

The Particle *li* and the Left Periphery of Slavic Yes/No Interrogatives*

Kerstin Schwabe

Abstract

The paper focuses on the interaction of interrogativity and information structure in Slavic polarity questions where the clitic *li* may indicate interrogativity as well as focusation. We will see how the semantic category sentence force as well as the pragmatically induced information structuring are anchored syntactically and represented semantically.

Even though we will introduce two notions of *li* for methodological reasons, there is only one *li* in each language. Within the framework of Rizzi's (1997) theory of the split C-Domain, we will see that *li* only occurs in Force⁰ in Russian and Serbian/Croatian indicating that *li* is some kind of complementizer. In Bulgarian and Macedonian, on the other hand, *li* is generated more or less 'independently' from Force⁰, but forces the constituent it is adjoined to to move up to FocP. We will further show that Rizzi's theory also accounts for the compositional derivation of meaning of yes/no-interrogatives with information or identificational focus.

1. Introduction: Question markers in Slavic polarity questions

In many Slavic languages, polarity (or yes-no) questions can be marked by the enclitic *li*. This clitic indicates interrogativity and additionally, its position may indicate the information structure of the interrogative. For methodological reasons, we distinguish two versions of *li*. It can be associated with the finite verb as in (1a) or it can be adjoined to an XP, in which case this XP is focused or contains a focused element cf. (1b).¹

- (1) a. *Čitaet li on knigu?* Rus
read.3SG Q he book
'Does he read a book?'

- b. *KNIGU_F li on čitaet?*
 book Q he read.3SG
 'Is what he is reading a book?'

The distribution of *li* varies among the Slavic languages. The next paragraphs give an overview of syntactic and semantic properties of *V⁰-li* and *XP-li*.

1.1. *V⁰-li* observations

V⁰-li occurs in South Slavic languages such as Serbian/Croatian, Bulgarian, and Macedonian.²

- (2) a. *Daješ li mu ih vsaki dan?* SC
 give.2SG Q him.dat them.acc every day
 'Do you give them to him every day?'
- b. *Ne izprati li Ivan pismoto?* Bg
 neg sent.3SG Q Ivan letter.DEF
 'Hasn't Ivan sent the letter?'
- c. *Ti go dade li?* Mac
 you.DAT it.ACC gave.3SG Q
 'Did you give it to him?'

Bulgarian subordinated interrogative clauses have either the *V⁰-li* or the complementizer *dali*. According to my informants, constructions with *dali* sound more natural.

- (3) a. *Iskam da znaja čete li knjigata.* Bg
 want3SG comp know read.3SG Q book.DEF
- b. *Iskam da znaja dali čete knjigata.*
 want3SG comp know comp read.3SG book.DEF

Slovenian, a another South Slavic language, uses the particle *ali* to indicate interrogativity in main clauses – cf. (4). The particle *ali* is not a clitic and, like a conjunction, it is always sentence initial.

- (4) *Ali mi ga boš dal?* Sln
 Q me.DAT it.ACC aux.FUT.2SG give.PART
 'Will you give it to me?'

As to East Slavic languages, *V⁰-li* exists in Russian where it is optional in main clauses (cf. (1)), but obligatory in subordinated clauses – cf. (5).

- (5) a. *Ja choču znat' čítaet *(li) Petr knigu.*
 I want.1SG know.INF read.3SG Q Petr book.ACC
 'I want to know whether Petr is reading a book.'
Ja choču znat' KNIGU li Petr čítaet.
 I want.1SG know.INF book.ACC Q Petr read.3SG
 'I want to know whether it is a book that Petr is reading.'

Other East Slavic languages such as Belorussian and Ukrainian do not exhibit *li* as an interrogative marker, but take sentence initial particles such as *ci* and *čy* to indicate interrogativity.

- (6) a. *Ci ne xoladna tabe?* Br
 Q ne cold you.dat
 'Aren't you cold?'
 b. *Čy ty tam buv?* Ukr
 Q you there were
 'Were you there?'

V⁰-*li* exists rather sporadically in West Slavic languages such as Polish, Czech and Sorbian. Slovak, however, does not use *li* in either matrix or subordinated clauses. In Czech, *li* occurs only in embedded clauses. According to Toman (1996:508), it is stylistically neutral when attached to a clause-initial verb as in (7a), but an "archaic poetic" device when attached to an XP as in (7b).

- (7) a. *Nevíme, mají-li dnes medovinu.* Cz
 neg.-know.1.PL have3PL-Q today honey
 'We don't know whether they have honey today.'
 b. *#Pochyby-li máte, ...*
 doubts-Q have.2PL
 'If this are doubts you have, ...'

However, it is productive in introducing a conditional - cf. (8). Similarly to the Czech interrogative *li*, the Sorbian *li* is archaic too. And it is productive as a conditional marker.

- (8) *Máte-li pochyby, zatelefonujte na informace.*
 have.2PL-Q doubts call.IMP at information
 'If you have doubts, call information'

In Polish, we mostly find the interrogative *czy*, which is not a clitic. *Li* is archaic and non-productive - cf. Rappaport (1988:306).

The examples show that V⁰-*li* as a clitic needs a host, a constituent that can be accented. As we have seen so far, this host can be the finite verb whether it be a

full verb form or an auxiliary. If the latter cannot be accented as in the case with clitic auxiliaries, it cannot host *li*. As Franks and King (2000) point out, only the full form of the auxiliary (9b) or, if there is any, its stressed counterpart (9d) are possible.

- (9) a. **Si li čitao knjigu?* SC
 aux.2SG Q read.PART book.ACC
 'Have you read a book?'
- b. *Jesi li čitao knjigu?*
 aux.2SG Q read.PART book.ACC
 'Have you read a book?'
- c. **Je li on došao?*
 aux.3SG Q he come.PART
 'Has he come?'
- d. *JE li on došao?*
 aux.3SG Q he come.PART
 'Has he come?'

In Serbian/Croatian, *li* can cliticize onto the complementizer *da*. According to Vrzić (1996), *da* is used in non-factive subordinated clauses. (10b) shows that the complex form *da li* can co-occur with the non-factive complementizer *da*.

- (10) a. *Da li mi ga želiš kupiti?* SC
 comp Q me.DAT it.ACC want buy.INF
 'Do you want to buy it for me?'
- b. *Da li da ti dam knjigu?*
 comp Q comp you.DAT give.1SG book.ACC
 'Should I give the book to you?'

Whereas in Bulgarian and Macedonian V⁰-*li* can cliticize onto non-finite forms – cf. (11), it cannot in Serbian/Croatian – cf. (12).

- (11) a. *Pokazval li si mu ja dnes?* Bg
 show.PART Q aux.2SG him.DAT her.ACC today
 'Have you shown her to him today?' (Avgustinova 1994:34)
- b. *Si mu gi dal li parite?* Mac
 aux.2SG him.DAT them.ACC give.PART Q money.DEF
 'Have you given him the money?'
- (12) **Davao li si mu ih vsaki dan?* SC
 give.PART Q aux.2SG him.DAT them.ACC every day
 'Did you give them to him every day?'

As we will see in section 2, this difference can be explained if we assume different originating positions for *li* in Bulgarian and Macedonian on the one hand and in Serbian/Croatian on the other.

Polarity questions with V^0 -*li* are neutral with respect to focus marking. This means that they can occur either with information focus or with identificational focus as the examples given in (13) to (15) show.

- (13) a. *Čitaet_i li Petr_j [t_j t_i interesnuju_F KNIGU_F]_F?* Rus
 read.3SG Q Petr interesting book
 'Is Peter reading an interesting book?'
 b. *Čitaet_i li Petr_j [t_j t_i [[INTERESNUJU]_F knigu]]*
 read.3SG Q Petr interesting book
 'Is the book that Peter is reading interesting?'
- (14) a. *Čita_i li Ana_j [t_j t_i skupe_F KNJIGE_F]_F?* SC
 read.3SG Q Ana expensive books
 'Is Ana reading interesting books?'
 b. *Čita_i li Ana_j [t_j t_i [[SKUPE]_F knjige]]?*
 read.3SG Q Ana expensive books
 'Are the books that Ana is reading expensive?'
- (15) a. *Čete_i li Petr_j [t_j t_i stara_F KNIGA_F]_F?* Bg
 read.3SG Q Petr old book
 'Is Petr reading an old book?'
 b. *Čete_i li Petr_j [t_j t_i [STARA]_F knjigata]?*
 read.3SG Q Petr old book.DEF
 'Is the book that Petr is reading an old one?'

1.2. XP-*li* observations

In languages that allow the association of *li* with maximal projections such as Bulgarian, Macedonian, Russian, and partially Serbian/Croatian, the maximal projection is focus-marked or contains a focus-marked constituent – cf. King (1995), Bosković (2001). In (16), we find Russian and Serbian/Croatian non-complex and complex maximal projections. As to the complex DPs, the clitic *li* is always cliticized onto the first stressed phonological word of this phrase.

- (16) a. *[KNIGU]_{i, F} li on čitaet t_i?* Rus
 book.ACC Q he read.3SG
 'Is it a book that he is reading?'

- b. *[INTERESNUJU_F li knjigu]_i Petr čitaet t_i?*
 interesting Q book.ACC Peter read..3SG
 'Is the book that Petr is reading interesting?'
- (17) a. *[KNJIGE_{i, F} li Ana čita t_i?* SC
 books Q Ana read.3SGG
 'Are what Ana is reading books?'
- b. *[SKUPE_F li knjige]_i Ana čita t_i?* (Boškovič 2001)
 expensive Q books Ana read.3SG
 'Are the books that Ana is reading expensive?'

According to Boškovič (2001), XP-*li* in Serbian/Croatian is rather archaic and some speaker even only allow *li* after a wh-word – cf. (35b).

As we will see in section 2, XP-*li* in Russian and Serbian/Croatian is actually the same as V⁰-*li*. Both are generated in C⁰ or Force⁰, respectively. That XP-*li* seems to be syntactically adjoined to the XP with identificational focus is due to the hierarchical position of ForceP, where *li* is located, and to FocP, which is dominated by ForceP and hosts the XP with identificational focus in its Spec-position – cf. (74). In Russian *li* always cliticizes onto the first phonological word of the phrase that is located in SpecFoc. As we may notice in (18) and (19), this phonological word must be focus marked.

- (18) a. *[[INTERESNUJU]_F li knjigu]_i Petr čitaet t_i?* Rus
 interesting Q book.ACC Petr read.3SG
 'Is the book that Petr is reading interesting?'
- b. **[Interesn_Fju_F li KNIGU_F]_{i, F} Petr čitaet?*
 interesting Q book.ACC Petr read.3SG
 'Is it an interesting book that Peter is reading?'
- (19) a. *[[SKUPE]_F li knjige]_i Ana čita t_i?* (Boškovič 2001) SC
 expensive Q books Ana read.3SG
 'Are the books that Ana is reading expensive?'
- b. **[Skupe_F li KNJIGE_F]_{i, F} Ana čita?*
 expensive Q books Ana read.3SG
 'Are what Ana is reading expensive books?'

