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A RELATIVE SYNTAX AND SEMANTICS FOR SLOVENIAN

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ABSTRACT. This paper entertains a novel, or rather transplanted, morhosyntactic and morphosemantic analysis of Slovenian Free Relative (FR) *wh*-markers with the signature enclitic *r*-morpheme. The syntax and semantics of *r*-marked FRs in Slovenian is set against an empirical observation of seeming morphosyntactic identity of interrogative and relative expressions (*qua* Caponigro's generalisation) and is derived from the theoretical model of Chierchia & Caponigro (2013), who derive the syntax and semantics of FRs from interrogatives. In this spirit, we identify the sole derivational difference between questions and FRs in the temporal ordering, derivational procedure and the choice of two excorporation options within the fine-grained clausal spine (Rizzi, 1997) combined with particular assumptions concerning the narrow syntactic status of head movement (Shimada, 2007). Evidence from Slovenian thus serves to substantiate empirically Chierchia & Caponigro's (2013) model as the *-r* morpheme can be analysed as an overt realisation of an otherwise stipulated operator. Attention is also devoted to the postsyntactic processes triggered by the presence of the relativising morpheme, substantiating the proposal, specifically, and also, more generally, lending support to an anti-lexicalist view of non-atomicity of relative pronouns in Slovenian.

1 INTRODUCTION

This paper presents a theoretically eclectic and novel morhosyntactic and morphosemantic analysis of Slovenian Free Relative (FR) construction which features the signature enclitic *-r* morpheme on the relativised *wh*-term. The analysis stems from, and is essentially an empirical transplantation and conjectural precisification of, Chierchia &

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Caponigro (2013) (henceforth, CC), who derive the syntax and semantics of FRs from interrogatives. The core intuition behind the analysis of CC, which we adopt here, is stated informally in (1) so as to capture the intuitive reasoning of their approach.

(1) $\overbrace{\text{John ate } [\underbrace{\textbf{what} \text{ Mary cooked}}_{CP_2}]}^{CP_1}$

a. $[\![CP_1]\!] \approx$ John ate x.

b. $[\![CP_2]\!] = x \approx$ the short answer to "What did Mary cook?" (e.g., "potatoes")

While the analysis rests on CC, it departs from its assumptions technically, especially with regard to the syntactic derivation (we lay out the departures progressively). Under the present account, the sole derivational difference between questions and FRs lies in the timing of two excorporation options under particular assumptions concerning head movement (Shimada, 2007), coupled with the fine-grained clausal spine (Rizzi, 1997), the left periphery (LP) is derived through successive excorporation of LP heads.

Set against this theoretical background is the empirical evidence from Slovenian which will serve to empirically substantiate CC's analysis by treating the *-r* morpheme as an overt realisation of an operator which remains a stipulation within CC's account. Under the analysis we develop here, we locate the *wh*-pronoun as potentially moving into two different structural positions, under the assumption that the complementiser field is fine-grained in the sense of Rizzi (1997). We associate the two different positions hosting the *wh*-word, via morphosyntactically conditioned allomorphy, under the assumptions of a late insertion model (Embick & Noyer 1999, 2001; Embick 2010; Bobaljik 2012, *int. al.*). For interrogatives, we will take the relevant categorial factor to be a local presence of the FORCE^0, encoding for clausal interrogativity, while we associate the signature FR exponence, featuring the *r*-morpheme, with the (high) TOP^0, encoding for clausal topicality. We thus exploit the notion of topicality to derive the intuition on the nominal nature of FRs.

The paper is structured as follows: §2 introduces the data under discussion with (§2.1) a preliminary sketch of the syntactic approaches to FRs, (§2.2) an empirical focus on the *r*-marker in Slovenian FRs, and (§2.3) a diachronic note on the morphosyntactic origins and history of the *r*-marker. §3 then illustrates the syntactic-semantic model we invoke to analyse the Slovenian FRs. Primarily, we show the conjecturally tighter link between Questions (Qs) and FRs, as suggested by CC. We then technically, yet minimally, depart from CC by making more precise the syntactic input derivation that derives the Logical Forms (LFs) that CC pro-

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pose. We additionally make the proposal that an operator (a relativising D head, or D_{REL}, in CC) be present in the syntax more explicitly: we develop a proposal according to which the origins of D_{REL} are located in the structure of the LP. In §4, we address the processes involved in the other wing of grammar, i.e. the post-syntactic component of morphophonology so as to derive the subtle morphophonological differences in the accentual and syllabic shape of FR and Q *wh*-pronouns. This section also suggests, and lends support to, an anti-lexicalist view of non-atomicity of relative pronouns in Slovenian. §5 concludes with a romantic outlook on future directions of this (kind of) research.

2 AN EMPIRICAL OVERVIEW

2.1 A brief syntax of relatives & interrogatives

As Alexiadou et al. (2000: 21) note, FRs (2a) should be distinguished from headed-relatives (2b) as well as interrogatives (2c), as shown in (2), which we borrow from Alexiadou et al. (2000: 22, ex. 55).

(2) a. FREE RELATIVE: [FR]
John liked [what(ever) I cooked]

b. HEADED RELATIVE: [HR]
John liked [the thing(s) [which I had had cooked]]

c. INTERROGATIVE: [Q]
John wondered [what I had cooked]

Alexiadou et al. (2000: 22) observe that while FRs and HRs share interpretative properties, FRs are syntactically more like Qs (*modulo* the optional *-ever* marker in FRs[1]) as both require movement of the *wh*-term to the edge of the relative CP, whose head is endowed with a [+WH] feature. Aside from the intersecting *wh*-feature on C^0, the two constructions are taken to instantiate two distinct constructions which lead to two distinct interpretations. The Q is assumed to have an interrogatively specified C^0, while the FR is generally assumed to involve a DP-embedded declarative CP. This paper departs from the standard perspectives and pursues a line of argumentation from syntax (Rooryck, 1994) and semantics (CC), according to which FRs are CPs which are neither embedded

1 Note, however, that FRs and Qs do not seem to differ substantially in this respect as suggested by the following English data:

i. I'll eat [what**ever** you cook]. [FR]

ii. [What **ever** do you mean?] [Q]

For ideas on such identities, and their semantic differences, pertaining mostly to South Slavonic, see Veselinović (2013) or Mitrović (2016).

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under a D^0 (Rooryck, 1994), nor declarative (CC).[2]

Slovenian FRs under discussion here have received ample and precise theoretical treatment: for an overview, see Šuligoj (2013) and references therein. In this paper, the syntax and semantics of *r*-marked FRs is set against an observation of seeming morphosyntactic identity of interrogative and relative expressions, also known as Caponigro's generalisation (introduced and discussed below), as extensively investigated by Caponigro (2003, 2004), *int. al.*.

There are two morphemic ingredients of relative *wh*-pronouns in Slovenian: the actual *wh*-word and an enclitic *-r* morpheme, which we subject to a morphological analysis in §4. The core aim of this section, however, is to show that Slovenian has retained a relative *r*-marker. Compare, for purposes of micro-comparative exposition, the two pairs of interrogative (a) and FR (b) data from Slovenian (3) and SerBo-Croatian (4).

(3) a. **Kaj**-∅ kuha Jožica?
what-Q cooks J
'What is Jožica cooking?'

b. Francl jé, [**ka-r** je Jožica skuhala]
F is.easting **what**-REL is J cooked
'Francl is eating [what Jožica cooked]'

(4) a. **Šta/o**-∅ kuha Fata?
what-Q cooks F
'What is Fata cooking?'

b. Mujo jede, [**šta/o**-∅ je Fata skuhala]
M is.easting **what**-REL is F cooked
'Mujo is eating [what Fata cooked]?'

The core difference between Qs/FRs and Slovenian/SerBo-Croatian we focus on, is the enclitic *r*-morpheme in Slovenian, which morphologically distinguishes an ambiguous *wh*-term, otherwise interpretable interrogatively or indefinitely. In the analysis we adopt and develop, the latter two *wh*-meanings are not separate taxonomies; instead, we adopt view under which one (FR) derives from the other (Q). We develop this in detail in §3. Before proceeding to an analysis, we briefly outline the historical and comparative distribution of the *r*-morpheme under discussion in the next subsection.

2.2 The diachronic origins and modern distribution of **že* across a fragment of Slavonic

The history of the *r*-marker can be traced back to Old Church Slavonic (OCS) relative marker *-že*, probably stemming from Proto-Slavonic (PSl)

2 For a syntactic view implicitly assumed in this paper, see Sauerland (1998).

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*že, and tracing back to Proto-Indo-European *$g^{w(h)}e$, as evidence from internal reconstruction suggests (Derksen, 2008: 554). Compare the syntax of the left clausal edge in OCS and Slovenian below.[3]

(5) egda**že** uslyša [OCS]
(kada-**r** je slišal) [Standard Slovenian]
when-REL heard
'When he had heard that . . .' (CM, Jn. 11:6)

The Common Slavonic *že* developed phonologically into the *-r* marker in Slovenian, whereby the OCS *že* (*se* in the *Freising Monuments*/FM in (7)) corresponds, at least in phonological form, to the *r*-marker under discussion, as shown independently (Greenberg, 1999; Cvetko Orešnik, 1988) We observe that this early rhotacism in the *Celovec/Rateče Manuscript* (CRM), dating from the 14th century, had already taken place by that time (6).

