

Mirative and reflective non-canonical content questions in South Slavic

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ABSTRACT

This paper presents a South Slavic non-canonical content question construction that involves the particle *li* (standardly used in polar questions). While the construction is morphologically identical across South Slavic, two readings with different semantic and pragmatic properties are identified here: a **MIRATIVE** one, expressing surprise and emotional attitude, and a **REFLECTIVE** one, expressing an expectation of addressee ignorance. The formal interface account combines the standard semantic treatment of *li* as a focus particle and recent developments in the syntactic expression of speaker and addressee.

KEYWORDS non-canonical questions · South Slavic · non-intrusive questions · mirativity · reflective questions

1 INTRODUCTION

This paper presents a South Slavic construction, descriptively labelled *WH+li*, which combines the morphological elements of standard polar questions (the focus/question particle *li*) and standard content questions (*WH*); the resulting string is neither a canonical polar question, nor a canonical *WH*-question, nor does it squarely fit with any of the well-known types of non-canonical questions, such as biased, tag, or rhetorical questions. The meaning falls into different semantic profiles, which I identify as a **MIRATIVE** reading in the sense of DeLancey (1997) (roughly, expressing surprise) and a **REFLECTIVE** reading in the sense of Giannakidou & Mari (2019) (roughly, expressing ‘I wonder...’), as defined in §2.

The languages surveyed are Bosnian, Croatian, Serbian, Bulgarian, and Macedonian.¹ Bulgarian, Serbian, and Bosnian have only the reflective reading, and the rest of the languages allow both readings. The data representing the two phenomena are mainly from Croatian and Bulgarian.

Capitalizing on the standard treatment of (South Slavic) *li* as a focus particle and following a line of work according to which the syntactic roles of the speaker and addressee are represented in the syntax, in §3 I develop a focus-based syntax-semantics account for each reading: the mirative reading is achieved when *li* is interpreted in a syntactic layer expressing the speaker’s emotional attitude, while in the reflective one *li* is interpreted in a layer expressing the expectations of the speaker towards the addressee. In §4 I explore the implications of the findings for the broader cross-linguistic landscape beyond Slavic.

2 THE PHENOMENON

In a number of South Slavic languages, standard (information seeking) polar questions are formed with the particle *li*, example (1), and standard content questions are formed with a *Wh*-phrase and without *li*, (2):

¹The data were obtained from consultations with individual native speakers of the respective languages. Interspeaker or dialectal variation is outside the scope of this paper.

- (1) Standard polar question:
- a. Pada **li** kiša? (Bosnian, Croatian)
fall.3SG li rain
'Is it raining?'
 - b. {Je-I / Da **li**} pada kiša? (Serbian)
is-li da li fall.3SG rain
'Is it raining?'
 - c. **Dali** vrne? (Macedonian)
da+li rain
'Is it raining?'
 - d. Vali **li**? (Bulgarian)
rain.3SG li
'Is it raining?'
- (2) Standard WH-question:
- a. Što/Šta je Ivan kupio? (Bosnian, Croatian, Serbian)
what is Ivan buy.PP
'What did Ivan buy?'
 - b. Što kupil Ivan? (Macedonian)
what buy.PP Ivan
'What did Ivan buy?'
 - c. Kakvo e kupil Ivan? (Bulgarian)
what is buy.PP Ivan
'What did Ivan buy?'

The phenomenon of interest in this paper is that in South Slavic, *li* can optionally be used in a WH-question, resulting in a non-canonical meaning.²

- (3) Non-standard, WH+*li* questions:
- a. Što/Šta **li** je Ivan kupio? (Bosnian, Croatian, Serbian)
what li is Ivan buy.PP
'What+*li* did Ivan buy?'
 - b. Što **li** kupil Ivan? (Macedonian)
what li buy.PP Ivan
'What+*li* did Ivan buy?'
 - c. Kakvo **li** e kupil Ivan? (Bulgarian)
what li is buy.PP Ivan
'What+*li* did Ivan buy?'