In Bulgarian and Macedonian, XP-*li* adjoins to a constituent that is located in SpecFoc and that is focus marked. This can either be the whole XP in SpecFoc or a focused constituent within it – cf. (20). Recall that in Russian it is always the first phonological word of the XP in SpecFoc *li* can cliticize to.

- (20) a. *[Novata_F zelena_F RIZA_F]_{i, F} li ti podari_j Krasi t_j t_i? Bg*
 new.DEF green shirt Q you.DAT gave.3SG Krasi
 'Is it the new green shirt that Krasi has given to you?'
 b. *[Novata [ZELENA]_F li riza]_{i, ti} podari_j Krasi t_j t_i?*
 new.DEF green Q shirt you.DAT gave.3SG Krasi
 'Is the new shirt that Krasi has given to you green?'
[[NOVATA]_F li zelena riza]_{i, ti} podari_j Krasi t_j t_i?
 new.DEF Q green shirt you.DAT gave.3SG Krasi
 'Is the green shirt that Krasi has given to you new?'
- (21) *[Tvojot malečok_F BRATUČED_F]_{i, F} li ke t_i čita knjigite? Mac*
 your.DEF little cousin Q fut. read.3SG books.DEF
 'Is it your little cousin who will read the books?'

1.3. *Li* in alternative questions

As to Russian, Serbian/Croatian, and Bulgarian alternative questions, the judgements differ whether *li* can occur in them or not. Neglecting the fact that *li* in Russian main clauses is marked anyway and that *XP-li* in Serbian/Croatian seems to be archaic, we can notice the following. If the alternatives are conjoined and in front of the construction as in (22a) to (28a), the occurrence of *li* is considered as very marked and superfluous. As we can notice with respect to the b-examples they are better because there is a break between the alternatives. And they are judged as wellformed if there isn't any *li* at all– cf, (22c) to (28c).

- (22) a. *??KNIGU li ili GAZETU Petr čitaet? Rus*
 book.ACC Q or newspaper.ACC Petr read.3SG
 'Is Petr reading a book or a newspaper?'
 b. *??KNIGU li • ili GAZETU Petr čitaet?*
 c. *KNIGU ili GAZETU Petr čitaet?*
- (23) a. *??STARUJU li knjigu ili NOVUJU_ Petr čitaet?*
 old Q book.ACC or new Petr read.3SG
 'Is Petr reading an old or a new book?'
 b. *??STARUJU li knjigu • ili NOVUJU_ Petr čitaet?*
 c. *STARUJU knjigu ili NOVUJU_ Petr čitaet?*
- (24) a. *??STARUJU li ili NOVUJU knjigu Petr čitaet?*
 old Q or new book ACC Petr read.3SG
 'Is Petr reading an old or a new book?'
 b. *??STARUJU li • ili NOVUJU knjigu Petr čitaet?*
 c. *STARUJU ili NOVUJU knjigu Petr čitaet?*

- (25) a. ??*STARU li knjigu ili NOVU Petar čita?* SC
 old Q book ACC or new Petar read.3SG
 'Is Petar reading an old or a new book?'
 b. ?*STARU li knjigu • ili NOVU Petar čita?*
 c. *STARU knjigu ili NOVU Petar čita?*
- (26) a. ??*STARU li ili NOVU knjigu Petar čita?*
 old Q or new book ACC Petar read.3SG
 'Is Petr reading an old or a new book?'
 b. ?*STARU li • ili NOVU knjigu Petar čita?*
 c. *STARU ili NOVU knjigu Petar čita?*
- (27) a. ??*STARA li knjiga ili NOVA _ čete Petr?* Bg
 old Q book.ACC or new read.3SG Petr
 'Is Petr reading an old or a new book?'
 b. ?*STARA li knjiga • ili NOVA _ čete Petr?*
 c. *STARA knjiga ili NOVA _ čete Petr?*
- (28) a. ??*STARA li ili NOVA knjiga čete Petr?*
 old Q or new book.ACC read.3SG Petr
 'Is Petr reading an old or a new book?'
 b. ?*STARA li • ili NOVA knjiga čete Petr?*
 c. *STARA ili NOVA knjiga čete Petr?*

If, on the other hand, the alternative is conjoined at the right edge of the initial clausal conjunct and if there is a break between both conjuncts, *li* can occur in the first conjunct in Russian and Serbian/Croatian and must appear in Bulgarian.

- (29) *STARUJU li knjigu Petr čitaet • ili NOVUJU _?* Rus
 old Q book.ACC Petr read.3SG or new
 'Is Petr reading an old or a new book?'
- (30) *STARU li knjigu Petar čita • ili NOVU _?* SC
 old Q book.ACC Petr read.3SG or new
 'Is Petar reading an old or a new book?'
- (31) a. *STARA li knjiga čete Petr • ili NOVA?* Bg
 old Q book.ACC read.3.SG Petr or new
 b. **STARA knjiga čete Petr ili NOVA?*

The constructions (29) to (31) get worse if the noun is deleted in the first conjunct and overt in the second one. The same observation can be done with respect to the b-examples in (22) to (28).

(32) ? *STARUJU li _ Petr čitaet • ili NOVUJU knjigu?* Rus
 old Q Petr read.3SG or new book.ACC
 'Is Petr reading an old or a new book?'

(33) ? *STARU li _ Petr čitaet • ili NOVU knjigu?* SC
 old Q Petr read.3SG or new book.ACC
 'Is Petar reading an old or a new book?'

(34) ? *STARA li _ čete Petr • ili NOVA knjiga?* Bg
 old Q read.3SG Petr or new book.ACC
 'Is Peter reading an old or a new book?'

We will see in section 2 that questions like (22b) to (28b) and (29) to (34), which allow *li*, are analyzed as conjoined polarity questions. Alternative interrogatives like (22c) to (28c), however, can hardly be represented as conjoined polarity questions. Their grammatically determined meaning consists of a constituent question and a set of possible answers.

1.4. Non-polarity interrogative uses of *li*

In several Slavic languages the clitic *li* may have other uses than to mark polarity questions. Thus, in Bulgarian and Serbian/Croatian, it may occur together with wh-phrases:

(35) a. *Kakvo li nameri?* Bg
 what Q found.3SG
 'What, if she has found anything, has she found?'
 b. *Sta li si mi to kupio?* SC
 what Q aux.2 SG me.DAT part buy.PART
 'What, if you have bought anything for me, have you bought?'

As Rudin (1993) points out, the wh-phrase preceding *li* is somehow focused. Scatton (1983), on the other hand, regards such questions as rhetorical. Mariana Damova (p.c. to Ellen Brandner) suggests that *li* in such contexts can be used in information questions, but overrules the existential presupposition induced by the wh-interrogative.

In Czech *li* only occurs as V^0 -*li* in embedded interrogatives (cf. (5)), but it is quite productive in noncounterfactual conditionals like (36) – cf. Franks & King (2000).

- (36) *Ztratí li volbu, musí odstoupit.* Cz
 lose Q election must step-down.INF.
 'If one loses an election, one must step down.'

The same holds for Sorbian *li*, which is archaic as an interrogative clitic, but productive as a conditional marker - cf. de Bray (1951:460).

- (37) *Dowoliće-li, wostanu na wječer.* Sor
 allow-CL stay for dinner
 'If you allow, I will stay for dinner'

To summarize the occurrences of *li* in Slavic languages, look at the following table:³

(38)

		interrogative <i>li</i>				conditional <i>li</i>
		V^0 - <i>li</i>		XP- <i>li</i>		
		matrix	subord.	matrix	subord.	
SS	Serbian/ Croatian	●	●	○ ⁴	○ ⁴	
	Bulgarian	●	●	●	●	
	Macedonian	●	●	●	●	
	Slovenian					
WS	Czech		●		○	●
	Slovak					
	Polish	○				□ ⁵
	Sorbian	○				●
ES	Russian	(●)	●	(●)	●	□ ⁶
	Ukrainian					
	Belorussian					

The interrogativity indicating *li* comes in two versions: V^0 -*li* and XP-*li*. If V^0 -*li* is associated with a verbal cluster, as it may happen in Serbian/Croatian, Bulgarian, and Macedonian, it seems to cliticize onto the first phonological word of this cluster- cf. (2). The same holds for complex XPs in Russian and Serbian/Croatian – cf. (13b) and (14b) and (15). With respect to information structure, V^0 -*li*-questions are neutral in that they can express information or identificational focus – cf. (12).

In XP-*li* -questions, the XP that is associated with *li* is focus-marked. Whereas the Russian and Serbian/Croatian XP-*li* always cliticizes onto the first stressed phonological word of this XP, the Bulgarian and Macedonian XP-*li* cliticizes onto a focus stressed phonological word of the fronted XP independently whether it is

the first word or not – cf. (16).

As to alternative interrogatives, *XP-li* cannot occur if the alternatives seem to be conjoined as in (22a) to (28a). If, on the other hand, they can be analyzed as conjoined polarity questions, *li* must occur in Bulgarian and is tolerated in Russian and Serbian/Croatian.

The questions that arise with respect to *li* are the following:

- a. What are the syntactic positions for V^0 -*li* and *XP-li*? How do they cope with the observation that V^0 -*li* cannot cliticize onto the participle in Serbian/Croatian, but can in Bulgarian and Macedonian? What is the explanation for the differing positions of *XP-li* in Bulgarian/Macedonian and in Russian?
- b. How does *li* interact with information structure and how is this interaction reflected in the semantic representation and interpretation?

Section 2 will try to find answers to the first and second questions whereas section 3 will handle the second.

2. Syntactic analysis

2.1. Preliminaries

Taking Rizzi's (1997) Split-CP-Hypothesis as a starting point and slightly modifying it, we assume that CP is split into functional categories that are relevant for the discourse anchoring of the sentence. All these categories, which form the left periphery of the sentence, may be subsumed under the label C-Domain.

(39) FrameP > ForceP > TopP > FocP >> VP

As we will see below, ForceP locates the sentence type feature. FocP renders the position for identificational focus – cf. Kiss (1998). The functional category FrameP hosts frame setting topics. Because they are not affected by the sentence type or sentence mood, FrameP dominates ForceP.

As to the information structure of yes/no interrogatives we follow Schwarzschild (1999) who assumes that F-markers are freely assigned and subject to constraints such as *FOC*, *HEADARG*, *GIVENness*, and *AVOIDF*. *FOC* demands that a F-marked phrase contains an accent if it is not immediately dominated by another F-marked node whereas *HEADARG* regulates that a head is less prominent than its internal argument. *AVOIDF* prevents F-marking more phrases than necessary

whereby *GIVENness* must not be violated. The latter constraint says that a constituent that is not F-marked must be *given*.