(6) Otſcha naſs **ky-r** ſy w nebeſſich [Old Slov.]
(Oče naš, **ki-**∅ si v nebesih) [Mod. Slov.]
father our **which**-FOC are in heavens
'Our father, who are in heaven.' (CRM, ln. 1)

The relativisation strategy found in (6) *prima facie* suggests a syntax retained by contemporary Slovenian. Note, however, that *ky-* in CRM (*ki* in modern Slovenian) does not have the interrogative *wh*-counterpart, unlike *kdo* (who.Q)/*kdo-r* (who-REL), as a reviewer observes.[4] This question is also related to the observation that a relativisation strategy in OCS or FM also differs from the modern variety in the fact that while the host of the *že* clitic may, and indeed tends to be, a *wh*-pronoun, as (7) demonstrates, this need not be the case, as shown in (8) (cf. (5)).

3 I employ an extra glossing line in the historical examples to elucidate the parallel with Standard Slovenian.

4 Note that *ki* 'which' does not have an interrogative counterpart, which can be explained if its etymological origin and early modern development is taken into consideration: the 14th century form *kyr* is reconstructable as **jь-že* (Snoj 1997.; viz. *i-že* in (7)), which we have analysed as 'who'-REL. We speculate that *ki*, after the 14th century, develops into an interrogative complementiser (perhaps analogically to Lat. *que*). The absence of the interrogative form of modern Slovenian *ki* serves as sufficient motivation for our excluding it from the FR/Q *wh*-paradigm under investigation here. The only available interrogative (and relative) counterpart to *ki* is *kateri*, which is historically, and possibly still synchronically, morphosyntactically complex. Despite its internal morphosyntactic complexity, the *kater-* FR/Q *wh*-term has very different origins, which we take as an explanandum for its diverging behaviour—for further, and independent evidence, see Majer (2015) for details. Despite its seeming identity, the *r*-marker in *kater-* is historically distinct from the FR *r*-marker; as such, it falls outside of the scope of the present paper and is left for future research.

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(7) Nas Gozbod, zueti Cristuz, || **i-se** gest bali telez
Naš Gospod sveti Krist **ki-∅/kdo-r** je zdravnik teles
our lord holy Krist **who**-REL/FOC is healer bodies
nassih [Old Slov.]
naših [Mod. Slov.]
ours

'Our Lord, holy Christ, who is the healer of our bodies'
(FM, 159v, ll. 89–90)

(8) Azŭ **že** gljǫ vamŭ [OCS]
Jaz **pa** rečem vam [Mod. Slov.]
I but tell.1.SG.PRES you.DAT

'But I tell you . . .' (CM. Mt. 5:28)

Such facts clearly suggest that *-se*/*-že* is not a mere relative marker but can also perform a focal function with an adversative effect, as (8) demonstrates. This motivates our treating the *-r* marker in (6), the *-se* marker in (7), and the *-že* marker in (8) as a non-relative focus marker.

These morphosemantic discrepancies are in line with the observation that the PSl **že*, stemming from PIE **$g^{(w)h}e$* and being cognate with the emphatic particles found in Indic *ha* and Greek *γε*, had a variety of meanings and featured in various constructions: in OCS it functioned as an emphatic, relative or even conjunctive (adversative) particle; in Russian, the conjunctive and emphatic functions remain, in Western Slavonic, **že* develops into a declerative complementiser, with emphatic functions of *że* surviving in Polish (see, among many others, Derksen 2008: 554, Mitrović 2014: 126ff. and references therein). We coarsely summarise these facts in Tab. 1.

We take it as a reasonable explanandum for the diachronic shifts in meaning of **že* across Slavonic that such semantic oscillations may be traced to structural shifts in the syntactic status of the positions that *že* occupied (or, indeed, still occupies): that is, the exact clausal location of *že* (within the LP) is synchronically dynamic in OCS with structural stability arising diachronically.[5]

Taking each of the categories from Tab. 1 to correspond to a LP clausal head, we translate these facts into theoretically more informed categories. As Tab. 2 suggests, *že* in OCS had both a focus and a relative function (we identify the latter as structurally deriving from the topic head, as motivated below). There is also a range of meanings in the contemporary varieties: in Czech, *že* functions as a complementiser (Šimík, 2009),

5 For a theoretical overview and background on structural reanalysis, see Roberts & Roussou (2003) and Roberts (2007) (and work cited therein). For a similar set of empirical motivations (from the history of Greek) for a diachronic explanandum resting on a structural analysis, see Chatzopoulou (2013) and references therein.

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	Complementiser	Relative marker	Focus marker
Old Church Slavonic		*že*	*že*
Old Slovenian (FM)		*se*	*se*
Early Middle Slovenian (CRM)			*-r*
Contemporary Slovenian		*-r*	*(pa)* *že*
Czech	*že*		
Polish	*że*		*że*
Russian			*že*

TABLE 1: *Syntactic-semantic roles of* že *across a fragment of Slavonic*

in Polish *że* is focal (Zagórska Brooks (1975) and references therein), as is the case with Slovenian. However, the rhotic version of **že*, i.e. *r*, in Slovenian is a relative marker. Also note that the relative *r*-marker in Slovenian cannot be a complementiser since it can co-occur with an overt declarative C^0, as shown in (9):

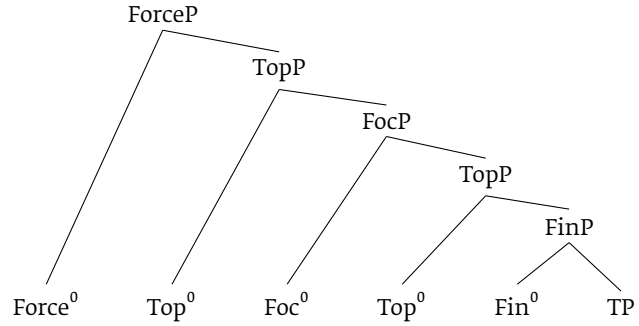
(9) Ka-**r** da je, po vašem mnenju, nadvse preprosta zadeva
what-REL that is on your opinion most simple matter
'Which is, in your opinion, a most simple matter . . .'
(DOOZ20, *Nova beseda* corpus)

In the next section, we motivate a syntax and assign a semantics to the *-r* morpheme, based on the model of CC.

3 MODEL AND ANALYSIS

3.1 Deriving the interrogative-relative identity

We now review and adopt the recent proposal by Chierchia & Caponigro (2013) according to which free relatives (FRs) are derived from ques-



Old Church Slav.			*že*			
		že				
Old Slov. (FM)			*se*			
		se				
Early Mid. Slov. (CRM)			*-r*			
Contemp. Slov.			*že*			
		-r				
Czech	*že*					
Polish			*że*			
	że					
Russian			*že*			

TABLE 2: *Left-peripheral position and interpretation of* -že, *or its rhotacised variant* -r, *across a fragment of Slavonic*

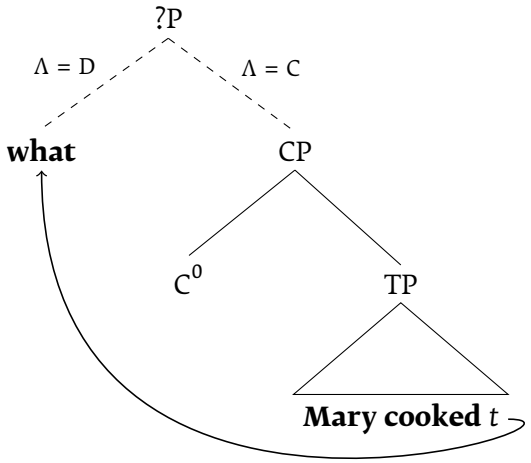
tions (Qs). The basic tenet of their analysis, which we apply to Slovenian FRs in §3.2, rests on the assumption that relative and interrogative expressions share a derivational core, namely FRs can broadly be treated as Qs in disguise.

