3)) \]

\[ \text{NP} \]

\[ \text{DAVE} \]

\[ \lambda y \ \text{GO}(y, h(3)) \land \text{PLACE}(h(3)) \]

\[ \triangle \]

\[ \text{Dave} \]

\[ \lambda x \lambda y \ \text{GO}(y, x) \]

\[ \text{V} \]

\[ \text{Foc}_1 P_{F3} \]

\[ \text{goes} \]

\[ \triangle \]

\[ \text{where} \]

\[ [Q_3 \ X]^g = \lambda p \exists x \ p = [X]^g, h^{[3\to x]} \] (Beck 2006)

\textbf{Figure:} Representation of the interrogative clause
**Correlative pronoun**

- Top is focus-sensitive, like Rooth’s (1992) ~ or Beck’s (2006) Q. It operates on the focus meaning and turns it to ordinary meaning. Prediction: no intervention for in-situ correlatives.

- It is similar to Cable’s (2010) Q-morpheme in that it relates the wh-alternatives (here: different designated assignments (DA) $h$ applied to the focus index 3) to some **binding operator** (see below).

- The binding operator is Kratzer-style covert conditional operator, enhanced by a “correlative binder”.

\[
\text{Top}_R P_3 \\
g(3) : g(3) \in \{ h(3) \mid h \in D_{DA} \} \Rightarrow \text{‘where’} \\
= g(3) : \text{PLACE}(g(3))
\]

**Figure:** Representation of the correlative pronoun
Correlative construction

$[[\text{Cond-Op } A \ B]]^g = \forall w \ [A](w) \rightarrow [B](w)$ (Kratzer 2012; simplified)

$[[\text{CoR-Op}_3 \ A \ B]]^g = \forall w, x \ [A]^{g^{[3 \rightarrow x]}}(w) \rightarrow [B]^g^{[3 \rightarrow x]}(w)$ (proposal)

**Figure:** Representation of the correlative construction

**Similar accounts:** Bittner 2001; Brasoveanu 2008; Arsenijević 2009
Correlatives: Discussion

CoR-Op

- Just like with Cond-Op, the semantic nature of CoR-Op determines the type of correlative (generic, modal, extensional). Declerck & Reed 2001; Haegeman 2003

- Languages can differ in which operators can be “adapted” (from conditional) to correlative use, with generic ones being the most likely ones (= puzzle, to me).

In-situ vs. ex-situ

- Correlative pronouns can in principle be in-situ (Hindi, Turkish, Chinese) or ex-situ (most European languages).

- My proposal relies on in-situ semantics (binding) of correlative pronouns. Correspondingly, correlative antecedents/consequents have propositional semantics (like questions or conditionals). Bittner 2001; Brasoveanu 2008

- Cf. in-situ semantics for in-situ correlatives (Liu 2016; Demirok 2017); ex-situ semantics for in-situ correlatives (Srivastav 1991; Chen 2019).
In-situ vs. ex-situ

• Ex-situ correlatives could in principle be free relatives. But there’s also evidence that in Slavic languages, correlatives, which are obligatorily ex-situ, do not have a free-relative syntax.

• That is, they are not DPs/NPs (islands), but CPs (transparent for extraction); also see Pancheva Izvorski (2000).

(16) a. To je ten chlap, kterému₁ [CoR co dáš ř₁], to that is that man which.DAT what.ACC give.2SG that ztratí. lose.3SG

b. *To je ten chlap, kterému₁ ztratí [Fr co dáš ř₁]. that is that man which.DAT lose.3SG what.ACC give.2SG

(Intended:) ‘That’s the man such that he will lose what(ever) you give him.’

Biskup & Šimík 2019
Correlatives: Discussion

Correlative/“Interrogative” mix

- Rudin (2009) shows that the presence/absence of -to on wh-words in Bulgarian multiple-wh correlatives correlates with interpretation; cf. (17).

- In the present analysis, correlative wh-words (with -to) get bound by CoR-Op, while non-correlative (without -to) don’t. The latter are interpreted as wh-words in unconditionals. (Logical representations are simplified.)