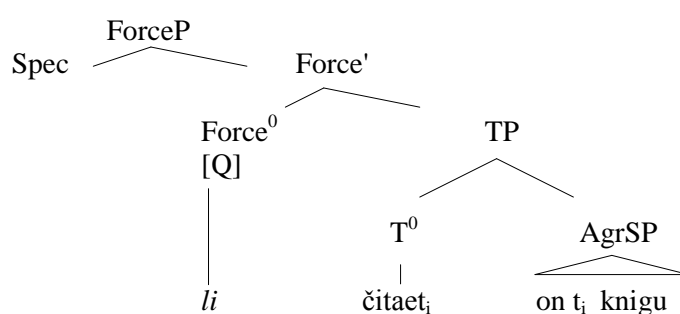
We assume that if a TP- or NP- internal constituent is marked with *Foc*, this *Foc*-feature must be checked syntactically and is interpreted semantically as 'narrow' focus. Since this feature is checked by Spec-head-agreement in *FocP*, the *Foc*-marked XP moves overtly or covertly to *SpecFocP*. If the narrowly focused constituent corresponds to a contextually given *wh*-phrase, the constituent is interpreted as identificational focus – cf. È. Kiss (1998) and Drubig (1994).

2.2. V^0 -*li*

2.2.1. The position of V^0 -*li* in Russian

In Slavic interrogative sentences, like in most other languages, *ForceP* contains the sentence type feature [Q]. This feature is licensed formally by intonation and can be licensed in Russian matrix clauses by *li*. As we already have shown (cf. (5)), *li* is obligatory in embedded interrogatives. That V^0 -*li* is located in $Force^0$ is consistent with King (1995), Junghanns (1995), and Rudnitskaya (1999), who suppose that in Russian *li* is always located in C^0 . Since *li* is a clitic, it looks for a host that can only be a phonological word. If there is not any functional category between $Force^0$ and T^0 , *li* cliticizes onto the finite verb, which is supposed to be in T^0 – cf. King (1995).

- (40) *Čitaet li on knigu?*
 read.3SG Q he book.ACC
 'Is he reading a book?'



We further suppose that cliticization is a phonological operation, that is a wrapping operation where the clitic together with its host 'A' form a clitic phrase *C*. Note that with regard to the syntactic position, the Russian *li* as well as the Slovenian *ali* and the Ukrainian *či* are located alike. They differ only with respect to their phonological status. Whereas *li* is a clitic, *ali* and *či* are phonological words.

The rule in (41b) shows that if the host is at the right side of *li*, phonological inversion (PI) must operate.

- (41) a. $\{A\}_\omega li \rightarrow \{A_\omega li\}_C$
 b. $li \{A\}_\omega \rightarrow \{A_\omega li\}_C$

According to (41b), *li* in (40) is cliticized onto the finite verb *čitaet*, which is located in T^0 .

- c. $li \{ \check{c}itaet \}_\omega \rightarrow \{ \{ \check{c}itaet \}_\omega li \}_C$

That *li* cliticizes onto V^0 in T^0 differs from King (1995), Junghanns (1995) and Rudnitskaya (1999), who assume that the verb adjoins to C^0 to serve as a host for the clitic. Contrary to them, we think that this phonologically motivated syntactic movement is not necessary since the verb in T^0 has the appropriate position for phonological inversion, which, as we will see below, is also motivated independently.

It may happen that there isn't any overt V^0 in T^0 as in (42):⁶

- (42) a. *Ne vse li ravno?* Rus
 neg. all Q indifferent
 'Doesn't it make any difference?'
Eto li ne velikaja udača?
 This Q neg. great task
 'Isn't this a great task?'
 c. *No, tol'ko li v etom sostoit problema?*
 but only Q in this consist.3SG problem.NOM.SG
 'But is it only this that is the problem?'

As the examples in (42a, b) show, Russian doesn't have an overt copula in present tense. Therefore the clitic *li* cliticizes onto the phonological word that follows it via phonological inversion. In (42c), the Russian finite verb *sostoit* as well as the identificational focus phrase *v etom* may stay in situ. Or their copy is not pronounced in T^0 or Spec-FocusP, respectively. If there is a host for *li* to the right of it like *tol'ko*, it may cliticize on it.

Whereas the cases demonstrated with (40) and (42) seem to be quite clear, the situation alters if we take the interaction of auxiliary and pronominal clitic clusters with *li* into account, which can be observed in Serbian/Croatian, Bulgarian and Macedonian.

2.2.2. *V⁰-li in Serbian/Croatian, Bulgarian, and Macedonian*

What we want to explain in this section is the interaction of the enclitic *li* with clitic clusters in Serbian/Croatian, Bulgarian, and Macedonian. We will focus especially on the differing behavior of Serbian/Croatian on the one hand and Bulgarian and Macedonian on the other with regard to the intervening of *li* between the participle and the auxiliary clitics. In order to do so, we will take the clitic analysis of Franks & King (2000) as a starting point. For them, *li* as well as pronominal and auxiliary clitics are functional heads.

Clitics as functional heads

With respect to the positions of auxiliary and pronominal clitics, two language types can be distinguished: Position 2 (P2) and verb-adjacent (VA) languages. Serbian/Croatian as well as Czech, Slovak, and Slovenian belong to the former type whereas Bulgarian and Macedonian constitute the latter.

- (43) a. *Kupio sam Vesni knjigu u utorak* SC
 buy.PART aux.1.SG Vesna.DAT book.ACC on Tuesday
 I bought Vesna a book on Tuesday.
 b. *Vesni sam kupio knjigu u utorak.*
 Vesna.DAT aux.1.SG buy.PART book.ACC on Tuesday

The examples in (43) show that the clitics are always in the second position regardless of whether they are realized with the verb as in (43a) or independent of it as in (43b).

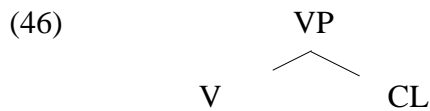
In Bulgarian and Macedonian, on the other hand, the pronominal and auxiliary clitics are always adjacent to the verb regardless of whether the latter is preceded by particular XPs as in (44a) and (44b) or not as in (45a) or (45b).

- (44) a. *Včera v gradinata Daniela mu gi dade.* Bg
 yesterday in garden.DEF Daniela him.DAT them.ACC gave
 'Yesterday in the garden Daniela gave them to him.'
 b. *Dala si mu gi.*
 give.PART aux.2SG him.DAT them.ACC
 'You gave them to him.'
- (45) a. *Si se raduvame na vnučevo.* Mac
 refl.DAT refl.ACC rejoice.3PL to grandson
 'We enjoy the grandson.'
 b. *Momčeto i go otstapilo mestoto na ženata.*
 boy.DEF her.DAT it.ACC gave seat.DEF to woman.DEF
 'The boy gave the seat to the woman.'

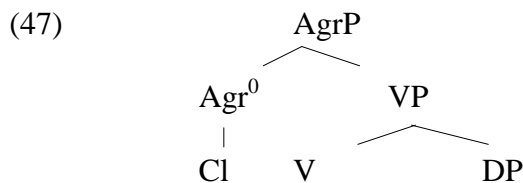
To yield a uniform analysis of the different positions of auxiliary and pronominal clitics, Franks & King argue that auxiliary and pronominal Slavic clitics are functional heads. This enables them to explain the ordering and clustering of the various clitic types. And they can handle specific problems in variation and diachronic development. Additionally they find a convincing explanation for clitic doubling and they pave the way for an explanation of the different behavior of the non-finite verb forms towards the cliticizing of *li* onto them.

According to Franks & King, P2-languages and VA languages differ with respect to the generation of the pronominal clitics. Whereas they are generated in VP in P2-languages, they enter the derivation in Agr⁰ in VA languages – cf. (46) and (47).

P2 languages



VA languages



If the pronominal clitic originates inside the VP, it is theta marked and clitic doubling is prevented. If, on the other hand, it is generated in Agr⁰ the theta position inside VP is not occupied, which enables clitic doubling – cf. (48).

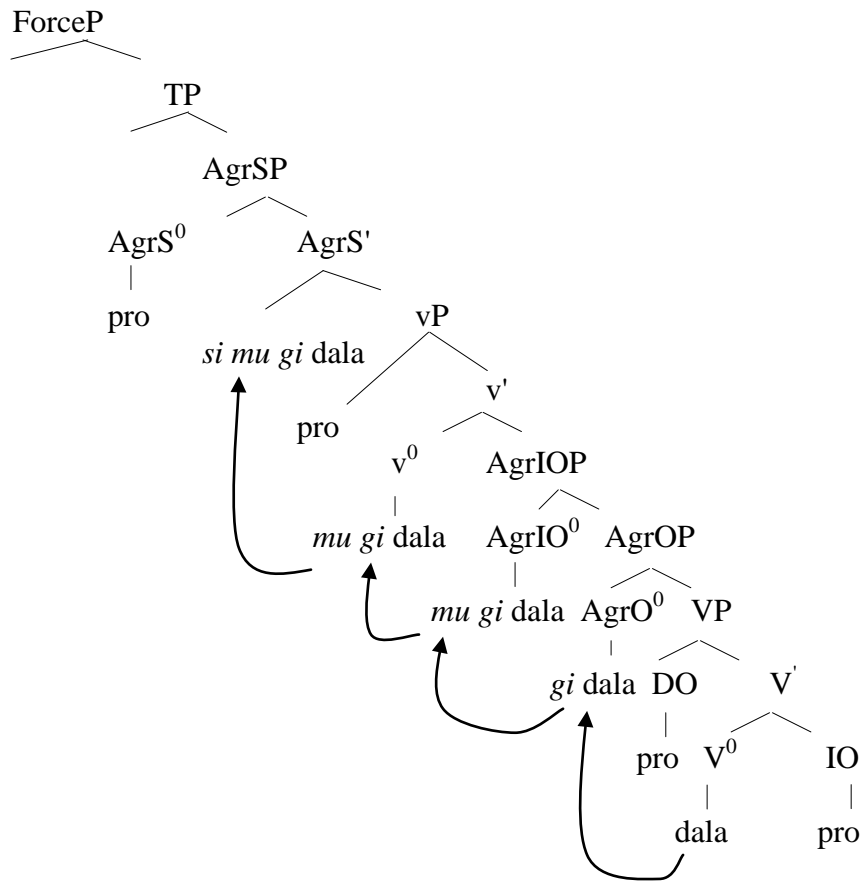
- (48) *Ivan go tasjat.* Bg
 Ivan him.ACC look for.3PL
 'They are looking for Ivan.'

As to the auxiliary clitics, P2- and VA languages do not differ. The auxiliary originates in the extended projection of the verb, this means in AgrS in both language types.

Following Franks & King, clitic clusters are formed in that clitics are in their functional head positions and the verb moves and takes them with it through successive head-adjunction. The direction of the verb adjunction of the verb to functional categories is unspecified in syntax. It can be determined by prosodic requirements as we will see below.

The following Bulgarian structure exemplifies the positions of pronominal and auxiliary clitics. As to the phrase structure of Bulgarian clauses see Franks & King.

- (49) *Dala si mu gi.* Bg
 give.PART aux.2SG him.DAT them.ACC
 'You gave them to him.'



According to Franks & King, the result of mapping adjunction configurations onto morphology or phonology is achieved by several constraints such as Pronounce Highest Copy (PHC) and Prosodic Support (PS), to name only the ones that are relevant for our purposes. PHC demands that only the highest copy should be pronounced and PS claims that only clitics that have a host should be pronounced. The examples in (50) and (51) show how these constraints work. According to PHC and since Macedonian is proclitic, the clitics there can procliticize onto the verb – cf. (50a). In contrast to Macedonian, the Serbian/Croatian and Bulgarian

clitics are enclitic and cliticize onto the phonological word at their left if there is any – cf. (50b, c).