In order to derive a conceptually necessary labelling difference between FRs and Qs, Chierchia & Caponigro (2013) adopt a loose variant of Cecchetto & Donati's (2010) approach to free relatives and labelling (see also Donati & Cecchetto 2011). According to this view, interrogative and free relative constructions differ in the label of the root, on which the final semantics hinges. Building on Chomsky (2008, 2013), *int. al.*, Cecchetto & Donati (2010) derive the logical necessity that a label be bound to a subset of the features of the items that are merged by proposing a Probing Algorithm:

(10) PROBING ALGORITHM
The label of a syntactic object $\{\alpha, \beta\}$ is the feature(s) that act(s) as a probe of the merging operation creating $\{\alpha, \beta\}$. (Cecchetto & Donati 2010: 254; Donati & Cecchetto 2011: 521)

In practical terms, (10) can derive meaningful labelling differences between an interrogative and a FR construction. Upon internal movement of the *wh*-term to the edge of CP, the matrix node contains two objects with labels C and D. Thus, the matrix can, in Cecchetto & Donati's (2010) and Donati & Cecchetto's (2011) model, be labelled by either of the two;, and it is in the labelling choice between the two that the core difference between Qs and FRs obtains. Take (11), taken from Cecchetto & Donati (2010), where the labelling algorithm at the root of the tree cannot readily determine the label (Λ) since the tree is essentially a set containing two distinctly labelled sets: $\{_{\Lambda=?}\{_{\Lambda=D}\ \text{what}\}, \{_{\Lambda=C}\ \text{CP}\}\}$.

(11) Cecchetto & Donati's (2010) labellability of Qs *v* FRs:



a. If QUESTIONS, then $\Lambda_{?P}$ = C
b. If FREE RELATIVE, then $\Lambda_{?P}$ = D

There is a theoretically presupposed idea to treating the Q/FR distinction, namely that they share a derivationally identical structure, *modulo* the final label, which is determined structure-externally, i.e. c-selectionally. Assuming a minimalist approach to syntax (Chomsky, 1995), if a head *α* merges above and combines with ?P in (11), ?P projects the categorial label [C] if *α* subcategorises for (an uninterpretable) [*u*C]; alternatively, if *α* subcategorises for (an uninterpretable) [*u*D], ?P projects the [D] label as provided by *what* in [SPEC,?P], where the uninterpretable categorial features are checked by, and only by, their interpretable counterparts (i.e., *i*C and *i*D, respectively). Assuming ?P embeds under a selecting head, then it is conceptually necessary to provide the label of ?P on a basis that does not resort to a look-ahead principle. Hence, in case of a FR, the label of the clausal complex is [D] and [C] in case of Q. This does, however, require the *α* selection to occur prior to the labelling procedure

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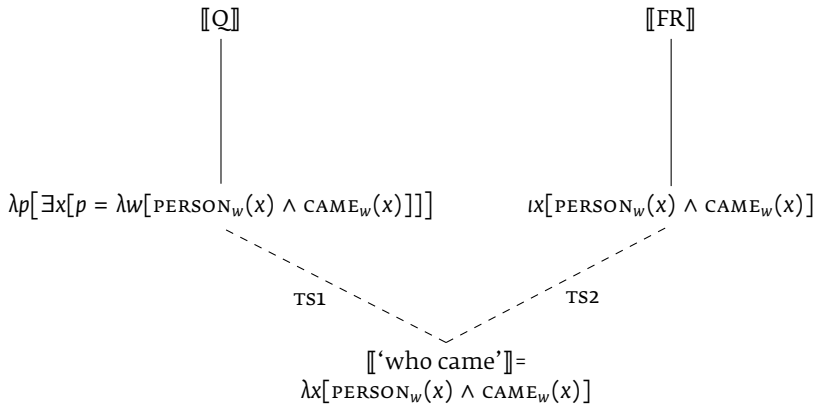
of the FR/Q CP. Assuming that labels are a requirement posed by the modular interfaces of narrow syntax, this delay in the labelling process presents no conceptual problems. Assuming, following Chomsky (2001: 13), that a phase Ph_1, in our case the clausal ?P, will be interpreted at the next relevant phase Ph_2, then ?P will be sent to the interfaces when the derivation reaches *v*P, i.e. the subsequent phase Ph_2.[6] Thus we take it that ?P is labelled in accordance, and simultaneously, with the relevant subcategorisation of the extra-phasal head.

We will, however, need not resort to Donati & Cecchetto's (2011) labelling mechanism as our derivational analysis will result in a trivial labelling evaluation, namely the one in which a maximal category (XP) comprises a minimal (X^0) and a non-minimal (X'/XP) category.

CC thus push the idea that relatives, such as *Mary ate what John cooked*, are structurally and thus interpretationally embedded interrogatives. Note that this departs from traditional analyses, both syntactically, where relativisation is completely independent from interrogativity, as well as semantically, where the traditional view maintains that clauses with *wh*-terms are traditionally seen as property- or set-denoting λ-abstracts, as per Groenendijk & Stokhof (1983) and that there exist two distinct semantic shifts of the (presumably homophonous and homonymous) denotation of the *wh*-term. One type shit TS1 in (12) lifts the *wh*-term to the level of propositions, yielding a question. The other type shifting operation TS2 in (12) lowers the type of the *wh*-term to e-level via an ι-operator, yielding a FR. The following scheme in (12), taken from Chierchia & Caponigro (2013: 2, ex. 4), shows the traditional semantic split in, and treatment of, the denotation of *wh*-terms.

(12) The traditional approach to the denotation of *wh*-abstracts (Groenendijk & Stokhof, 1983) :



6 For an independent execution of these derivational ideas on temporal structure of spell-out and phasality, see Roberts (2010) and references therein.

Such dual-shift hypothesis and the traditional view may be questioned on grounds of theoretical parsimony. What gives substance to this doubtful view that (12) may be flawed comes from empirical evidence and cross-linguistically consistent generalisation with which the view in (12) is not compatible with. The generalisation in question is known as Caponigro's generalisation (CG), which we state below in form taken from Chierchia & Caponigro (2013: 2, ex. 3).

(13) CAPONIGRO'S GENERALISATION (Caponigro, 2003, 2004)
If a language uses the *wh*-strategy to form both Qs and FRs, the *wh*-words found in FRs are always a subset of those found in Qs. Never the other way around. Never some other arbitrary relation between the two sets of *wh*-words.

CC list three languages, English, Italian and Nieves Mixtec, which confirm (13), which we restate in Tab. 3 (their Tab.1, p. 2).

		who	what	where	when	how	how much	why	what/which + NP	how much + Adj/Adv
English	*wh*-Qs	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FRs	✓/★	✓	✓	✓	✓	★	★	★	★
Italian	*wh*-Qs	✓	✓	✓	✓	✓	✓	✓	✓	✓
	FRs	✓	%	✓	✓	✓	%	★	★	★
Nieves Mixtec	*wh*-Qs	✓	✓	✓	✓	✓	N/A	✓	✓	✓
	FRs	✓	✓	✓	✓	✓	N/A	★	★	✓

TABLE 3: *Use of wh-words in* wh-*questions* (wh-Qs) *and free relatives (FRs) in English, Italian and Nieves Mixtec (Chierchia & Caponigro, 2013)*

Crucially, the facts stated in Tab. 3 are not borne out under the assumption that FRs and Qs derive from a bare property-denoting *wh*-abstract as per the traditional analysis of Groenendijk & Stokhof (1983), which we sketched in (12). What CG empirically suggests is that the relation between between Q and FR *wh*-pronouns is partial and not total as (12) would lead us to expect.[7] The theory which CC pursue, and which we

7 See Caponigro (2003, 2004), and references therein, for further empirical motivation.

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adopt here, is the one according to which FRs derive from Qs. In sketch form, we thus revise (12) and follow (14).

(14) A generalised sketch of CC's derivative approach to the denotation of Qs and FRs:

$$[\![\text{FR}]\!] \approx \iota x[\textsc{person}_w(x) \wedge \textsc{came}_w(x)]$$

$$\vdots \quad [\![\text{Q}]\!] \rightarrow [\![\text{FR}]\!]$$

$$[\![\text{Q}]\!] \approx \lambda p[\exists x[p = \lambda w[\textsc{person}_w(x) \wedge \textsc{came}_w(x)]]]$$