(17) a. Kogo to kakvoto go boli, za nego prikazva. Bg
   who.REL what.REL him hurts about it talks
   ‘The person who has something hurting, talks about it.’
   \[\forall w, x, y[HURT(x, y, w) \rightarrow TALK ABOUT(x, y, w)]\]

b. Kogo kakvoto go boli, za nego prikazva. who what.REL him hurts about it talks
   ‘Everyone talks about whatever is hurting them.’
   \[\forall x[PERSON(x) \rightarrow \forall w, y[HURT(x, y, w) \rightarrow TALK ABOUT(x, y, w)]]\]
Free relative pronoun

- Force is selected for (Rizzi 1997) → in-situ interpretation impossible.
- Selection by a nominal determiner entails selection of a property → \textit{lambda-abstraction} is necessary.
- The free relative pronoun \textsc{ForceP} moves to the left periphery where it is interpreted as a lambda abstracter, contributing the nominal restriction (Heim & Kratzer 1998; Adger & Ramchand 2005). Besides the restriction, the node does not contribute its own meaning, it only contributes to the meaning of its mother.

\[
\text{Force}_R \text{P}_{A3} \\
\text{PLACE}(g(3)) \Rightarrow \text{‘where’}
\]

\[
\text{Force}_R \quad \text{Top}_R \text{P}_3 \\
\text{turns index to} \quad g(3) : \text{PLACE}(g(3)) \\
\text{lambda-abstracter}
\]

\textbf{Figure:} Representation of the free relative pronoun
Free relative clause

- I assume that the relative pronoun projects (cf. Donati & Cecchetto 2011).
- Alternatively, Force$_R$ is base-generated in the left periphery and Top$_R$ moves into its complement (submerge; Pesetsky 2013; multidominance version with Top$_R$P “in-situ”: Johnson 2012)

\[
\text{DP} \\
\lambda x \text{PLACE}(x) \land \text{GO(DAVE, } x) \\
\text{where} \\
\text{Dave V'} \\
\text{goes } t_3
\]

Figure: Representation of the free relative clause
Free relatives: Discussion

No relative wh-in-situ

• There is no wh-in-situ in free (or headed) relatives (originally discussed by Schwartz 1971; cf. de Vries 2005).
• What comes closest to an exception: Tsez ever free relatives (Polinsky 2015); Hittite headed relatives (Huggard 2015).

Light-headed relatives

• The analysis is directly applicable to light-headed relatives (Citko 2004). That is a good result, as it is very rare for light-headed relative pronouns to be different from free relative pronouns (potential exception: English, which seems to use headed relative pronouns – still in line with the implicational hierarchy above).

(18) a. Pozval {toho / každého / někoho}, koho včera potkal. Cz invited.PFV.SG.M that everybody somebody who yesterday met.PFV.SG.M ‘He invited {that / every / some} person that he met yesterday.’

b. ...[VP invited [DP [D that / everybody / somebody] [ForceRP [ForceRP who] he met]]]
Connection to correlatives

- Diachronic link between correlatives and free/light-headed relatives (see above).
- Synchronically, not always easy to tell the two apart (in some cases: correlatives \( \approx \) left-dislocated free relatives).
- Present take on the synchrony, multi-dominance-style:
Headed relatives: Discussion

• Wh-words in headed relatives is the rarest phenomenon cross-linguistically.
• They are determiners, not pronouns.
• The dependency expressed by headed relative pronouns is not between a quantificational head (D, Op, etc.) and a pronoun, but between two NPs: the RC-internal and RC-external head (on the so-called matching analysis).

(19) the book \[CP [\text{which} \text{book}] \text{I} \text{read}]

• Yet they also must trigger abstraction (property of Force$_R$) \(\rightarrow\) double function of the headed relative pronoun.
• The double function can map to morphological complexity; cf. Greek FR \textit{opjos} – HR \textit{o opíos}.

• Note: Raising relatives do not use relative pronouns (Aoun & Li 2003; Szczegielniak 2005; Cinque 2020) (= no non-movement dependency involved).