The construction WH+*li* has been mentioned in the syntax literature, e.g. Bošković (2001), Rudin (1994, 1997), Franks (2006), but there is no detailed description of its meaning or its use in context – within a language or in cross-linguistic comparison. This paper investigates the semantic microvariation of the construction, identifying two types of meaning with different properties (the rest of this section), provides an interface

²This seems to be a Balkanism – other Slavic languages, such as Russian, Belarussian, Ukrainian, Polish, and Czech, do not allow WH+*li*, cf. the data set below from Russian:

- (i) a. Kupila **li** Maša knigu? (Russian)
bought li Maša book.ACC
'Did Masha buy a book?'
- b. **Kakuju** knigu mne podariš?
which book me.DAT give.2SG
'Which book will you give me?'
- c. ***Kakuju li** knigu mne podariš?
which+li book me.DAT give.2SG
Intended: ??? n/a

account for it (§3), and concludes by discussing the broader theoretical significance of the findings for similar phenomena beyond Slavic (§4).

2.1 MIRATIVE WH+LI

What I call mirative WH+*li* is the reading most often mentioned in the syntax literature on BCS (Bosnian/Croatian/Serbian): Bošković (2001) calls it ‘emphatic questions’ and translates it roughly with ‘on Earth’ (p. 26) (also in Franks 2006); Bošković (2002), fn. 10 mentions that WH+*li* are ‘not a “neutral” question semantically’), but there is no dedicated discussion of the meaning. Here we delve deeper into its use.

- (4) Što li je Ivan kupio? (Croatian)
 what li AUX.3SG Ivan bought
 ‘What+*li* did Ivan buy?!?’

One important property of this reading is that it expresses a counterexpectation to the question’s presupposition: the sentence in (4) is used when the speaker had expected Ivan to not buy anything. This is confirmed by the infelicity of the next example – a use that already demonstrates a difference with standard questions, which would be felicitous in this context.

- (5) I expected Ivan to buy something. #(4)

The second component of mirative WH+*li* is evaluative: it conveys a strong emotion, which can be positive or negative. Sentence (4) can be uttered in either context below.

- (6) Negative context:
 I had told Ivan to not buy anything for a while because we’re saving money. Then our friend tells me that she saw him at the mall carrying large shopping bags.
- (7) Positive context:
 Ivan was tasked with buying a joint gift for a friend’s birthday, but he is forgetful and unreliable. To my relief, he arrives bringing something wrapped.

The emotive component is further evidenced by the fact that mirative WH+*li* can co-occur with the lexical expression ‘the hell’ resulting in a semantic concord reading in the generalized sense of Geurts & Huitink (2006), Huitink (2012), van Wijnbergen-Huitink (2020):³ the two elements contribute roughly the same meaning (or at least similar enough that they emphasize each other, rather than, say, scoping over each other), and removing one of them does not change the meaning of the utterance significantly. (Recall that Bošković (2001) translates the WH+*li* construction in BCS as ‘on Earth’).⁴

- (8) Što li e dovraga Ivan kupio? (Croatian)
 what li AUX hell Ivan buy.PP
 ‘What the hell did Ivan buy?!’

I call this reading of WH+*li* mirative because surprise (counterexpectation) and evaluativity are the two hallmark properties of mirative expressions crosslinguistically (DeLancey 1997, Aikhenvald 2012).⁵ For example, the following mirative utterances from Turkish

³While the above cited works are on ‘modal concord’, i.e. the co-occurrence of a modal verb and a modal adverb (e.g. ‘you may possibly have read...’ or ‘all employees must necessarily...’), called also ‘modal spread’ in Giannakidou & Mari (2008), or a modal attitude verb and a modal in the embedded clause (called also ‘harmonic’ by Lyons 1977, see recently Kratzer 2016), concord phenomena more broadly can also occur between other elements, such as evidentials, cf. Schenner (2010).

⁴That the meaning is roughly the same as a general property of concord is not trivial and remains to be seriously explored across constructions, see discussion and alternative views by Huitink (2012), Anand & Brasoveanu (2010), and Giannakidou & Mari (2008).

⁵‘Mirativity’ is a somewhat controversial term, as there is an older term, ‘admirativity’ – see an overview of the two terms in Friedman (2012). Since ‘mirativity’ is the one widely used in formal linguistics, I stick with it

express surprise and are associated with either positive or negative attitude (compliments and sarcasm).