- (50) a. *Mi go dade Vera mi-go dade ...* Mac
 me.DAT it.ACC give.3SG.PAST Vera
 'Vera gave it to me.'
- b. *Ja sam ti kupila sam-ti-kupila knjigu* SC
 I aux.1SG you.DAT buy.1SG.PAST book.ACC
 'I bought you a book.'
- c. *Vera mi go dade včera.* Bg
 Vera me.DAT it.ACC give.3SG.PAST yesterday
 'Vera gave it to me yesterday.'

If there isn't any host for the clitic at the left as in (49) or (51), respectively, PHC is overridden by PS. Then the next lower copy gets pronounced.

- (51) a. *si — mu — gi dala si mu gi dala.* Bg
 aux.2SG him.DAT them.ACC give.PART
 'You gave them to him.'
- b. *sam kupio sam kupio Vesni knjigu* SC
 aux.1.SG buy.PART Vesna.DAT book.ACC
 'I bought Vesna an interesting book on Tuesday.'

With respect to PHC, the question may arise why the highest copy of the verb need not always get pronounced as in (52).

- (52) a. *U utorak sam knjigu kupio Vesni.* SC
 On Tuesday aux.1SG book.ACC buy.PART Vesna.DAT
 'It was on Tuesday when I bought a book for Vesna.'
 (King & Franks 2000)
- Ona tvrdi da smo mu je mi predstavili* SC
 she claim.3SG C aux.3PL he.DAT she.ACC we introduce.PART
 'She claims that we introduced her to him.'

(Boškovič 2001)

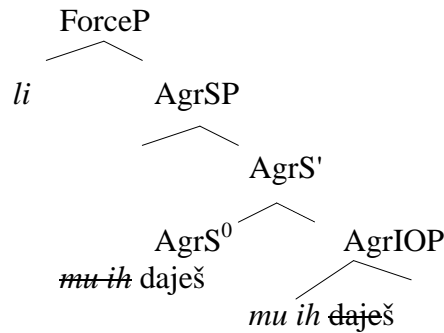
The answer could be a modification of PHC in such a way that the highest copy should only be pronounced if it is necessary for feature checking or, as we will see below, it has to serve as a host for cliticization. Since the clitic auxiliaries *sam* and *smo* express the AgrS-features and there are hosts for the clitics, the upper copy of the participle need not be pronounced.

Position of V⁰-li

It is commonly agreed on that V⁰-*li* is in Force⁰. We have seen that this is true for Russian and we will show that this is correct for Serbian/Croatian as well. The differing behavior of participles towards hosting the interrogative *li* however indicates that in Bulgarian and Macedonian, *li* is not generated in Force⁰.

To start with a Serbian/Croatian example, we realize that PS prevents spelling out the highest clitic copies since they don't have any host.

- (53) *Daješ li mu ih vscaki dan?* SC
 give.2SG Q him.DAT them.ACC every day
 'Do you give them to him every day?'



The cliticization of *li* onto the finite verb results from phonological inversion as demonstrated in (54a). The pronominal clitics cliticize onto the clitic phrase *daješ li* after PI – cf. (54b).

- (54) a. *li* {*daješ*}_ω *mu ih* → {{*daješ*}_ω *li* }_C *mu ih*
 b. {{*daješ*}_ω *li* }_C *mu ih* → {{*daješ*}_ω *li* }_C *mu ih* }_C

Let's now return to the problem that has not been solved so far: Why cliticizing of *li* onto the participle is impossible in Serbian/Croatian?

- (55) **Davao li si mu ih vscaki dan?* SC
 give.PART Q aux.2SG him.DAT them.ACC every day
 'Did you give them to him every day?'

That cliticization is possible onto the participle in principle can be seen in the following example where PS overrides PHC.

- (56) a. *Kupio sam Vesni knjigu u utorak* SC
 bought aux.1.SG Vesna.DAT book.ACC on Tuesday
 I bought Vesna an interesting book on Tuesday.
 b. ~~*sam*~~ *kupio sam kupio*

As we may see in (56b), the highest copy of the participle is pronounced since it is needed as a host for the auxiliary clitic.

But what prevents the cliticization of *li* in (55)? If we look at the left periphery of (57), which is the syntactic representation of (55), we realize that the verb cluster occurs in T^0 as well as in AgrS^0 . When mapped onto the phonological form, the highest copy of the clitic cluster is not pronounced because of PS. Thus the second copy is spelled out and cliticizes onto the participle.

- (57) a. $[\text{ForceP } li \text{ } [_{\text{TP}} \text{ ~~si mu ih~~ davao } [_{\text{AgrSP}} \text{ si mu ih } \text{ ~~davao} \dots]]]~~$
 b. $li \{ \text{davao}_{\omega} \} si \text{ mu ih} \gg li \{ \{ \text{davao} \}_{\omega} si \}_{\text{C}} mu ih$

In (57b) both the participle and the auxiliary clitic form a clitic phrase with two phonological boundaries to the left. As to *li*, we could assume that it cliticizes onto the participle. This, however, is not possible since phonological inversion cannot go across two phonological boundaries as predicted by (41b). This means it cannot crack a clitic phrase.

- c. $li \{ \{ \text{davao} \}_{\omega} si \text{ mu ih} \}_{\text{C}} \gg * \{ \{ \text{davao} \}_{\omega} li \}_{\text{C}} si \}_{\text{C}} mu ih$

The only way out for Serbian/Croatian interrogatives with analytic verb forms is cliticization of *li* onto the full form of the auxiliary as in (58a) or onto the complementizer *da* as in (58b).

- (58) a. *Jè li im ga dao?*
 aux.3SG Q them.DAT it.ACC give.PART
 'Did he give it to them ?'
 b. *Da li si mu ih davao?*
 comp Q aux.2SG him.DAT them.ACC give.PART
 'Did he give it to them ?'

If we look at (58), we might ask why *li* can intervene between the auxiliary or complementizer, respectively, and the clitic cluster. It can because the configuration participle plus auxiliary clitic is not given there. If there is an auxiliary clitic and the potential host is a participle, the former cliticizes onto its host as soon as the latter is available, this means before PI of *li*. This may be determined by morphological reasons.

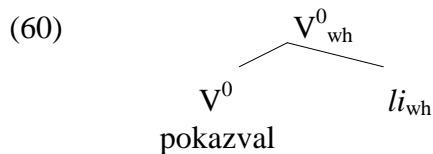
To put it in a nutshell, *li* cannot intervene between a potential host and a clitic (cluster) if the host is a participle and the cluster contains an auxiliary clitic, in any other case it can.

Having an explanation for the Serbian/Croatian case, we should now find an answer why cliticizing of *li* onto the participle is not prohibited in Bulgarian and Macedonian.

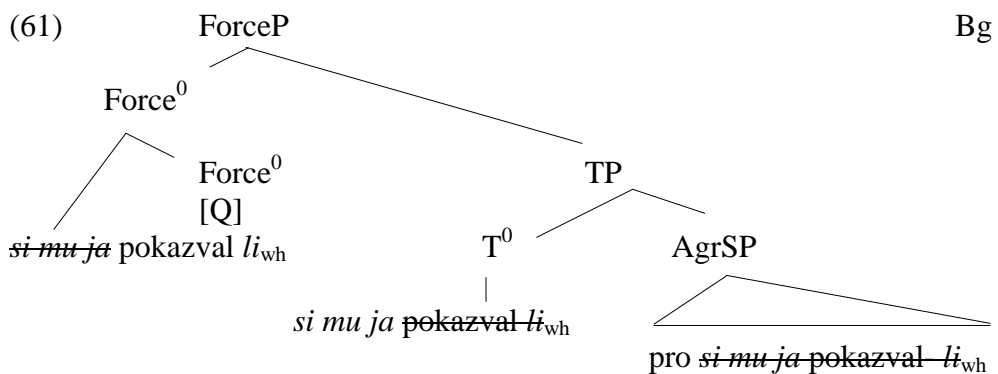
- (59) a. *Pokazval li si mu ja dnes?* Bg
 showed Q aux2SG him.DAT her.ACC today
 'Have you shown her to him today?'
 b. *Si mu gi dal li parite?* Mac
 aux.2SG him.DAT them.ACC give.PART Q money.DEF
 'Have you given him the money?'

As to Macedonian, the explanation seems to be obvious. The auxiliary clitic *si* is proclitic and left peripheral in the clitic cluster. Thus it cliticizes onto the participle independently of PI of *li*. With respect to Bulgarian, we could assume that the auxiliary clitic is not as weak as the Serbian/Croatian one so that it cliticizes onto the participle after PI of *li*. Whereas this explanation presupposes a different behavior of Bulgarian and Serbian/Croatian auxiliary clitics with respect to their cliticizing force, another approach seems to be more convincing and can be justified independently as we will see in the next section.

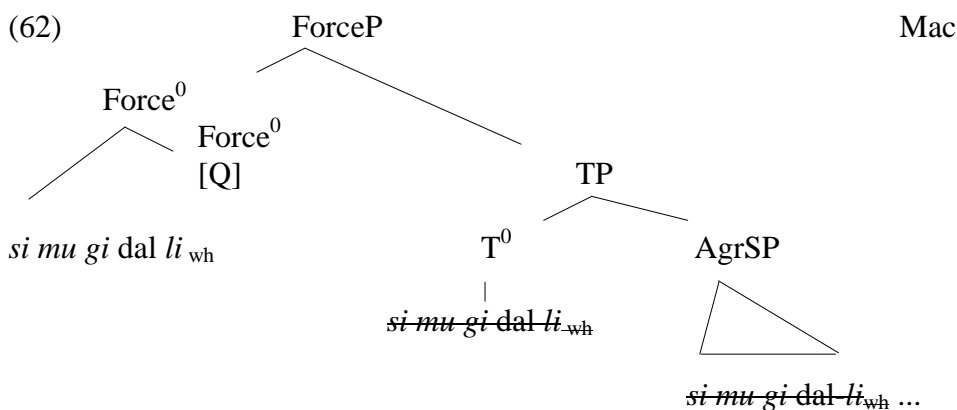
As to Bulgarian and Macedonian, we assume that V^0 -*li* can be adjoined to V^0 before the latter is merged with other categories.



Marked with the interrogative wh-feature by *li*, V^0 projects an interrogative clause. Since the wh-feature indicated by *li* has to be checked, V^0 moves to Force 0 . Let's first have a look at the Bulgarian example where PS prevents the highest copies of the auxiliary and pronominal clitics from being pronounced.



Roughly the same happens with the Macedonian example only that PHC is not overridden there by PS. The reason is, you may recall, that Macedonian auxiliary and pronominal clitics are proclitic.



If the verb is negated by the proclitic *ne* as in (63), the verb with *li* adjoins to the negation element in NegP, which dominates AgrSP.

- (63) *Ne običa li devojki?* (King 1995) Bg
 neg love.3SG Q girls
 'Doesn't he like girls?'