(20) the book$_1$ \[CP t_1 \text{(that) I read} t_1\]
Unconditionals: Discussion

- In the present analysis, unconditional wh-words are not (cor)relative (ForceP/TopP), but interrogative (FocP).

- **Puzzle:** Some languages use free relative pronouns in unconditionals: Slovenian *kdor* (relatives) ‘who.REL.EVER’, Greek *opjosdhípote* ‘REL.who.EVER’.

- **Potential solution:** These wh-words are sluicing remnants of free relatives.

(21) Comes [\text{FR who(ever) comes}], you’ll be happy.

- **Evidence from Slovenian doubling unconditionals:**

(22) a. Naj pride [\text{FR kdor (-koli) (že) pride}], bom PRT come.3SG who.REL -EVER PRT come.3SG will.be.1SG zadovoljen. satisfied ‘Whoever comes, I’ll be happy.’

b. Naj pride [\text{FR kdorkoli (že) pride}], bom PRT come.3SG who.REL.EVER PRT come.3SG will.be.1SG zadovoljen. satisfied ‘Whoever comes, I’ll be happy.’

Šimík 2020
Modal existential constructions: Discussion

**Puzzle:** Wh-words in MECs exhibit apparently conflicting properties:

- They wh-move obligatorily (trigger lambda-abstraction) and yet
- they have no relative morphemes (potential exception: Hungarian).

\[(23)\]  
(a) Nimam \[\text{NEG} \ \text{have.1SG} \ \text{with} \ \text{what} \ \text{REL} \ \text{wash.INF} \ \text{dishes} \]  
\[\text{\[MEC s \ \{\text{ˇcime} / *\text{ˇcimer}\} \ \text{pomiti posodo]} \]. \ \text{SIn} \]  
\text{‘I have nothing to clean the dishes with.’}

(b) *Nimam \[\text{NEG} \ \text{have.1SG} \ \text{wash.INF} \ \text{dishes} \ \text{with} \ \text{what} \]  
\[\text{\[MEC pomiti posodo s \ \text{ˇcime]} \]. \ \text{SIn} \]  
\text{Intended: ‘I have nothing to clean the dishes with.’}

**Potential solution:**

- Their “licensing” operator is not of the right kind to license Top/Force projections.
- They are FocPs turned directly to a Λ-index (triggering lambda-abstraction).
Summary

• Relative pronouns are not just sometimes identical to interrogative ones, they can be **morphologically derived** from them (int → rel).

• This process is similar to the more common derivation of indefinites from interrogative pronouns (int → ind).

• I proposed that relative pronouns, just like indefinite ones, may be in need of **licensing from a higher quantificational operator**. In correlatives, this operator is akin to Kratzerian conditional modal; in free (and light-headed) relatives, this operator is a definite or quantificational determiner.

• Morphological evidence suggests the following structural containment:

  (24) Free relative pronoun ⊇ Correlative pronoun ⊇ Interrogative pronoun

• I proposed account for the morphological containment in a nanosyntactic fashion, building on the familiar hierarchy Force > Top > Foc.
Relative pronouns are not just sometimes identical to interrogative ones, they can be **morphologically derived** from them (int → rel).

This process is similar to the more common derivation of indefinites from interrogative pronouns (int → ind).

I proposed that relative pronouns, just like indefinite ones, may be in need of **licensing from a higher quantificational operator**. In correlatives, this operator is akin to Kratzerian conditional modal; in free (and light-headed) relatives, this operator is a definite or quantificational determiner.

Morphological evidence suggests the following structural containment:

(24) Free relative pronoun ⊃ Correlative pronoun ⊃ Interrogative pronoun

I proposed account for the morphological containment in a nanosyntactic fashion, building on the familiar hierarchy Force > Top > Foc.
References I


Bhatt, Rajesh. 2011. Hindi-Urdu unconditionals with caahe. Manuscript, University of Massachusets, Amherst, MA.


References II


References IV


Pospíšil, Adam, Ours Aljani & Radek Šimík. in prep. Interrogative and (cor)relative pronouns in Syrian Arabic. Manuscript, Charles University and University of Nantes.


References