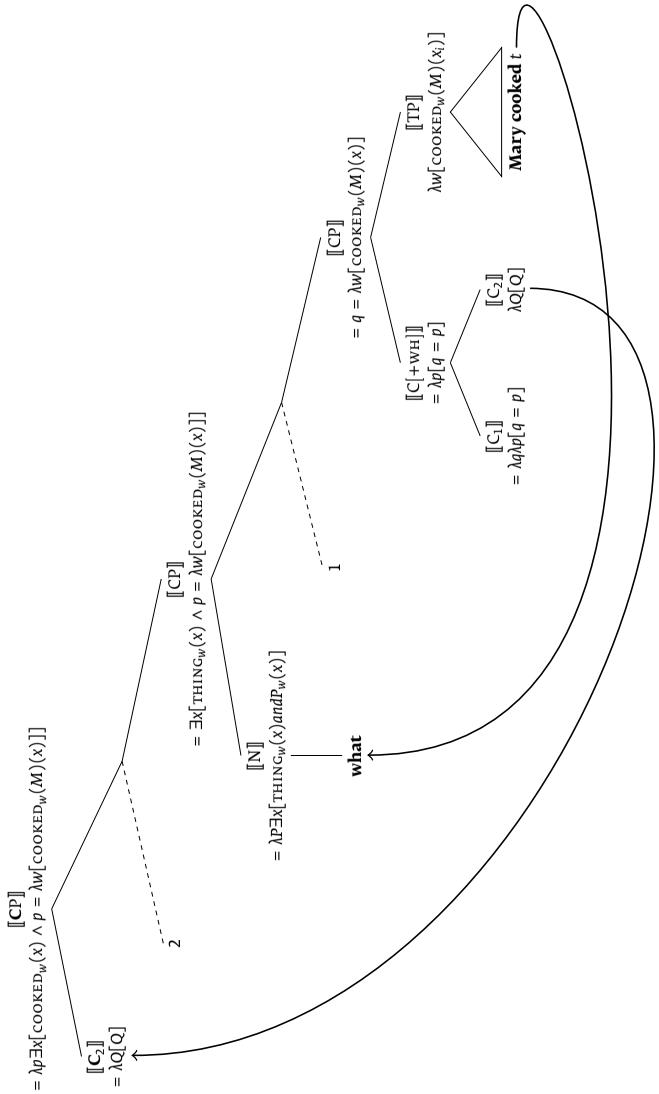
$$\vdots$$

$$[\![\text{'who came'}]\!] = \lambda x[\textsc{person}_w(x) \wedge \textsc{came}_w(x)]$$

Let us now turn to Chierchia & Caponigro's (2013) derivation of questions, which we list in (15). The composition and interpretation is standard, *modulo* the excorporation of the question-forming head C_2^0 from a clause head-complex. With respect to this mechanical move, Chierchia & Caponigro's (2013) adopt Shimada's (2007) head-unfolding model. While C_1 creates a protoquestion, as assumed by Karttunen (1977), and many others subsequently, C_2 is the element that derives the actual interrogative meaning. The common assumption is that C_2 cannot be interpreted *in situ* and so it must be merged at the root of the CP.[8]

8 Note that 1 and 2 in dashed positions of the tree represent indices indexes, *qua* movement numerators, as per the system of Heim & Kratzer (1998).

(15) The composition of *wh*-interrogatives (Chierchia & Caponigro, 2013: 4, ex. 6d):



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The derivation and interpretation of FR relies on the same building blocks, namely the excorporation of an operator from within the clause-head complex. The derivational difference between Qs and FRs, as we have observed in (11), following Cecchetto & Donati (2010), lies in the label of the CP (or ?P). Under Shimada's (2007) assumptions, the label is not determined CP-externally but rather CP-internally, by virtue of head-unfolding. For Chierchia & Caponigro (2013), the difference between Qs and FRs lies in the probing mechanism, i.e. whether a Q-forming or a FR-forming operator excorporates from the clause-head complex. Their derivation is given in (19), where the excorporating head is a nominal operator, which Chierchia & Caponigro (2013) dub D_{REL}.

D_{REL} in the system functions as a nominal operator that extracts the Topical Property (ToPr) out a clause. TP is, in turn, defined as a singleton property of a question. Informally, since every question has a short answer, ToPr extracts such a short answer. This latter definition of TP, which underlies the notion of D_{REL}, thus relies on answerhood conditions, for which Chierchia & Caponigro (2013) adopt an Answerhood operator, following Dayal (1996). We now turn to providing the definitions of the three interdependent operators, which we take as necessary ingredients for our derivation and interpretation: (i) the Answerhood operator (with a short-counterpart, Ans^s), (ii) Topical Property (ToPr) operator, and (iii) the D_{REL} operator. We now turn to explicating the three in more detail.

3.1.1 Answerhood

Questions seem to presuppose unique answers, which led many authors (see Dayal 1996 for a review) to posit an Answerhood operator, which specifies the unique maximal true proposition (answer) in the set of propositions determined by the question. Following the spirit of Dayal (1996), we can thus define an answerhood operator.

(16) Defining answerhood, in long (a) and short (b) forms:
   a. $[\![\text{Ans}]\!]^w(Q) = \iota p \in Q[p_w \wedge \forall q \in Q[q_q \longrightarrow p \subset q]]$
   b. $[\![\text{Ans}^s]\!]^w(Q) = \iota x[[\text{ToPr}]_w(x)]$

3.1.2 Topicality

Following CC, we take there to be an operator, namely ToPr, which composes with a question and, when it does, turns that question into a property that is true of the short answer to that question. Hence, the meaning of ToPr should correspond to (16b) as defined above.

(17) Defining the topicality of a question:
$[\![\text{ToPr}]\!](Q) = \iota P \forall w \forall x[P_w(x) \leftrightarrow \lambda w'[P_{w'}(x) = \text{Ans}_w(Q)]]$

3.1.3 Property conversion

The D_{REL} operator in Chierchia & Caponigro's (2013) system is a particular variant of ANS^S as defined and described above. While TOPR returns the unique property that is essentially a short answer to the question, D_{REL} yields an almost identical result, *modulo* its nominal D-like status which converts properties, which TOPRS extract from questions, into DPs in the generalised quantifier format.

(18) a. i. $[\![D_{REL}]\!]^w(Q) = [\![ANS^S]\!]^w(Q)$
ii. $[\![D_{REL}]\!]^w(Q) = \lambda P \exists x[[TOPR(Q)]_w \wedge P_w(x)]$

Therefore, since nearly[9] all questions have short answers, Chierchia & Caponigro (2013) take such short answers to be the very extractable property that D_{REL} is all about. Hence, D_{REL} denotes a, or rather the, short answer to a question (18a-i) or a type-lifted variant thereof in form of a generalised quantifier (GQ), as per (18a-ii).

For (18a-ii), however, the definition of ANS will not suffice, hence a type-lowered variant is needed in (16b). In (19), the building blocks we defined above are utilised derivationally and compositionally, yielding the structure in (19).

9 Those questions that do not allow short answers, such as *why*-questions, are predicted by the system not to allow FRs, which is confirmed by CG.

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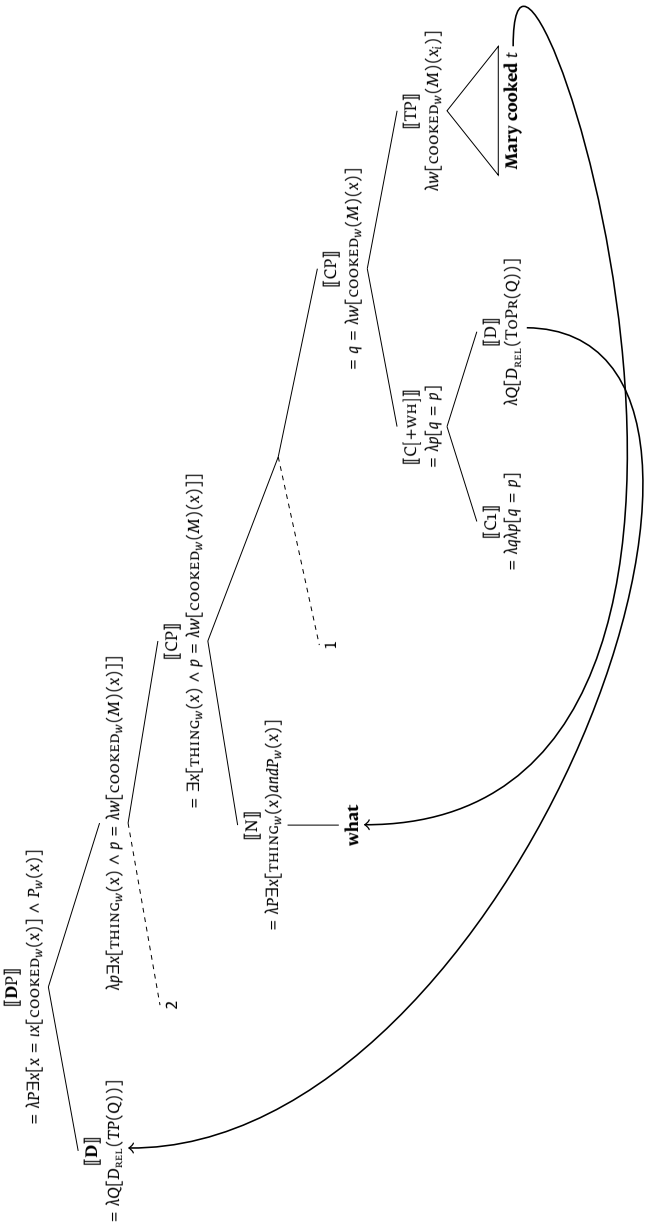
(19) The composition of free relatives (Chierchia & Caponigro, 2013: 4, ex. 6e):



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Note that head movement plays a crucial interpretational role in both Chierchia & Caponigro's (2013) and Shimada's (2007) systems (cf. also Lechner 2006 and Roberts 2010). While Chierchia & Caponigro (2013) do not discuss the syntactic nature of the input to semantic interpretation, which obtains the two differential LFs for questions and free relatives, we now turn to the syntactic input of such LFs.