- (9) a. Kız-ınız çok iyi piyano çal-ıyor-**muş** (Turkish)
 daughter-2PL.POSS very good piano play-PRES-**mİş**
 ‘Your daughter plays [-mİş] the piano very well’ (compliment)
 b. Her gün koş-uyor-**muş**
 every day run-PRES-**mİş**
 ‘He jogs every day!?’ (of an exercise hater) (Aksu-Koç & Slobin 1986:9, 7)

Unlike canonical information seeking questions, mirative *WH+li* are felicitous without an addressee, e.g. (7) can be uttered to oneself. They do not require an answer either. They can be answered, but since they serve to *express* the counterexpectation, this is what is most naturally targeted by the addressee:

- (10) Person A: Što li je Ivan kupio?
 Person B: ‘Why are you surprised? He has a shopping addiction...’

Finally, *WH+li* cannot be used as an echo question:

- (11) A ‘Ivan bought 300EUR shoes.’
 B’ [OK] ŠTA je Ivan kupio?
 B” #ŠTA li je Ivan kupio?

To summarize, the properties of the mirative reading of the *WH+li* construction presented here show that it expresses neither a canonical information seeking question, nor one of the typical non-canonical questions, such as biased, rhetorical, or echo questions.

The mirative reading of the *WH+li* construction is attested in Croatian and Macedonian, but not in Bosnian, Serbian, and Bulgarian, whose meaning is explored next.

2.2 REFLECTIVE *WH+LI*

Reflective questions are a special type of non-canonical questions that do “not require an actual or full answer, and might not even require an addressee” (Giannakidou & Mari 2019:7). They are found with a number of constructions cross-linguistically (see Giannakidou & Mari 2019), perhaps most intuitively illustrated with weak epistemic modals:

- (12) With the owners and the players on opposite sides philosophically and economically, **what might** they talk about at the next bargaining session?
 (Hacquard & Wellwood 2012:12)

For *li*, this reading has been noted by Rudin (1997) in a survey of the many uses of *li* in Bulgarian. She cites traditional Bulgarian scholars who describe the reading as ‘wondering’ or ‘unanswerable’, expressing ignorance.

Of course, canonical information seeking questions also entail the speaker’s ignorance (Whitcomb 2017), so this cannot be a sufficient defining feature. The next arguments clarify the meaning of reflective *WH+li* questions by discussing the contextual restrictions on the addressee and what elements *WH+li* can semantically concord with.

2.2.1 EPISTEMIC RESTRICTIONS ON THE ADDRESSEE

The central difference between canonical questions and reflective *WH+li* questions is not the ignorance of the speaker, but that of the addressee: in uttering a canonical question, the speaker expects the addressee to know the answer (Haziza 2023), or at least does not know the addressee to not know the answer, while with a reflective question, the speaker

here for convenience, without committing to either side of that discussion.

does not expect the addressee to have an answer. This is evidenced by the following example, where a fair election is assumed and therefore a canonical information seeking question reading is ruled out. Because a WH-question without *li* is the canonical question form in Bulgarian, it is infelicitous in this context.⁶ The utterance is only felicitous with *li* precisely because WH+*li* questions are not information seeking.⁷

- (13) Context: A fair election was held between two parties with very close numbers of supporters. The voting has just closed; it is impossible to know at this moment who will win.

Koj #(*li*) šte spečeli izborite? (Bulgarian)
 who li will win elections.DEF
 ‘Who will win the elections, #(I wonder)?’

Conversely, in a context that forces a canonical information seeking question interpretation, i.e. where it is most naturally expected that the addressee has the information to answer the question, WH+*li* is infelicitous.

- (14) A ti küde (#*li*) si učil? (Bulgarian)
 and you where li AUX.2SG study.PP
 ‘And where did you study?’ (e.g. which high school)

Further support comes from the use of ‘actually’, which challenges conversational expectations (Francis 2021). Applied to the present topic, in a canonical information seeking question, (15), ‘actually’ used by the addressee cancels the expectation that she knows the answer and can’t be used to confirm it; crucially, the judgements are reversed with reflective WH+*li*, (16).