Contrary to our proposal, Izvorski (1993, 1994) argues that *li* is generated in Foc⁰. She bases her claim on data as given in (64) and (65), where *li* is preceded by topics and/or foci. If there is a constituent in SpecFoc, *li* cliticizes onto it - cf. (64). If not, *li* cliticizes onto an element just below it via PI (cf. (65)).

- (64) *Ivan na Maria li dade knjigata?* Bg
 Ivan to Maria Q gave book.DEF
 'Was it Maria that Ivan gave the book to?'
 [_{TopP} Ivan [_{FocP} na Maria [_F li [_{TP} dade ... knjigata ...]]]]

- (65) *Decata bjaha li na kino?*
 Children.DEF were Q at the cinema
 [_{TopP} children [_{FocP} [_{Foc'} li [_{TP} bjaha ... na kino ...]]]]

The question that arises with such an approach is why *li* does not cliticize onto the topic *decata* in (65), which would be more economical than cliticization onto V⁰ via PI. It does not cliticize onto the topic since the topic scopes out ForceP – cf. Krifka (2001a). But if the topic is not in the sentence structure, Izvorski loses her argument that *li* is in Foc⁰. These examples rather support our suggestion that *li* is adjoined to the verb before the latter is merged with other categories or to a

focused constituent as in (64) – cf. 3.3.2. A further objection against locating *li* in Foc^0 is more conceptual. What does *li* indicate in FocP , which actually separates a clause into a focus and background part?

The following examples seem to challenge the claim that V^0 -*li* in Bulgarian is always adjoined to V^0 . They could indicate that *li* is located in Force^0 and cliticizes via PI onto the phonological word *ne šte*. This is suggested by Franks & King (2000)

- (66) a. *Ne šte li ste mu go dali?* (King 1997) Bg
 neg fut. Q aux.PL him.DAT it.ACC give.PART
 'Won't you have given it to him?'
Ne ti li go dade?
 neg you.DAT Q it.ACC gave
 'Hasn't he given it to you?'

We, however, assume that *li* is adjoined to *dali* (cf. (67a)) and that there is a constraint, let's call it CLITICIZE ONTO $\omega 1$ ($\text{C}\omega 1$), which says that *li* always cliticizes onto the first phonological word of the clitic cluster that precedes V^0 . Since the clitic cluster preceding the participle *dali* consists of more than one phonological word, namely *ne šte* and *dali*, *li* is pronounced after the first phonological word of the phrase it is adjoined to via PI. To fulfill $\text{C}\omega 1$, the mapping constraint LEFT EQUALS HIGHEST (LEH) must be overridden. Franks & King (2000:341) define LEH as "Every thing else being equal, the syntactically higher head is pronounced to the left, and the syntactically lower head to the right." If LEH is overridden by $\text{C}\omega 1$, *li* is adjoined to the left of the clitic cluster as in (67b) and can cliticize via PI onto *ne šte*, which is the first phonological word of the phrase *li* is adjoined to (cf. (67c)). Since *ne* has the property of stressing the clitic following it, both, *ne* and the clitic *šte*, form the phonological word *ne šte*, which may serve as a host for *li*.

- (67) a. $[\text{v}^0 \text{ne } \text{šte} \text{ste } \text{mu } \text{go } \text{dali} [\text{v}^0 \text{li}]]$
 $[\text{v}^0 \text{li} [\text{v}^0 \{ \text{ne } \text{šte} \}_\omega \text{ste } \text{mu } \text{go } \text{dali}]]$
 $\text{li} \{ \text{ne } \text{šte} \}_\omega \text{ste } \text{mu } \text{go} \{ \text{dali} \}_\omega \square \{ \text{ne } \text{šte } \text{li} \}_\omega \text{ste } \text{mu } \text{go} \}_\omega \text{dali}$

If *li* has cliticized onto *ne šte*, the pronominal clitics *mu* and *go* have a host at their left to which they can cliticize to.

As we may see with respect to the Bulgarian and Macedonian examples (68a, b), the constraint LEH is not overridden since the clitic following *ne* is not stressed in (68a) and the clitics preceding the verb are proclitic in (68b).

- (68) a. *Ne ti go Dade li?* Bg
 neg you.DAT it.ACC gave.3SG Q
 'Hasn't he given it to you?'
- b. *Ne ti GO dade li?* Mac
 neg you.DAT it.ACC gave.3SG Q

To sum up, we have seen that the different behavior of non-finite verb forms towards the cliticization of *li* has led to the conclusion that on the one hand, in Serbian/Croatian like in Russian *li* is situated in Force⁰ and that, on the other hand, *li* is adjoined to V⁰ in Bulgarian and Macedonian before V⁰ is merged with other categories.

2.3. XP-*li*

This section will show that the claim that *li* is generated in Force⁰ in Russian and Serbian/Croatian and that it is adjoined to a constituent in Bulgarian and Macedonian can be maintained also with respect to the XP-*li*, which co-occurs with 'narrow' focus. Recall that 'narrow' focus that corresponds to a contextually given wh-phrase is seen as identificational focus.

2.3.1. XP-*li* in Russian

As to Russian yes/no interrogatives with identificational focus as (69), we assume that *li* is in ForceP where it indicates interrogativity.

- (69) *IVANA li Petr vstretit?*
 Ivan.ACC Q Petr meet.3SG
 'Is it Ivan who Peter is meeting?'

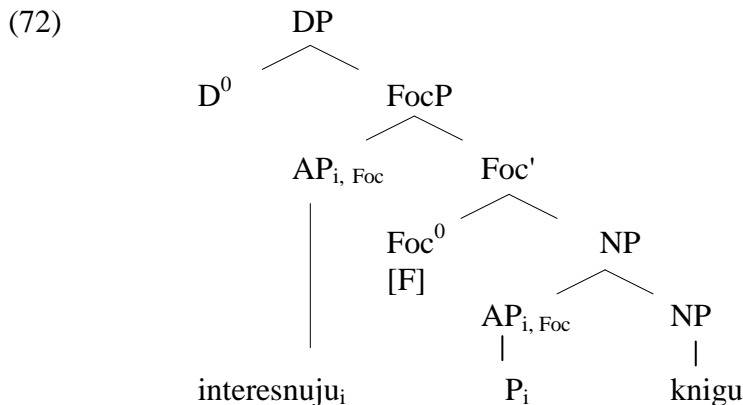
The XP that exhibits identificational focus is in SpecFoc to check its F-feature there. Since Force⁰ dominates FocP immediately, *li* is adjacent to the XP in SpecFocP and can find its host via phonological inversion.

- (70) a. [_{ForceP} *li* [_{FocP} [_{Ivana}]_i, Foc [_{TP} Petr vstretit t_i]]] Rus
 b. *li* {Ivana}_ω ... □[{Ivana}_ω *li*]_C Petr vstretit

Recall that if there is a complex DP, XP-*li* cliticizes onto the first focused phonological word.

- (71) a. *[INTERESNUJU_F li knigu]_i Petr čitaet t_i? (ili skučnuju?)* Rus
 interesting Q book.ACC Petr read.3SG (or boring)
 'Is the book that Petr is reading interesting?'
- b. **[Interesnuju_F li KNIGU_F]_b Petr čitaet t_i? (ili roman?)*
 interesting Q book.ACC Petr read.3SG (or novel)
 'Is what Petr is reading an interesting Book?'
- c. *Čitaet li Petr [interesnuju_F KNIGU_F]? (ili roman)*
 read.3SG Q Petr interesstin book.ACC (or novel)
 'Is what Petr is reading an interesting Book?'

Why does *li* only cliticize onto a phonological word that is Foc-marked and why is this Foc-marked constituent the first constituent in such a complex DP? *Li* cliticizes onto a Foc-marked constituent because this constituent is the first phonological word of the complex focus phrase. The Foc-marked constituent is the first constituent of a complex DP because complex DPs, similarly to clauses, are informationally structured. For this reason we assume a FocP inside the DP. It renders the position where the Foc-feature of the focused constituent can be checked.

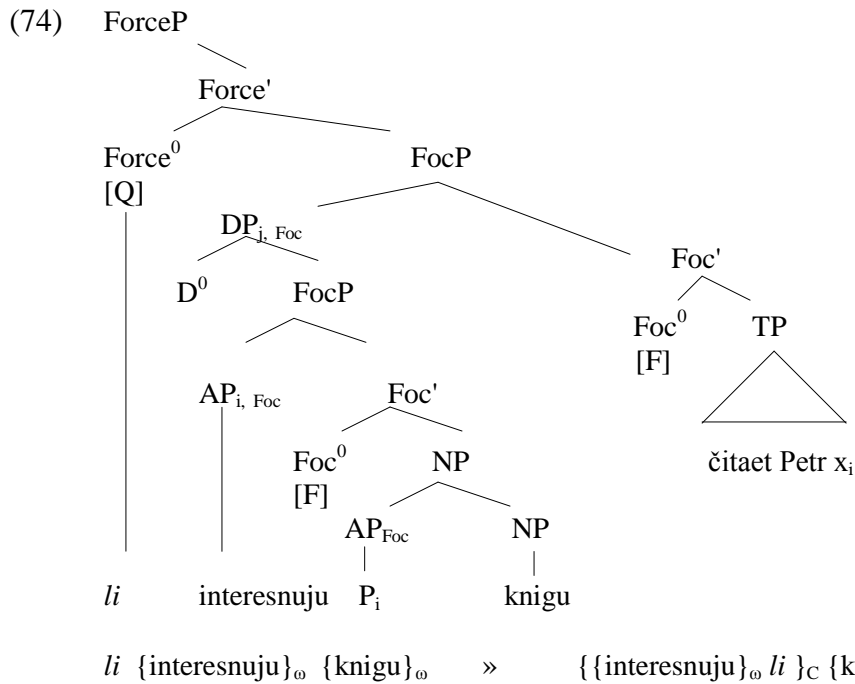


Following Schwarzschild (1999), the AP *interesnuju* is Foc-marked since it is F-marked and not dominated by an F-marked constituent. It must be F-marked because it is not *given*. Schwarzschild defines *given* as follows:

- (73) An utterance U counts as *GIVEN* iff it has a salient antecedent A, and if U is of type e, then A and U corefer; otherwise: modulo \exists -type shifting, A entails the Existential Closure of U.

The whole DP *interesnuju knigu* is Foc-marked as well since there isn't any antecedent the DP corefers with. Thus the DP is not *given* either and must be F-marked. It is Foc-marked because it is not dominated by an F-marked node.

Marked by the Foc-feature, the DP *interesnuju knigu* has to check it in SpecFoc of the clause or DP, respectively.



If there were a complex DP in SpecFoc with all constituents being focused as in in (71b) and (75), PI between *li* and the first phonological word of this phrase could not obtain – cf. (75b). The reason is that the first phonological word is integrated in a larger prosodic domain and that PI cannot obtain over two prosodic boundaries. Since *li* needs a host, the Foc-marked phrase moves to SpecFoc after Spell out so that *li* can cliticize onto the the verb *čitaet* – cf. (75c).