Note that the interrogative core in CC's model in (19) is also derived without the excorporation of the true interrogative C^0_2. In (19), the interrogative semantics obtains solely from the functional application of the Karttunen's proto-question (PQ) operator: we revise these assumptions by taking both PQ and C^0_2 to feature actively in the composition of both FRs and Qs. Following CC, we assume C^0_2 to be interpretable only *ex situ*, hence its excorporation is sufficiently motivated.

While the syntactic origin of $D_{(REL)}$ as head-sister of C^0 is stipulation in Chierchia & Caponigro's (2013) system, we reconcile this by fine-tuning the microscopic nature of C^0. We do so by adopting Rizzi's (1997) left-peripheral micro-composition of the clause. Recall that both the ANS^S and the D_{REL} operators ontologically rest on and are built from TOPR.

It is my proposal here to locate the structural locus of TOPR in one of the two of Rizzi's (1997) Topic (TOP) heads. I propose we treat the C-complex, the structure of which, and indeed movement from which, yields the differential interpretation, in the following way. Assuming a rich microstructure of the C head, we locate the different heads within the left periphery and assign them the semantic forms which will be part of the overal meaning calculation.

Before implementing the proposal, we additionally extend our proposal by explicating in more detail Shimada's (2007) model of head movement, which CC adopt and to which we have implicitly already alluded in our derivations above. A phrase-structural spine, like the one of a CP which can be represented as in (20a), is traditionally built in a bottom-to-top fashion. Shimada (2007) convincingly argues for the derivational procedure that is primarily the inverse of (20a) and 'unfolds' to a structure like the one in (20a) through successive excorporation (20b). The specific steps of the 'unfolding' steps are given in (20b-i) through (20b-iii).[10]

We do not go into any greater detail of Shimada's (2007) proposal; the reader is instead referred to the original work (Shimada, 2007), or its application in Chierchia & Caponigro (2013) and Mitrović (2014: chap. 2).

(20) a. $\Big[_{CP}\ C^0 \Big[_{TP}\ T^0\ [_{vP}\ v^0\ [_{VP}\ V^0\ ]]]\Big]$

10 We subscript traces (t) of movement with numerals which should be read procedurally as denoting successive steps of excorporation. The terminal heads in (20b-iii) are boxed for clarity.

b. $\left[_{V}\ V^0 \left[_{v}\ v^0 \left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]\right]\right] > \left[_{CP}\ C^0 \left[_{TP}\ T^0 \left[_{vP}\ v^0 \left[_{VP}\ V^0\ \right]\right]\right]\right]$

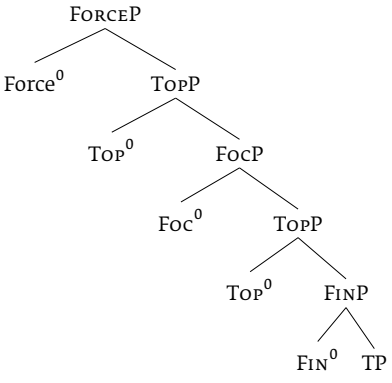
i. $\left[_{V}\ V^0 \left[_{v}\ v^0 \left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]\right]\right] \mapsto$
$\left[\left[_{v}\ v^0 \left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]\right]^1_v \left[_{V}\ V^0\ t^1_v\ \right]\right]$

ii. $\left[\left[_{v}\ v^0 \left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]\right]^1_v \left[_{V}\ V^0\ t^1_v\ \right]\right] \mapsto$
$\left[\left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]^2_T \left[\left[_{v}\ v^0\ t^2_T\ \right]^1_v \left[_{V}\ V^0\ t^1_v\ \right]\right]\right]$

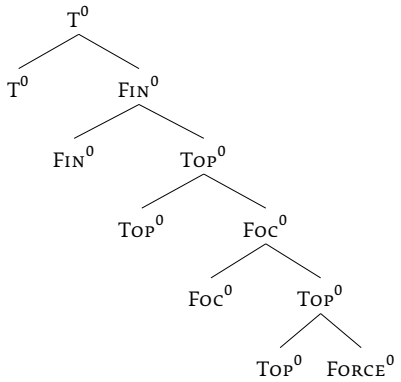
iii. $\left[\left[_{T}\ T^0 \left[_{C}\ C^0\ \right]\right]^2_T \left[\left[_{v}\ v^0\ t^2_T\ \right]^1_v \left[_{V}\ V^0\ t^1_v\ \right]\right]\right] \mapsto$
$\left[\left[_{C}\ \boxed{C^0}\ \right]^3_C \left[\left[_{T}\ \boxed{T^0}\ t^3_C\ \right]^2_T \left[\left[_{v}\ \boxed{v^0}\ t^2_T\ \right]^1_v \left[_{V}\ \boxed{V^0}\ t^1_v\ \right]\right]\right]\right]$

We take the same excorporational procedure to extend to the articulated clausal projection, as per Rizzi's original fine-grained view of the left periphery (LP), which we state in original in (21a). I propose we treat the C-complex, the structure of which, and indeed movement from which, yields the differential interpretation, in the following way. Assuming a rich micro-structure of the clausal system, we locate the different heads within the left periphery and assign them the semantic potential, which will give (15) and (19) as calculated meanings. Given below is Rizzi's original fine-grained view of the left periphery (LP) in (21a), which we translate into Shimada's (2007) model in (21b). Upon 'head unfolding' (21b), the LP takes the shape of (21a).

(21) a. Rizzi's (1997) take on the fine-tuned LP:



b. Rizzi's (1997) LP reinterpreted via Shimada (2007):



In this case, we assume the full head-set unfolds but should, say, one of Top heads or the Foc head be 'inactive' in a structure, e.g. the sentence does not contain and thus does not express a topic or a focus meaning, then two options seem available.

Under the assumption that the richness of the LP is universally present, in one form or another, then *conceptually*, an inactive head may simply make no contribution. The inactivity can be stated in terms of feature valuation: non-locally through long-distance probing of a LP head within the clausal interior (e.g. *in situ* topic or focus association); or, locally via [EPP]-like driven movement to specifiers of LP heads. If a LP head does not enter into any checking relation with an element within the clausal interior, a head can be said to be inactive.[11] Semantically, inactive heads are vacuous at LF, or are assigned identity function meaning so as to not make any meaningful contribution. We ignore the specifier slots and the recursivity notation of Topic projections for convenience, and translate IP into TP (not that it matters much for our purposes).

Adopting Shimada's (2007) model, another option makes itself available *technically*, i.e, the availability of inconsistent excorporation, which, as a reviewer notices, violates the Mirror Principle (MirPr). We thus assume the MirPr to be relaxed in the left peripheral environments, specifically in the structural context of Top^0 and Foc^0. One explanandum for the violation of MirPr is the trigger and nature of choice of excorporation of Top and Foc heads: under standard assumptions, FRs are nominal goals probed by respective c-selecting heads. A bare Q, with the categorial label [C], hence cannot, *ceteris paribus*, value the uninterpretable [*u*D] feature on the selecting verb, as in (1). The Top head, carrying an [*i*D] feature, interpretable as the D_{REL} operator, is thus triggered to excorporate.[12] As a reviewer also notes, one could avoid MirPr violations by assuming that the MirPr applies (at PF) to overt heads only.

Semantically, we propose that the ToPr is part of the meaning of the high Topic head, i.e. $[\![\text{ToPr}]\!] \in [\![\text{Top}^0]\!]$. The (potentially non-exhaustive) meaning of the Top head is taken to be D_{REL}. The reasons for height preference will become clear in the second, structural, step.

Derivationally, we are concerned with the unfolding of heads up to the last point, when the C-head complex contains the high Topic head and

11 This principle, although stipulative, seems to be a default consequence and an automatic implication within the cartographic approach relying on the necessary existence of empty categories. Methodologically at least, we assume that a head is inactive if there exists no suitable Goal for it to probe. We return to the notion of activity in §4.

12 With the adoption of Shimada's (2007) model, we also obviate the seeming violation of the "no look ahead" principle (NLA) since the embedded-matrix relation, reducible to the $\text{V}^0_{[u\text{D}]}$-$\text{CP}_{[i\text{D}]}$ selection in our scenario, is preliminarily established in the head-complex at the onset of the derivation. The argument from §3.1, concerning the phasal spell-out of a FR until *v*P is formed, applies. See Shimada (2007) for details and further justification of *prima facie* MirPr and NLA violations.