- (15) *Actually* with a canonical, information-seeking question:
 Kakvo zakusva včera? (Bulgarian)
 what eat.for.breakfast.PST.2SG yesterday
 ‘What did you have for breakfast yesterday?’
 (i) ‘Actually, I have no idea.’
 (ii) #‘Actually, I know what.’
- (16) *Actually* with a reflective question, e.g. (13):
 a. # ‘Actually, I have no idea.’
 b. [OK] ‘Actually, I know who.’

To sum up, reflective WH+*li* expresses the expectation of the speaker that there is no conversational participant who can answer the question of interest.

Recall that mirative WH+*li* is also felicitous if the addressee does not know the answer (and without an addressee, i.e. when self-addressed). But the reasons are different: the conversational goal of the mirative is to express the speaker’s emotion and counterexpectation and not to focus on the ignorance (of either the speaker or the addressee). A reflective utterance such as (13), on the other hand, has the opposite properties. This is further supported below with arguments from semantic concord.

2.2.2 OPTIONAL SEMANTIC CONCORD WITH MODALS, NOT WITH ‘THE HELL’

The next insight into the properties of reflective WH+*li* comes from what they can engage in optional semantic concord with: unlike mirative WH+*li*, which optionally concords with overt ‘the hell’ (shown in (8)), reflective WH+*li* semantically concords with a weak

⁶Excluding gods, fortune-tellers, etc. from the list of addressees.

⁷If no reply is needed, what can the addressee even reply with? A sympathetic addressee can confirm not having an answer, e.g. by using a rhetorical question such as ‘Who knows’. Note, however, that reflective questions do not even require an addressee, for example (13) is felicitous as a self-addressed question.

modal – recall that *might* gives rise to a prototypical reflective question as in (12) – and not ‘the hell’, (18).

In (17) the modal and *li* used together emphasize the meaning (i.e. they have a mostly quantitative effect), but there is no significant qualitative difference between the three options – they are roughly interchangeable.

- (17) a. Koj **li** go e izpratil? (Bulgarian)
 who li it.ACC is sent.PP
 ≈ ‘I wonder who has sent it’
 b. Koj **može** da go e izpratil?
 who may.3SG da it.ACC is sent.PP
 ≈ ‘Who could have sent it’
 c. Koj **li može** da go e izpratil?
 who li may.3SG da it.ACC is sent.PP
 ≈ ‘I wonder who could have sent it’

These findings also demonstrate the intimate relationship between the reflective *WH+li* expression and weak epistemic modality, despite the fact that *WH+li* bears no morphological kinship to modality. I take this as a major clue into the nature of reflective expressions, which will be explored in the following sections.

In the case of *the hell*, on the other hand, the three sentences in (18) are not interchangeable: the sentence without *li* and with just *WH+‘the hell’* (18-a) is equivalent to its English counterpart in (i) and cannot express a reflective meaning (cf. (ii)); the sentence without ‘the hell’ and just *WH+li* is also not ambiguous between a ‘the hell’ and a reflective reading but only has the reflective reading. Insofar as the two can co-occur at all,⁸ as in (18-c), they cannot engage in optional semantic concord because the two elements are not semantically equivalent (or even close). Rather, the only possible meaning is one of interaction, where the speaker is upset at their ignorance. Even this marginally possible reading is different from the one we get with mirative *WH+li* discussed in §2.1, since with miratives, the frustration is about the truth of the proposition presupposed by the question (‘he bought a gift’ in example (8)).

- (18) a. Koj **po diavolite** go e izpratil? (Bulgarian)
 who on devils.DEF it.ACC is sent.PP
 (i) felicitous: ‘Who the hell sent it?’
 (ii) not possible: ‘Who could have sent it?’
 b. Koj **li** go e izpratil?
 who li it.ACC is sent.PP
 (i) not possible: ‘Who the hell sent it?’
 (ii) felicitous: ‘Who could have sent it?’
 c. ?Koj **li po diavolite** go e izpratil?
 who li on devils.DEF it.ACC is sent.PP
 (i) concord 1: not possible: ‘Who the hell sent it?’
 (ii) concord 2: not possible: ‘I wonder who could have sent it’
 (iii) interaction: marginally possible: ≈ ‘I am upset that I don’t know who (the hell) sent it.’