- (75)
- a. $[_{\text{ForceP}} li [_{\text{FocP}} [\text{interesnuju}_F \text{knigu}_F]_i]_{\text{Foc}} \text{čitaet Petr} \dots x_i .]$
 - b. $li \{ \{ \text{interesnuju} \}_\omega \text{knigu}_\omega \}_\psi \gg^* \{ \{ \{ \text{interesnuju} \}_\omega li \}_C \text{knigu}_\omega \}_\psi$
 - c. $li \{ \text{čitaet} \}_\omega \gg \{ \{ \text{čitaet} \}_\omega li \}_C$

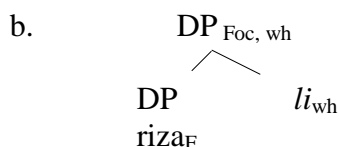
To summarize, Russian complex Foc-marked XPs are located in SpecFoc. They are there before Spell out if they are structured with respect to information structure. Since the Foc-marked constituent inside the Foc-marked DP is in the beginning of this DP and forms a single prosodic domain, *li* can cliticize onto this Foc-marked constituent. If the complex DP is not informationally structured, the whole DP constitutes a prosodic domain and *li* does not have any access to its first phonological word. Then the Foc-marked DP moves to SpecFoc after Spell out.

2.3.2. *XP-li in Bulgarian and Macedonian*

Contrary to the Russian and Serbian/Croatian *XP-li*, which is located in Force^0 , the Bulgarian and Macedonian *XP-li* is adjoined onto a constituent that is Foc-marked:

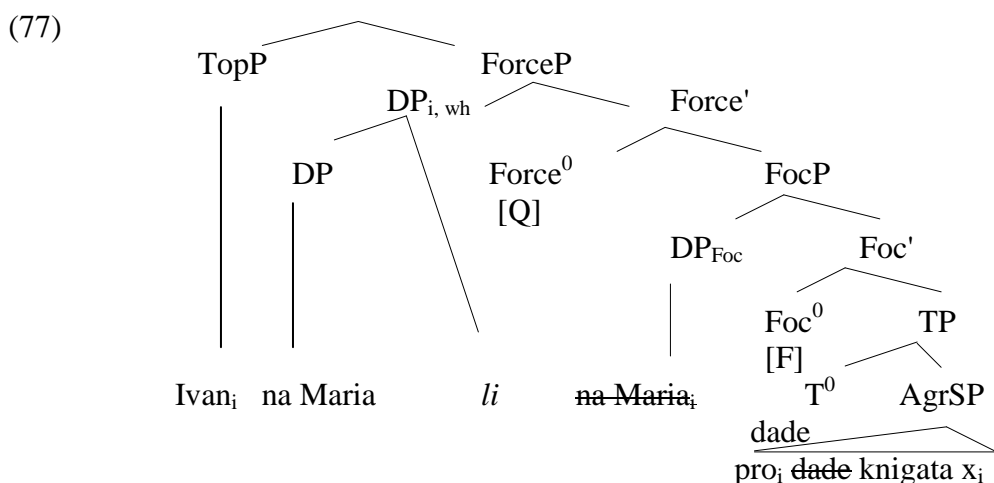
- (76) a. *RIZ*_{A_i, Foc} **li ti** *podari Krasi t_i?* Bg
 shirt Q you.DAT gave.3SG Krasi
 'Is it a shirt that Krasi has given to you?'

Like V^0 -*li* in (60) the *XP-li* contributes the *wh*-feature to the derivation as represented in (76b):



As in Russian, the Foc-marked DP is located in SpecFoc to check its Foc-feature there. This is shown in (77) where the Foc-marked DP is preceded by a topic phrase. The *wh*-feature, which is introduced into the derivation by *li*, is checked in Force^0 . The same happens with respect to *wh*-questions, only that the *wh*-feature there is introduced by a *wh*-phrase.

As Krifka (p.c.) suggests, the topic in (77) is not part of the interrogative. The reason is that it constitutes a separate speech act that scopes out of Force of the interrogative – cf. (64) and (77). The proposal that the topic is beyond Force is backed up by the fact that the focus phrase *na Maria li* has to move to SpecForce to check its *wh*-feature there.

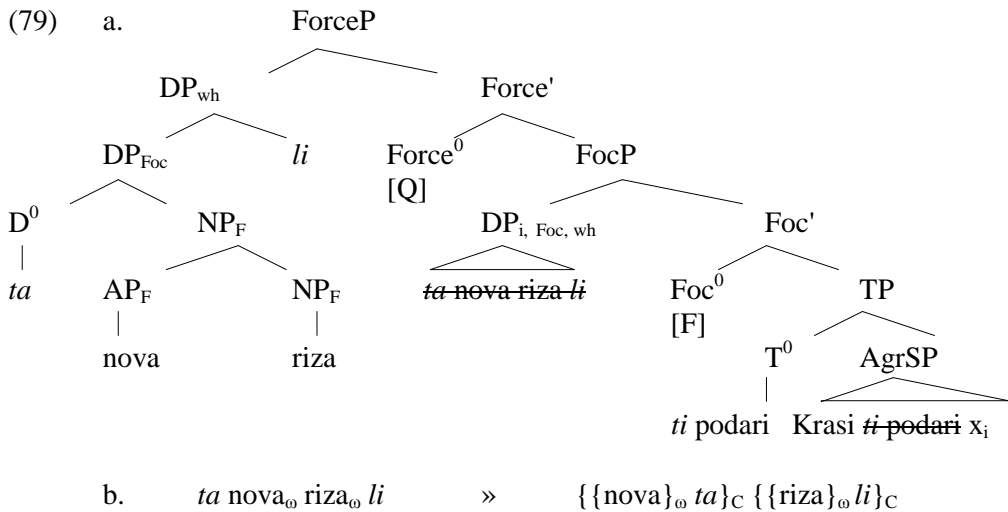


Could V^0 -*li* also adjoin to a focused V^0 ? It could, only that this focus cannot be regarded as identificational focus.

If there is a complex XP like in (78a, d) where all constituents are F-marked, this XP is not informationally structured. It is F-marked because it is not *given* and it is Foc-marked since it is not dominated by another F-marked node.

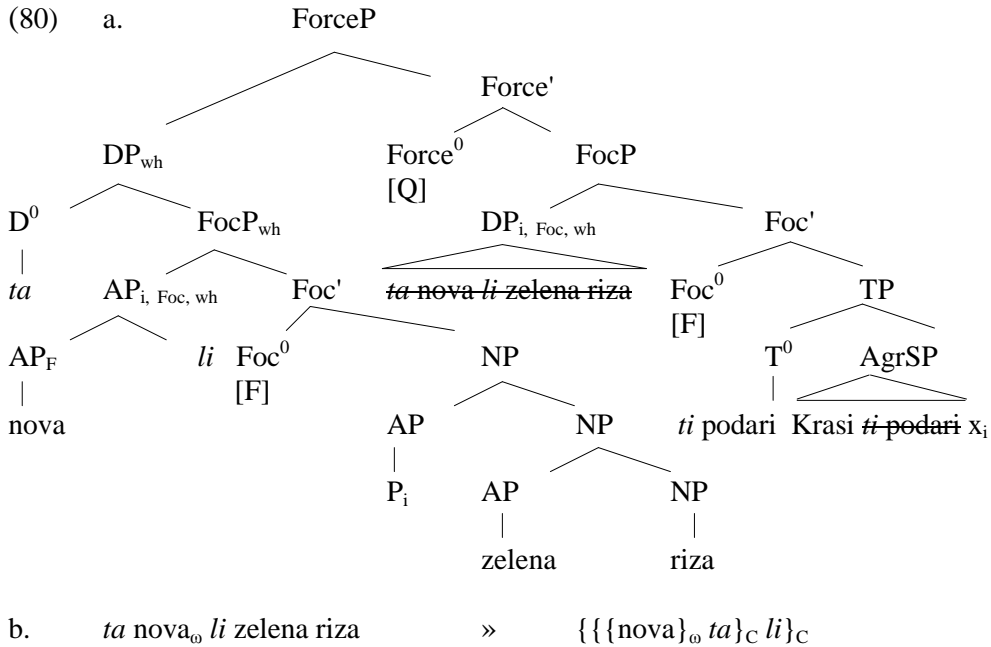
- (78) a. *[Novata_F zelena_F RIZA_F]_{i, Foc, wh} li ti podari Krasi t_i? Bg*
 new.DEF green shirt Q you.DAT gave.3SG Krasi
 'Is it the new green shirt that Krasi has given to you?'
 b. *[_{Spec-FocP} [NOVATA]_{Foc, wh} li zelena riza]_i ti podari Krasi t_i?*
 c. *[_{Spec-FocP} Novata [ZELENA]_{Foc, wh} li riza] ti podari Krasi?*
 d. *[Tvojot malečok bratučed]_{i, Foc, wh} li k_{≅e} gi čita knjigite t_i?*
 Mac
 your.DEF little cousin Q fut them.ACC read books.DEF
 'Is it your little cousin who will read the books?'

Since the complex DP is Foc-marked, it is located in SpecFoc – cf. (79). Thus, a constituent marked by *li*, presupposes that the rest of the clause is not F-marked. Since *li* contributes the *wh*-feature, the constituent marked by *li* moves up to SpecForce.



The article *ta* cliticizes via PI onto the first phonological word of the complex DP and *li* cliticizes onto the phonological word to its left.

If only one constituent is focused within the complex DP as in (78b, c) and thus Foc-marked, the Foc-feature must be checked within the complex DP. For this reason we have assumed a FocP inside the DP – cf. (74) and (80). XP-*li* is always adjoined to the constituent with the lowest Foc-feature.



As we can see in (80b), the article *ta* cliticizes onto the phonological word *nova* via PI. After that, *li* cliticizes onto the clitic phrase *nova ta*. The reason why the determiner cliticizes first is that cliticization via PI is not possible over two phonological boundaries – cf. the impossibility of PI of *li* into a clitic phrase consisting of a participle and an auxiliary in 3.2.2, example (55) and the impossibility of PI into an intonational phrase in (75) in 3.3.1.

The assumption that the DP has an internal information structure is supported by the observation that focused adjectives tend to be in the DP-initial position. Thus, sentences like (78c) are objected to by most informants and if they are accepted they are evaluated as very marked.

Our view that XP-*li* is adjoined to the lowest Foc-marked constituent of a DP in Bulgarian and Macedonian deviates from Izvorski's (1993, 1994) claim that the XP-*li* is located in Foc⁰. Apart from the objections given with respect to the examples (64) and (65), Izvorski cannot explain how *li* can cliticize onto the DP-internal constituents.

The same holds for approaches suggesting that *li* is located in Force⁰. They do not account for the fact that *li* can cliticize onto the last phonological word of a complex DP.

2.3.3. Alternative interrogatives

With respect to the examples (22) to (28), we have observed in section 1.3 that *li* cannot occur if the alternatives are conjoined. As to the syntactic representation of

alternative interrogatives, we take the Russian examples since the judgements towards the potential occurrence of *li* in Russian, Serbian/Croatian, and Bulgarian examples do not differ so much. The coordination format is taken from Wilder (1994).