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the Force head, the former encoding for topicality (ToPr), the latter for interrogativity.

Given the conceptual need for the existence of the proto-question (PQ) operator, itself of type ⟨⟨s,t⟩t⟩, for the calculation of both Q and FR meanings, we stipulate its (syntactically silent) placement in the LP, such that FORCE^0 ⟩ TOP^0 ⟩ PQ^0 ⟩ FOC^0.[13] Although this is a stipulation, classical semantic treatments of the composition of questions assume it implicitly, hence the syntactic nature of PQ does not constitute any controversies here (or, is at least not meant to raise any such issues for our purposes). Given the type mismatch of the head-complex containing {TOP^0, FORCE^0}, one of the heads moves out of the complex and is interpreted at the root. Acting in concert with this mechanism, and determining the choice of excorporation, is the probing trigger of the selecting verb, coupled with the assumption that TOP^0 carries [D], as per our motivation.

3.2 Slovenian FRs and the *r*-incarnation of ToPr

We now show that the model of CC not only lends itself to an analysis of *r*-marked FRs in Slovenian, but also finds in the data the empirical evidence for an otherwise stipulated operator.

The explanandum of Slovenian FRs, to state it briefly, is that the *r*-morpheme is an incarnation of an overt D_{REL} operator, which we structurally locate in TOP^0 as motivated in the previous section. Note that the inactive LP heads are ignored in the derivation and are thus represented below as not featuring in the derivation. Recall that the excorporation procedure stemming from Shimada's (2007) model technically allows for two excorporation options at the stage of the unfolding of the final head-complex (i.e., {TOP^0, FORCE^0}). Firstly, for interrogative structures, a standard excorporation is assumed: at the point when the non-simplex head-complex remains, it is the FORCE^0 that excorporates to root while the TOP^0 is inactive (as signalled by the bracketed nodes), as per (22). In the case of FRs, we take, first, the TOP^0 to be active; furthermore, we TOP^0 expropriates to root after FORCE^0 has done so, as schematised in (22). Also note our partial utilisation of Cecchetto & Donati's (2010) idea, resting on the probing algorithm (10), to derive the asymmetric labelling of the two constructions, namely Λ = C for Qs and Λ = D for FRs. We depart, however, rather radically from their view, according to which the labelling choice rests on the label projecting either from the *wh*-term in [SPEC, CP] or C′. According to our view, the labelling derives and can be read off by the interfacing modules from the structural hierarchy of

13 The ⟩ symbol refers to asymmetric structural/compositional height precedence, in the typographical and conceptual sense of Adger (2003).

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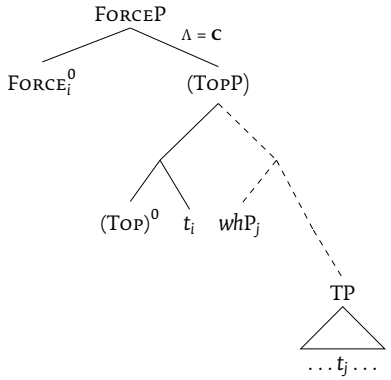
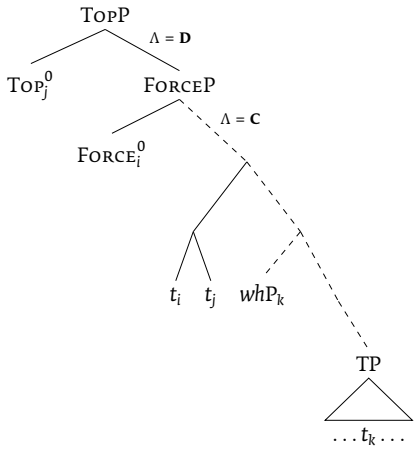
the matrix phrasal node, eliminating Cecchetto & Donati's (2010) and Chomsky's (2013) stipulation that internally moved maximal categories, viz. *wh*-terms in [Spec, CP], may in fact project.

(22) The narrow syntax of Qs:



(23) The narrow syntax of FRs:



The head adjacency follows from Shimada's (2007) model applied to Rizzi's (1997) dissection of the clause. We gain two advantages: firstly, the syntactic ontology of D_{REL} is no longer a stipulation as we are identifying it as Top^0. What is more, we relate it to an overtly realised morpheme. Secondly, Rizzi's (1997) LP provides a head-adjacent relation between (the high) Top^0 and Force^0 by virtue of Shimada's (2007) head unfolding rendition. This way, we maintain, in more syntactic terms, Chierchia & Caponigro's (2013) assumption that selection and excorporation of the second operator C_2 vs. D_{REL} is a matter of Agree relation.

Note that the *r*-marked FRs in Slovenian may *technically* lend themselves to a Kaynean analysis and treated on a par with the *-ever* morpheme in English, which Kayne (1994: 125, 154) as a CP-embedding D^0 triggering *wh*-incorporation of its sister's specifier, as schematised in (24) below.

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(24) UNDERLYINGLY.: $\left[_{\text{DP}}\ wh^0_j + \text{D}^0 \quad \left[_{\text{CP}}\ [t_j\ \text{NP}]_i\ \text{C}^0\ [\ldots t_i \ldots]\ \right]\right]$
ENGLISH: *what* - **ever**
SLOVENIAN: *ka* - **r**

We abstract away from this pursuit since the core semantic insight from CC would be lost under this analysis, especially since there is no natural pre-theoretic connection between Free Choice (FC) and relativisation expressions. Also, the structure in (24) is incompatible with Slovenian under the assumption that we treat the English *-ever* and the Slovenian *-r* morphemes on a (structural) par since Slovenian Free Choice Indefinites (FCIs) are formed using both the *-r* morpheme as well as a dedicated FC-marker *-koli*[14], akin to English *-ever*.

(25) ka -r -koli
what -REL -FC
'whatever'

The obligatory co-occurrence of the *-r* and *-koli* morphemes cannot be subsumed under (24) where both morphemes would, *prima facie* compete for the realisation of a single D head. Also note that the D_{REL} operator can essentially be treated as D^0, which derives the relative structure in the sense of Rooryck (1994), as noted in §2.1, or Kayne (1994), albeit from the 'inside', as it were.

Let us now return to the pair of Q/FR data in (3), which we repeat in (26) in order to sketch the excorporational mechanics of FRs and the resulting computation of meaning.

(26) a. **Kaj**-∅ kuha Jožica?
what-Q cooks J
'What is Jožica cooking?'
b. Francl jé, [**ka-r** je Jožica skuhala]
F is.easting **what**-REL is J cooked
'Francl is eating [what Jožica cooked]?'

We thus assume that interrogative interpretation obtains when FORCE^0 excorporates to the root of the unfolding clausal spine, where the matrix node is computed by turning a proposition, a TP, into a question, i.e. into a set of propositions.

14 As I argued elsewhere (Mitrović, 2014), the internal structure of the FC *koli*-marker is morphosyntactically non-atomic, being composed of a indeterminate *wh*-term *ko-* and an existential quantifier *-li*, and, as such, cannot be subsumed under a simplex D-structure (for comparative evidence, see Veselinović 2013). The derivational ramifications of FCFRs have not yet been explored and are thus not reported here.

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(27) An interrogative interpretation of (26a):

$$\begin{aligned}[\![(26a)]\!] &= [\![\textsc{Force}^{0}_{+\textsc{Q}}]\!]([\![\textsc{TP}]\!]) \\ &= \lambda p[p](\exists x[\textsc{thing}_w(x) \wedge p = \lambda w[\textsc{cooked}_w(m,x)]]) \\ &= \lambda p \exists x[\textsc{thing}_w(x) \wedge p = \lambda w[\textsc{cooked}_w(m,x)]]\end{aligned}$$

The relative clause is now interpreted along the same lines, *modulo* the excorporated operator. Recall that we are assuming that FRs are built from questions, hence our *r*-morpheme, taken to be $\textsc{Top}^0$ incarnating the $D_{\textsc{rel}}$ operator, will combine with a question, which is equivalent to the result of (27). Also, the Answerhood operator allows us to transit from propositions to properties.

(28) A relative interpretation of (26b):

$$\begin{aligned}[\![(26b)]\!] &= [\![\textsc{Top}^0]\!]([\![\textsc{TP}]\!]) \\ &= \lambda p[D_{\textsc{rel}}(\textsc{ToPr}(p))]\Big(\lambda p \exists x[\textsc{thing}_w(x) \wedge \\ &\quad \wedge p = \lambda w[\textsc{cooked}_w(m,x)]]\Big) \\ &= \lambda p\Big[D_{\textsc{rel}}(\textsc{ToPr}(\lambda p \exists x[\textsc{thing}_w(x) \wedge \\ &\quad \wedge p = \lambda w[\textsc{cooked}_w(m,x)]]))\Big] \\ &= \lambda P \exists x[x = \iota x[\textsc{cooked}_w(m,x)] \wedge P(x)]\end{aligned}$$

In the next section, we explore the processes involved in the other wing of the grammar, namely the Vocabulary Insertion (VI) procedure in the externalisation component so as to derive further support for our account and the predictions that are borne out.