To sum up, the optional semantic concord data provide further evidence for the reflective nature of *WH+li*, as well as how it differs from mirative *WH+li*: because reflective ques-

⁸This meaning is not as productive as the one with modals, for example, there were only 13 Google hits for *who+li+‘the hell’* and under 30 for *what+li+‘the hell’*, compared to 24,000 and 52,700 for *who+li+‘might’* and *what+li+‘might’*, respectively. In the TenTen12 corpus of Bulgarian hosted by SketchEngine, which has 843,328,184 tokens and comprises internet speech, such as comments on discussion groups, *who+li* had 5691 hits compared to 0 hits for *who+li+‘the hell’*, *what+li* had 19,069 hits, compared to 1 hit for *what+li+‘the hell’*.

I am grateful to Roumyana Pancheva (p.c.) for bringing this to my attention and to a reviewer for further discussion.

tions express ignorance, as opposed to discovery in the case of mirativity, they interact differently with external expressions of emotion such as ‘the hell’.

3 FORMAL ACCOUNT

The previous section has shown that the same surface construction has two different readings; this section provides an interface account that captures the similarities and differences between them. The proposal is rooted in the idea that the relationships between the speaker and the addressee are syntactically expressed, in the tradition of Ross (1970), Speas & Tenny (2003) and many others. The central role of explaining the semantic variation is attributed here to the syntactic layer in which the particle *li* is interpreted. The semantic ingredients of the two meanings involve focus generated alternatives (from *li*), expectations (from the syntactic scope of *li*), and – on the mirative reading – an exclamative/emotive component. Each of these is discussed in turn below.

3.1 THE SYNTAX OF SPEAKER AND ADDRESSEE

The proposal is couched within the long and recently intensifying tradition of encoding the attitudes of discourse participants and their relationships in syntax, e.g. Ross (1970), Speas & Tenny (2003), Tenny & Speas (2004), Speas (2004), Zanuttini (2008), Krifka (2014), Wiltschko et al. (2015), Wiltschko & Heim (2016), Woods (2016), Zu (2018), Portner et al. (2019) to name but a few, see Wiltschko’s 2021 recent monograph for an overview. The shared conceptual core among all these works is that there is a syntactic layer of functional projections located above what is traditionally taken to be the CP, which hosts, among others, commitments, honorifics, expectations, authority, intentions, epistemic relations (such as what Speas & Tenny 2003 call the ‘seat of knowledge’), and various discourse particles. The richness of these projections reflects the subtlety and diversity of how utterances are used in discourse, going beyond categorical, canonical speech acts, although the speaker-addressee layer is assumed to be syntactically realized in every utterance (not just questions and not just non-standard questions). And, as shown in the previous section, both *WH+li* constructions are non-canonical – miratives blurring the long debated distinction between exclamatives and questions (Elliott 1971, Zanuttini & Portner 2003), and reflectives blurring the distinction between questions and assertions (recall the descriptive reading ‘I wonder’ and the absolution of the addressee of any informative response).

For the implementation here I adopt Wiltschko & Heim’s 2016 structure, which includes a Grounds phrase encoding the attitude of the speaker towards the scope proposition, another Grounds phrase encoding the attitude of the addressee (which is either contextually known or construed by the speaker), and a Response Phrase encoding the expectations of the speaker towards the next conversational move of the addressee. For example, in an assertion of *p*, the speaker assumes that the addressee does not know *p* (GroundsA) and that she will accept *p* as true (RespP), and in a canonical information seeking questions, GroundS conveys that the speaker does not know *p*, GroundA conveys that the speaker expects the addressee to know *p*, and RespP expresses that the speaker expects that the addressee will provide the answer in the next conversational move.

$$(19) \quad [_{\text{RESP}} \text{ANS}_{\text{adrs}} [_{\text{GROUND A}} \text{att-adrs} [_{\text{GROUND S}} \text{att-spkr} || [_{\text{CP}} \dots]]]]$$

Here is how this framework applies to the two phenomena at hand in this paper: I propose that mirativity is realized in the GroundS projection, expressing the speaker’s counterexpectation and the resulting emotive attitude, while reflectivity is manifested in the GroundA projection, expressing the speaker’s expectation that the addressee does not know the answer. In both cases the RespP projection is neutral (assuming the default response move to be non-confrontational, cf. Farkas & Bruce 2010, the addressee would be expected to endorse the speaker’s feelings or their own ignorance, respectively), not

requiring an informative response; this explains the shared properties between the two constructions.