- (81) a. * [_{FocP} [_{&P} [_{DP} KNIGU *li*] [_& ili [_{DP} GAZETU]]] [Petr c[_{taet}]]? Rus
 (cf. (22))
 * [_{FocP} [_{&P} [_{DP} STARUJU *li* knjigu] [_& ili [NOVUJU pro]]] [Petr c[_{taet}]]? (cf. (23))
 * [_{FocP} [_{&P} [_{DP} STARUJU *li* knjigu] [_& ili [NOVUJU knjigu]]] [Petr c[_{taet}]]? (cf. (24))

If *li* is in Force⁰ as in Russian and Serbian/Croatian, why doesn't it cliticize onto the first phonological word of the constituent located in SpecFoc? The answer could be that the conjoined alternatives form a prosodic phrase so that *li* had to overcome two prosodic boundaries to cliticize onto the adjacent phonological word. But this is impossible as we have seen above with respect to the examples (57) and (75).

- (82) *li* { {knjigu}_ω ili gazetu } ... » * { { {knjigu}_ω *li* }_C ili gazetu } ...

But presupposed this prosodic reason is correct, why are Bulgarian alternative interrogatives, where *li* does not cliticize via PI on its host, incorrect?

- (83) a. ??STARA *li* knjiga ili NOVA pro čete Petr? (cf. (27)) Bg
 {stara}_ω *li* knjiga ... → { {stara}_ω *li* }_C knjiga ...
 b. ??STARA *li* ili NOVA knjiga čete Petr? (cf. (28))
 old Q or new book.ACC read.3SG Petr
 'Is Petr reading an old or a new book?'

It seems that the reason why *li* cannot occur in alternative interrogatives, where the alternatives are conjoined in SpecFoc, is not phonological but semantic. This assumption seems to be confirmed by an observation in Chinese where alternatives in interrogatives, which are conjoined by the conjunction *huozhe* (or) cannot co-occur with the particle *ma*, which indicates a polarity interrogative – cf. (84a). If, however, alternatives are conjoined in an interrogative sentence, the conjunction *haishi* is used – cf. (84b).⁷

- (84) a. *Wo mingtian huozhe houtian qu Shanghai (*ma)*
 I tomorrow or the day after tomorrow go to Shanghai (PART)
 'Will I go to Shanghai tomorrow or the day after tomorrow.'

- b. *Ni mingtian haishi houtian qu Shanghai (*ma)?*
 you tomorrow or the day after tomorrow go to Shanghai
 'Will you go to Shanghai tomorrow or the day after tomorrow?'

The sentence particle *ma* as well the clitic *li* indicate the sentence type feature [Q] that turns, as we will see in section 3, a proposition into a function. According to Krifka (2001b), the meaning of alternative interrogatives corresponds to a pair consisting of a constituent question and a set of alternative answers. Thus the semantics of FocP cannot render the correct type t that is needed by the semantics of [Q].

If, on the other hand, the alternative is conjoined to the right of the clause that contains the other alternatives, *li* can occur in the first conjunct. In this case we have conjoined polarity interrogatives.

- (85) $[\text{ForceP } li [\text{FocP } \text{staruju knigu}_i \text{ Petr}_j \text{ c} \rightarrow \text{itaet}_k]] \text{ ili}$ Rus
 $[\text{Force } [\text{Q}] [\text{novuju pro}_i \text{ pro}_j \text{ pro}_k]]$ (cf. (29))

This is confirmed by the Bulgarian data where such interrogatives are ill-formed without *li* – cf. (31b).

2.4. Conclusion

To summarize, *li* is a clitic that

- a. is generated in Force^0 in Russian and Serbian/Croatian,
- b. is adjoined to V^0 in Bulgarian and Macedonian and forms with it a functional head, which moves through all V^0 -relevant functional heads to check its relevant features there,
 is adjoined to an XP in Bulgarian and Macedonian, which is marked by a Foc-feature and moves up to FocP to check this feature there, and
 contributes a wh-feature to the derivation either by indicating an overt wh-complementizer as in Russian and Serbian/Croatian or by indicating an overt wh-feature that is checked in Force^0 as in Bulgarian and Macedonian.

Although we have introduced two notions of *li* for methodological reasons, there is only one *li* in each respective language.

That *li* only occurs in Force^0 in Russian and Serbian/Croatian indicates that *li* is some kind of complementizer there. And indeed, that *li* in Russian becomes more and more restricted to embedded clauses seems to back up this suggestion. In Bulgarian and Macedonian, on the other hand, *li* is generated more or less

‘independently’ from Force⁰. That *li* in these languages is nearly obligatory in embedded as well as in root clauses indicates that it is not a complementizer but rather a sentence type marker like the interrogative particle *ma* in Chinese.

As we will see in the next paragraph, the syntactic analysis of Slavic yes/no interrogatives with *li* is well suitable for the compositional derivation of their meaning.

3. Semantic representation of yes/no-interrogatives and information structure

3.1. [Q]-interpretation and information focus

We interpret the [Q]-feature in Force⁰ as a functor that turns a proposition into a function. Following von Stechow & Zimmermann (1984) and Krifka (2001b), we consider a question to be a function, which results in a proposition if it is mapped onto the meaning of its answer – cf. (86). In the case of yes/no questions, the answer is a sentential operator that maps a proposition to itself in the case of 'yes', and to its complement in the case of 'no' – cf. Brandt et al. (1992).

- (86) a. A: Does Petr read a book? $\lambda f \in \{\llbracket \text{yes} \rrbracket, \llbracket \text{no} \rrbracket\} [f(\text{read}(p)(b))]$
 b. B: Yes. $\lambda p [p]$
 b. question mapped onto the answer:
 c. $\lambda f \in \{\llbracket \text{yes} \rrbracket, \llbracket \text{no} \rrbracket\} [f(\text{read}(p)(b))] (\lambda p [p]) = \text{read}(p)(b)$

With this idea of the question meaning, we can give [Q], which only represents a polarity interrogative, in Force⁰ the following semantics:

$$(87) \quad \llbracket \text{Q} \rrbracket = \lambda p \lambda f \in \{\llbracket \text{yes} \rrbracket, \llbracket \text{no} \rrbracket\} [f(p)]$$

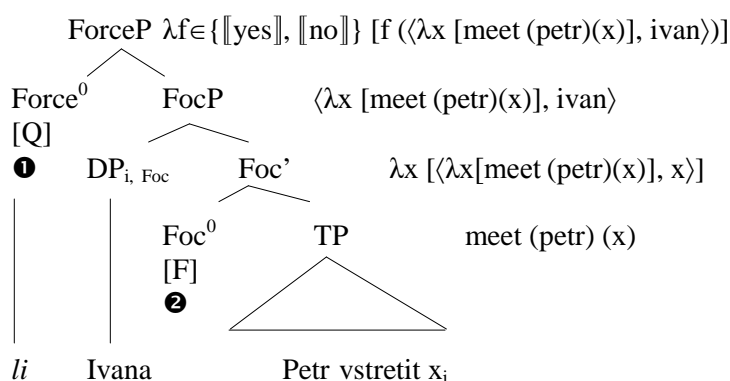
As we may notice with respect to the semantic representation of the following V⁰-*li*-interrogatives, the proposition given by the semantic representation of TP is turned into a function by the semantics of [Q]:

- (88) a. *Čitaet li Petr knigu?* Rus
 read.3SG Q Petr book.ACC
 'Is Petr reading a book?'
 b. *Čete li Petr knigata?* Bg
 read.3SG Petr book.DEF

background is represented as a property or a set of items, which is obtained in that the focused constituent quits the proposition leaving behind a variable that is bound by a lambda operator. As we can see in (89), the semantics of the focus feature [F] structures the background ($\llbracket \text{TP} \rrbracket$) into a background and a focus part, with the latter represented by a variable. The variable is bound by a lambda operator and thus related to the semantics of the focused constituent.

We can notice that the semantics of the background ($\llbracket \text{Foc}' \rrbracket$) resembles the semantics of a constituent question. If it is applied to the focused constituent or to its 'answer', respectively, a structured proposition results. At the ForceP-level, this structured proposition ($\llbracket \text{FocP} \rrbracket$) is turned into a function by the semantics of [Q] – cf. (89), which is the representation of (69).

- (89) *IVANA li Petr vstretit?*
 Ivan.ACC Q Petr meet.3SG
 'Is it Ivan who Peter is meeting?'



- a. ① = $\lambda p \lambda f \in \{\llbracket \text{yes} \rrbracket, \llbracket \text{no} \rrbracket\} [f(p)]$
 b. ② = $\lambda p \lambda x [\langle \lambda x [p, x] \rangle]$

As to the focus interpretation we follow Rooth (1992, 1996) and Krifka (1996): a focused constituent ϕ generates a set of alternatives. These alternatives are collected in the set of all alternatives (or alternative meanings) $\llbracket \phi \rrbracket^A$.⁸ This set corresponds to $\llbracket \text{Foc}' \rrbracket$ in (89), since it is derived by substituting the focused expression with a variable and binding it by the lambda-operator. This set of alternatives is further restricted to the context alternative set C by linguistic and non-linguistic material, such as explicit or implicit questions. Rooth (1996) defines the relation between the expression ϕ , its alternative meaning $\llbracket \phi \rrbracket^A$, the context alternative set C, and the ordinary meaning $\llbracket \phi \rrbracket^0$ in the following way⁹:

- (90) Where φ is a syntactic phrase and C is a syntactically covert semantic variable, $\varphi \sim C$ introduces the presupposition that C is a subset of $\llbracket \varphi \rrbracket^A$ containing $\llbracket \varphi \rrbracket^0$ and at least one other element.

To implement the relation between $\llbracket\phi\rrbracket^0$, $\llbracket\phi\rrbracket^A$, and C into the semantic representation, we adopt Rooth's definition and add to (89b) the following:

$$(91) \quad \textcircled{2} \quad = \quad \lambda p \lambda x [\langle \lambda x [p], x \rangle] \\ \text{with } \llbracket\phi\rrbracket \text{ related to C by the } \sim\text{-operator}$$

Regarding our example (89), we imagine a contextually given question as *Who is Petr meeting, Ivan or Tolja?*, which gives us the context alternative set C {Ivan, Tolja}. The question needn't be uttered, but can be accommodated. Since the speaker selects one alternative out of this set, he rejects the other one. Thus the impression emerges that identificational focus exhaustively identifies a subset of a contextually given set. This description of identificational focus has been suggested in Kiss (1998) and Rooth (1994). Returning to example (69) or (89), respectively, we can notice that Rooth's definition given in (90) is fulfilled: C is restricted by the question above to a set (92a) that is a subset of the alternative set – cf. (92b) and (92c). And the context alternative set includes the ordinary meaning of the focused constituent – cf. (92d):