4 THE POSTSYNTACTIC PROCESSES AND THE INTERROGATIVE/ RELATIVE ALLOMORPHY

The derivational and interpretational analysis of FRs and Qs put forth in the previous section specifies the locus in differential excorporation of the LP heads.

The architecture we assume is that of Distributed Morphology, as developed in Halle & Marantz (1994); Embick & Noyer (1999, 2001); Embick (2010) and most recently instantiated in Myler (2014). The basic observation, under the assumption of the morphemic status of *wh*-terms that

feature in FR and Q constructions, is that one involves a zero, or at least a zero-like, morpheme and that the other, namely FR construction, involves the *r*-marker. We now propose the last derivational step which will create a local configuration between the functional heads, FORCE^0 or TOP^0, which will allow us to formulate allomorphic conditions on realisation of interrogative/relative pronouns. The structures as proposed thus far (22 & 23) provide neither a local nor linearly[15] amenable set-up for the (zero) interrogative or the (*r*-) relative marking of the *wh*-pronouns, which remains structurally lower to the two functional heads. One way of deriving the local configuration of the *wh*-DP and the functional head is by successive Ā-movement of the DP to [SPEC, {FORCEP,TOPP}]. Following the tenets of Bobaljik (2012), we take the necessary configuration between the functional head and the root to be constrained to a maximal projection. We therefore adopt another analytical step, according to which the root of the *wh*-term may incorporate (Johns 2007, *int. al.*) and thus incorporates into one of the two semantically defining heads, FORCE^0 or TOP^0. The root incorporability is predictable from the current models of minimalist syntax, resting on the notion of defective goalhood to which we now briefly turn.

Rather than $\sqrt{\text{WH}}$ items being externally merged as complements to their categorising heads, namely FORCE^0 (with a verbal C feature) and FORCE^0 (with a nominal D feature, as per CC), we take incorporation to take place and, via internal merge, the complement-like configuration to be established. Following the evidence in Johns (2007), we take roots to be movable. Root movability combines well with the articulated theory of narrow-syntactic head movement founded on the notion of Defectivity as proposed by Roberts (2010), as defined in (29).

(29) PRINCIPLE OF DEFECTIVITY (PD) (Roberts, 2010)
A goal *G* is defective iff *G*'s formal features are a proper subset of those of *G*'s probe *P*.

In a defectivity system, it follows that if roots have no formal features, being mere lexical and a functional items (to-be), then their possessing an empty set of features constitutes them as inherently defective, making them probable by any functional terminal. More formally, we sketch a proof of this in (30).

(30) PROOF OF ROOT INCORPORATION (given PD):
We prove that root heads are universally movable. Given PD, heads with a subset of features defined on a probe (*P*) incorporate into *P*. A root head $\sqrt{x}$, having no formal features, has an empty set of formal features (*F*), hence $F(\sqrt{x}) = \varnothing$ is universally true. Every *P*

15 We assume that linearisation is narrow-, and not post-, syntactic, as per Kayne (1994).

	'who'	'what'	'where'	'how'	'when'
INTERROGATIVE	kdó	káj	kjé	ka.kó	kdáj
RELATIVE	kdór	kár	kjér	ká.kor	ká.dar

TABLE 4: *Sounds shifts and Q/FR alternation of* wh*-pronouns*

will universally have a non-empty F, $F(P) \neq \varnothing$, hence PD is met and root heads universally incorporate since $F(\sqrt{x}) \subset F(P)$. ■

The empirical motivation for requiring a local configuration under which morphosyntactically, and phonologically, conditioned allomorphy may apply rests on the syllabic and accentual alternations in the Q/FR-featuring *wh*-pronouns, as Tab. 4 suggests (exx. d & e). Specifically, take a *prima facie* monosyllabic *wh*-pronoun *kdáj* 'when' which, in relative form, becomes disyllabic with a shifted stress, suggesting a VI rule as the one stated in (31).

(31) a. $\sqrt{\text{WHEN}} \Leftrightarrow$ [gdáj]
b. $\sqrt{\text{WHEN}} \Leftrightarrow$ [ká.dar] / ___ [+TOP]

Given the alternation in (Tab. 4-e), we assume that the temporal *wh*-pronoun *kdáj* (when.Q) is morphemically disyllabic with the monosyllabicity and glade insertion arising allomoprhically. We thus assume, at least for *wh*-pronouns, that unstressed vowels undergo deletion and thus forming a complex onset (viz. *kdaj*), as proposed by Silva (1997: 302, ex. 7) for Faialense Portuguese.

(32) UNSTRESSED VOWEL DELETION rule:
$V_{[-\text{STRESS}]} \longrightarrow \varnothing$

The application of the rule in (32) will thus create monosyllabic strings out of disyllabic ones, lending to the view that complex onset is preferred over disyllabicity in Slovenian: i.e., a syllable preceding a heavy syllable undergoes stress assignment (viz. Tab. 4-d.,-e.) via stress retraction possibly due to stress clash avoidance. We further take the glide in coda positions of Q-*wh*-pronouns, *káj* 'what.Q' and *kdáj* 'when.Q', to be inserted in line with (33). Thus the allomorphy of *wh*-pronouns, along with [j]-insertion, is both morphosyntactically and phonologically conditioned, which we superscribe in (33) with Σ and Φ respectively.

(33) GLIDE INSERTION rule for *wh*-pronouns:
$\sqrt{\text{WH}} \Leftrightarrow$ -/j/ / $\left[\begin{matrix}[+\text{OPEN}]^{\Phi} \\ [+\text{WH/N}]^{\Sigma}\end{matrix}\right]$ ___ #

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Assuming the Top^0 triggers a stress retraction cycle, (33) does not apply and, furthermore, the unstressed vowel deletion rule is also overridden by virtue of stress retraction.[16] In summary, then, the allomorphy of *kdáj* 'when.Q' and *kadar* 'when.REL' is contextually conditioned by the two local environments rendered by the morphosyntactic component; we predicate the allomorphy rule on categorial sensitivity as per (34)

(34) a. The morphemic rule for 'when':
$\sqrt{\text{WH}} \Leftrightarrow$ /ka.dá/ / ___ [+TIME]]$_{\text{DP}}$

b. Two allomorphic rules for 'when':

i. The interrogative 'when':
/ka.dá/ ⇒ [kdáj] / ___]$_{\text{ForceP}}$

1. Glide insertion:
∅ ⇒ [j] / $\text{V}_{[+\text{OPEN}]}$ ___ #

2. Vowel deletion and mono-syllabisation:
V ⇒ ∅ / C___ C $\text{V}_{[+\text{STRESS}]}$ #

ii. The relative 'when':
/ka.dá/ ⇒ [ká.dar] / ___]$_{\text{TopP}}$

1. Relative morpheme insertion:
Top^0 ⇒ [r] / $\sqrt{\text{WH}}$___]$_{\text{TopP}}$

2. Stress retraction:
σ'σ ⇒ 'σσ / ___]$_{\text{TopP}}$

The derivation of Qs, therefore, follows the standard analysis, *modulo* Shimada's (2007) unfolding-via-excorporation. The excorporation to root of the relevant interrogative head, namely Force^0, creates the conditions under which a question interpretation obtains. As noted before, we take the $\sqrt{\text{WH}}$ to incorporate into Force^0.

Under defectivity assumptions (29), the root may well incorporate upward to any non-root terminal, which leaves us with an imprecise and unrestricted analysis. We take $\sqrt{\text{WH}}$ to be probable by the most recently active syntactic object in the derivation. In case of (35), only Force^0 qualifies as such an object hence it probes $\sqrt{\text{WH}}$.

16 Note that stress retraction, as termed here, is a mere pre-theoretical description of the phenomenon, namely the leftward shift of stress from second to initial syllable in disyllabic *wh*-terms. For a theoretical background, see Idsardi (1992), Halle & Idsardi (1995) and Halle (1997). We follow Marvin (2003: 122) in assuming that Halle's (1997) stress assignment rules apply to Slovenian.

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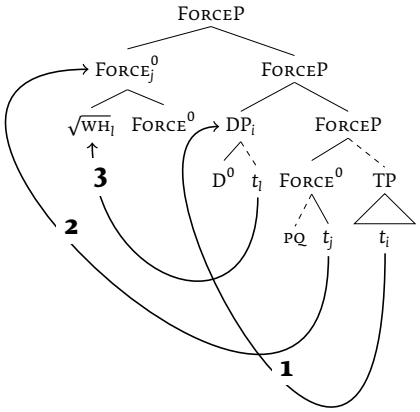
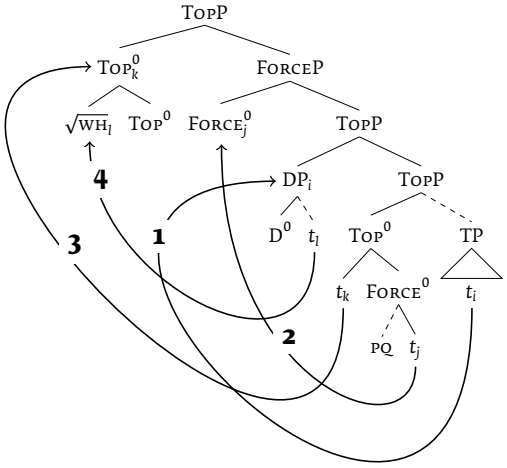
(35) Deriving Qs:



For the derivation of FRs, the Top^0 will, as per account above, be the most recently active object, triggering incorporation of $\sqrt{\text{WH}}$ and rendering a generalised derivation as given in (36) which provides a local configuration of the Top^0 and $\sqrt{\text{WH}}$.

(36) Deriving FRs:



We now exploit the local configuration created in Force^0 and Top^0: after the incorporation of the $\sqrt{\text{WH}}$, the configuration renders the conditions for VI-sensitivity within the same projection in the model of Bobaljik (2012).

(37) (32) $\longrightarrow$ OVERRIDE / $\sqrt{\text{WH}} \in$ Top^0

This derives the conditions under which locality restrictions dictate the Vocabulary Insertion (VI). Following Myler (2015a) and adopting his VI timing algorithm (38), VI will proceed from the most deeply embedded consitutent. Focussing only on the Top-complex in (36), $\sqrt{\text{WH}}$ undergoes VI prior to Top^0, as per the principle of (38).

(38) THE MYLER ALGORITHM (temporal order of vocabulary insertion; Myler 2015a)
For a pair of terminal nodes *x* and *y*:
a. If *x* is the head of a maximal projection *M* such that *M* is categorially distinct from *y* and *M* dominates *y*, then $y \triangleright x$.
b. If $y \triangleright x$, then *y* undergoes Vocabulary Insertion prior to *x*.

In monosyllabic *wh*-pronouns, stress retraction cannot apply for reasons to do with monosyllabicity (39a). A cycle of stress retraction (or more generally, stress assignment) thus applies when Top^0 is spelled out.[17] Assuming that a *wh*-pronoun like *kdaj* ('when'), with a heavy onset, in fact results from vowel deletion (32), the explanandum is allomorphically borne out in its relative form as Top^0 triggers a stress retraction cycle (39b) at the point when $\sqrt{\text{WH}}$ has undergone VI, as per (38). We notate this stress shift periphrastically with an additional VI step in (39b).

(39) The VI procedure in FRs:
a. i. $\langle \sqrt{\text{WHO}}\text{-Top}^0 \rangle$
ii. $\langle \textbf{kdo}\text{-Top}^0, \textbf{kdo-r} \rangle$
iii. $\langle \textbf{kdo-r} \rangle$
b. i. $\langle \sqrt{\text{WHEN}}\text{-Top}^0 \rangle$
ii. $\langle \textbf{kadá}\text{-Top}^0 \rangle$
iii. $\langle \textbf{kadá-r}, \textbf{ká̲da-r} \rangle$
iv. $\langle \textbf{ká̲da-r} \rangle$ (stress retr., as per 34b-ii-2)

For the procedures involved in VI of interrogative *wh*-pronouns, we take the phonologically empty character[18] of Force^0 will locally not prevent (32) from applying, in line with (37). In case of $\sqrt{\text{WHEN}}$ (40b), glide insertion (33) will additionally take place.

(40) The VI procedure in Qs:
a. i. $\langle \sqrt{\text{WHO}}\text{-Force}^0 \rangle$
ii. $\langle \textbf{kdo}\text{-Force}^0 \rangle$
iii. $\langle \textbf{kdo-}\varnothing \rangle$
b. i. $\langle \sqrt{\text{WHEN}}\text{-Force}^0 \rangle$
ii. $\langle \textbf{kadá}\text{-Force}^0 \rangle$

17 For a similar DM approach that explains stress assignment from syntactic sensitivity of particular heads, see Myler (2015b).

18 The null nature of Force^0 in combination with a *wh*-pronoun may be understood under the assumption that Slovenian is Doubly-filled COMP filter obeying language in the sense of Riemsdijk & Williams (1986), *int. al.*

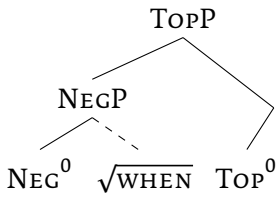
iii. ⟨**kadá-**∅⟩
iv. ⟨**kdá-**∅⟩ (vowel del., as per 32, 34b-i-2)
v. ⟨**kdáj-**∅⟩ (glide ins., as per 33, 34b-i-1)

Recall that the locality condition resting on (projectional) maximality, as adopted from the model of Bobaljik (2012), would also allow for an analysis under which the entire *wh*-DP (to be relativised) successively moves to [Spec,TopP]. This shift from head to phrase movement of the $\sqrt{\text{WH}}$ is motivated by the negative adverbs which are morphologically *wh*-relatives, like the one stated in (41). Note the accentuation pattern and obligatory monosyllabicity of the *wh*-component of the expression.

(41) a. ní-kdar (ni-kdár)
NEG-when.FR
'often'
b. * ni-kádar
NEG-when.FR
'often'

We analyse the adverb above as a complex relative QP. Sketching the structure in (42), we again appeal to Myler's algorithm (38) so as to derive the seemingly coutner-expectational accentuational pattern in (41). What Myler's algorithm predicts is that VI of $\sqrt{\text{WHEN}}$, the most deeply embedded object in (42), precedes VI of Neg^0, realised as *ni-*,[19] followed by Top^0, viz. *r*-enclisis of the entire NegP. Note that glide will not be inserted, as per (33).

(42)



a. VI entries:
i. $\text{Neg}^0 \Leftrightarrow$ [ni]
ii. $\sqrt{\text{WHEN}} \Leftrightarrow$ [ka.dá]
iii. $\text{Top}^0 \Leftrightarrow$ [r]
b. VI procedure: $\sqrt{\text{WHEN}} > \text{Neg}^0 > \text{Top}^0$
i. $\langle \text{Neg}^0\text{-}\sqrt{\text{WHEN}}\text{-Top}^0 \rangle$
ii. $\langle \text{Neg}^0\text{-}\mathbf{ka.dá}\text{-Top}^0 \rangle$

19 Other complex relatives that fall within class include quantificational time-relatives, such as, *marsikdar, rédkokdár, málokdár, velíkokdár*, 'often, seldom, rarely, often,' respectively.

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iii. ⟨**ni**-**ka.dá**-Top^0⟩
iv. ⟨**ni**-**kdá**-Top^0⟩ (vowel del., as per 32, 34b-i-2)
v. ⟨**ni**-**kdá**-**r**⟩

Note that we are, for presentational parsimony, ignoring the micro-compositional details of the VI entry for [ni] and identifying it with the formative Neg^0. As developed in Mitrović (2014), the morpheme [ni] is in fact non-simplex and comprises the negative item, or rather, a negative concord reflex, [n], and the quantifier particle [i]. Since nothing in this paper hinges on the level of detail pertaining to this aspect of the word-internal compositionality of [ni], it is simplified.

5 CONCLUDING REMARKS & OUTLOOK

This paper has entertained a novel syntactic/semantic analysis of FRs in Slovenian. Adopting Chierchia & Caponigro's (2013) analysis of relatives, which derive from interrogatives, I have proposed to treat the relativising *-r* morpheme as the overt realisation of the D_{REL} operator, which Chierchia & Caponigro (2013) posit in order to extract the Topical Properties (ToPr) out of questions.

If the view of morphosyntactically conditioned allomorphy we advocated here, including stress assignment, is on the right track, then the accentual options below may present a window into the variation and change of lexical atomicity. For speakers disallowing the stress assignment on the right syllable, we may predict the head-status of the *r*-morpheme underlying Top^0; inversely, for those speakers who allow such assignment, the *r*-comprising adverbs may have already undergone re-analysis.

Aside from the conjectural aspects of the potentials developments of the analysis given here, this paper has demonstrated that a holistic and grammatically trans-modular analysis of Slovenian FRs may well be an empirical validation of a theoretically motivated derivation and composition.

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CRM *Celovec/Rateče Manuscript*, Ms. code Sign. GV-HS 6/24, text edition as per Grafenauer (1958).

MF *Monumenta Frisingensia* (The Freising Monuments), text edition as per Ogrin (2007)

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