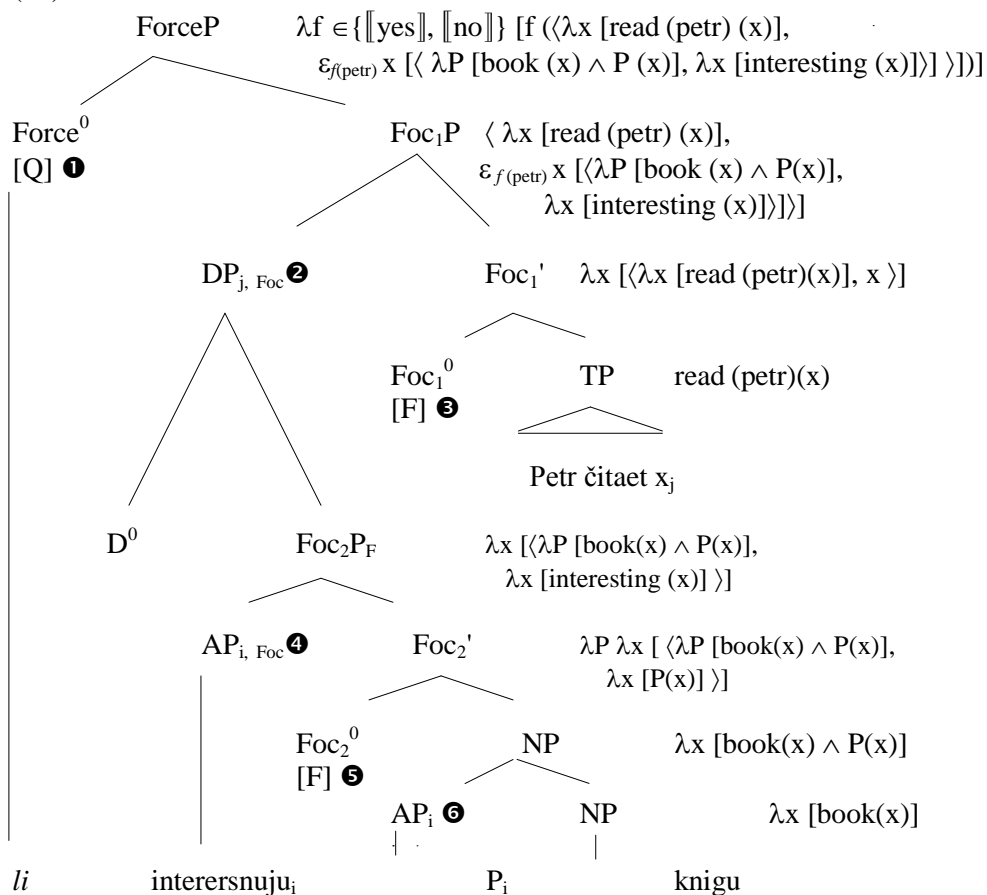
$$(92) \quad \begin{array}{llll} \text{a.} & C & = & \{\text{Ivan, Tolja}\} \\ \text{b.} & \llbracket\text{Ivan}_F\rrbracket^A & = & \{\text{Ivan, Tolja, Wolodja...}\} \\ \text{c.} & C & \subset & \llbracket\text{FocP}\rrbracket^A \\ \text{d.} & \llbracket\text{Ivan}_F\rrbracket^0 & \subset & C \end{array}$$

Finally, we should add that the semantics of the structured propositions given with $\llbracket\text{FocP}\rrbracket$ in (89) is turned into a function by the semantics of [Q] in Force⁰. If this question is applied to its answer, if the answer is a function of the proposition itself (cf. (86b)), and if the resulting structured proposition is provided with an assertive operator, a contrastive statement results.

We can now find an explanation why in Bulgarian and Macedonian, XP-*li* only adjoines to focused constituents. A focused constituent in a yes/no interrogative acts as an answer to an implicitly given constituent question. If *li* is associated with a focused XP, it is indicated that it is not clear whether the answer is the correct choice out of the context alternative set C.

Let's see how the focus interpretation of interrogatives with focused complex DPs like in (74) works.

(93)



- ❶ = $\lambda p \lambda f \in \{\llbracket \text{yes} \rrbracket, \llbracket \text{no} \rrbracket\} f(p)$
- ❷ = $\varepsilon_{f(\text{petr})} x [\langle \lambda P [\text{book}(x) \wedge P(x)], \lambda x [\text{interesting}(x)] \rangle]$
- ❸ = $\lambda p \lambda x [\langle \lambda x [p], x \rangle]$
- ❹ = $\lambda x [\text{interesting}(x)]$
- ❺ = $\lambda P [\lambda x [\langle \lambda P [\text{book}(x) \wedge P(x)], \lambda x [P(x)] \rangle]]$
- ❻ = $\lambda x [P(x)]$

Following von Heusinger (1997, 2001), the focused DP is represented as an indexed epsilon term. Since in Russian no definite and indefinite articles exist, the context decides whether the DP gets a specific or non-specific reading. We suggest that the referent of the DP *interesnaja kniga* is anchored in the discourse to 'Petr'. The anchor-relation is represented by a function f from that discourse item to a certain choice function – cf. Schwabe & von Heusinger (2001).

As to the satisfaction of condition (90), we start with the interpretation of the most internal focus feature in Foc₂P. It relates the focused AP to its alternative set

as well as to its context alternative set. Both sets are restricted by the background meaning of Foc_1P and Foc_2P . Since the context alternative set is a subset of the alternative set and since the former contains the ordinary meaning of the AP and at least one other element, condition (90) is fulfilled.

$$\begin{array}{lcl}
 (94) \quad \text{C} & = & \{\lambda x [\text{book}(x) \wedge \text{interesting}(x) \wedge \text{read}(\text{petr})(x)], \\
 & & \lambda x [\text{book}(x) \wedge \text{boring}(x) \wedge \text{read}(\text{petr})(x)]\} \\
 \llbracket \text{interesnaja} \rrbracket^{\text{A}} & = & \{\lambda x [\text{book}(x) \wedge \text{interesting}(x) \wedge \text{read}(\text{petr})(x)], \\
 & & \lambda x [\text{book}(x) \wedge \text{boring}(x) \wedge \text{read}(\text{petr})(x)], \\
 & & \lambda x [\text{book}(x) \wedge \text{awful}(x) \wedge \text{read}(\text{petr})(x)], \dots\} \\
 \text{C} & \subset & \llbracket \text{interesnaja} \rrbracket^{\text{A}} \\
 \llbracket \text{interesnaja} \rrbracket^0 & \subset & \text{C}
 \end{array}$$

4. Conclusions

The task of the paper was to explain the interaction of interrogativity and information structure in Slavic yes/no-interrogatives. These interrogatives are challenging because they exhibit lexical entities that indicate interrogativity as well as focusation. Taking Rizzi's (1997) theory of the split C-Domain as a starting point, we could present some pieces of evidence for the plausibility of functional categories like ForceP and FocP .

ForceP renders the position for a [Q]-feature that stands for interrogativity. This is indicated by the clitic *li* in Russian, Serbian/Croatian, Bulgarian, and Macedonian. Russian and Serbian/Croatian, on the one hand, and Bulgarian and Macedonian, on the other, differ with respect to the position where *li* originates.

In Russian and Serbian/Croatian, *li* is generated in Force^0 , thus indicating the [Q]-feature. Since it is a clitic, it cliticizes onto the phonological word to its right via phonological inversion. This can be the finite verb, which is in T^0 , or a phonological word if there isn't any finite verb in T^0 as it is the case with copula constructions or with certain focus particles. If there is a focus phrase in SpecFocP , this phrase renders the host for *li*. If there is a complex focus phrase, *li* can only cliticize onto the first phonological word if the latter is focused. Then, the focus phrase is informationally structured by itself. It contains a focus phrase that forms an independent phonological phrase that allows phonological inversion with *li*. If, on the other hand, the complex focus phrase is not informationally structured, there isn't any host for *li* available within the focus phrase. Then *li* cliticizes onto the finite verb in T^0 and the Foc-marked DP moves to SpecFoc after Spell out.

In Bulgarian and Macedonian, *li* is either syntactically adjoined to V^0 and forms with it a functional head that moves through all V^0 -relevant functional heads to check its relevant features there. Or it is adjoined to a focused constituent that moves up to FocP and then to ForceP to check its focus or wh-feature. In both cases, *li* cliticizes onto its host at its left.

The different origin of *li* in Russian and Serbian/Croatian on the one hand and in Bulgarian and Macedonian on the other has been backed up first by the different behavior of non-finite verb forms towards the cliticization of *li*. Since in Serbian/Croatian the auxiliary and the participle form a clitic phrase, *li*, which is located in Force⁰, cannot intervene. In Bulgarian and Macedonian this problem doesn't occur because *li* is adjoined to V⁰ before V⁰ enters into the derivation of the clause. Second, the different origin has been explained by the position of *li* with respect to complex focus phrases in Russian on the one hand and in Bulgarian and Macedonian on the other.

FocP is necessary to explain the position of focused constituents. This functional category is necessary to host either the clausal [F]-feature or the DP- or PP-internal [F]-feature. This feature attracts a focus marked constituent for that constituent to check its Foc-feature.

The semantics of the [F]-feature structures its input, which is either a proposition, the semantics of TP, or a predicate, the semantics of NP. Additionally, the semantics of the F-feature relates the ordinary meaning of the focused constituent to its alternative set as well to the context alternative set, which restricts the latter, and it introduces the presupposition that the context alternative set is a subset of the alternative set and that it contains the ordinary meaning of the focused constituent as well as at least one other element.

Whether the input for the semantics of the [Q]-feature in Force⁰, which is indicated by *li*, is a structured proposition or not, the semantics of [Q] turns the respective proposition into a function, which is assumed to be the meaning of an interrogative. If this function is applied to its answer, a proposition results again. If this proposition is provided with an assertive operator, we have an assertion. If the proposition is not structured, the assertion adds new information to the discourse. Then we speak of information focus. If the resulting proposition is structured, the assertion is used to express a contrast towards another assertion. Then we speak of identificational or contrastive focus.

We can finally state that the syntax and semantics of Slavic yes/no-interrogatives with the clitic *li* is a worthwhile topic to demonstrate the interface of syntax, prosody and semantics that they are a challenge for further discussion.

Thus it would be interesting to investigate whether Brandner's (i.t.v.) idea of complex heads that realize the features for Tense and Force could be adopted for the Bulgarian and Macedonian V⁰-*li*.

Notes

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Bold-faced words are clitics.

The data in this overview are mainly from Franks & King (2000).

● indicates productive *li*, ○ stands for archaic *li*, □ symbolizes *li* in word formation and brackets indicate optionality.

XP-*li* occurs in some Serbian/Croatian dialects.

According to Franks & King (2000:153) *li* occurs also in colloquial *jes zli* and bookish *jezeli*.

In Russian the conditional clause has as complementizer *esli*, which consists of a reduced form of *est'* (to be) and the clitic *li*.

The data in (32) stem from the Uppsala corpus.

This suggestion stems from Gasde (p.c.).

Rooth (1992, 1996) uses $\llbracket \varphi_F \rrbracket^f$ for the focal alternative value and $\llbracket \varphi_F \rrbracket^0$ for the ordinary meaning. Following Krifka (1996) we use $\llbracket \varphi_F \rrbracket^A$ for the alternative meaning and $\llbracket \varphi_F \rrbracket^0$ for the ordinary meaning. In this way, no confusion concerning the use of *f* or *F* as a syntactic feature for focus or as a kind of denotation can arise.

Rooth uses the \sim -operator as the translation of the focus. This operator introduces C as a variable for the context alternative set.

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