(20) $[_{\text{RESP}} \emptyset [_{\text{GROUNDA}} [_{\text{GROUNDS}} \text{MIR} || [_{\text{CP}} \dots]]]]$

(21) $[_{\text{RESP}} \emptyset [_{\text{GROUNDA}} \text{REFL} [_{\text{GROUNDS}} || [_{\text{CP}} \dots]]]]$

Furthermore, I introduce a refinement of Wiltschko & Heim (2016) with regard to the conversational status of the information encoded in each of these layers. First, the information encoded in the speaker-addressee constellation of layers is necessarily non-truth-conditional (not-at-issue, 'NAI'), represented here visually with the two vertical lines. Broadly, I assume that it is part of the sincerity conditions of the respective speech act in the sense of Faller's (2002) richer representation of the structure of speech acts.

Note, however, that even NAI information can still be conversationally new (see Murray 2010 and Potts 2013 for discussion of such types of information). I propose that this is possible at the lower, GroundS layer, which encodes the speaker's attitude, e.g. the addressee is not assumed to be already aware of the speaker's emotional state. GroundA, on the other hand, is necessarily shared information, given that it is contestable as such (see again (15), (16)). With regard to RespP, I take it to be shared information by definition, since it is part of the general linguistic knowledge of natural language speakers what conversational moves are expected and acceptable for any given utterance, together with their consequences (e.g. for non-conforming to the default move to be recognized as such; see Farkas & Bruce 2010 for more discussion).

3.2 *LI* AND ALTERNATIVES

Above, the syntactic locus of the two meanings was established, capturing properties they have in common (the lack of response expected from the addressee) as well as how they differ. Here the role of *li* in deriving the two readings is discussed. In a nutshell, I propose that *li*, a focus particle (§3.2.1), can also be interpreted in either of the two high positions presented above (§3.2.2), where it serves (together with intonation) discourse functions.

3.2.1 LOW *LI* AND FOCUS

Recall that *li* participates in canonical polar questions (albeit in slightly varying guises in the various languages, cf. *dali*, *jel*, *li* in (1)) while canonical WH-questions do not involve *li* in any of the languages that have it, (2). When used in polar questions, *li* can give rise to either a broad focus question when attached to the verb (or verbal complex), as seen in (1) and in (22-a) below, or narrow focus when attached to a (fronted) subpropositional constituent, as exemplified in (22-b) from Rudin (1997).

- (22) a. Ivan kupil *li* e kafe? (Bulgarian)
 Ivan buy.PP *li* AUX coffee
 'Did Ivan buy coffee?'
 b. Ivan [_F KAFE *li*] e kupil?
 Ivan coffee *li* AUX buy.PP
 'Is it coffee that Ivan bought?' (Rudin 1997:11)

In addition, *li* participates in a number of non-interrogative constructions, surveyed by Rudin (1997), such as concessive free relatives and conditionals, emphatic verb prolongation (e.g. *piše li piše* 'writes for a very long time'), as well as morphologically complex expressions standardly taken to relate to focus, such as disjunctions (*ili*), 'hardly' (*edva li*), 'not even' (*kamo li*), 'as if' (*kato će li*). Due to this large range of functions, together with the behavior of *li* specifically in polar questions giving rise to narrow focus, (22-b), and the fact that *li* does not occur in canonical WH-questions, Rudin (1997) concludes that *li* in Bulgarian is not an interrogative marker, but a focus particle, and specifically a

complementizer, see Rivero (1993), Rudin (1994), Izvorski (1995), Izvorski et al. (1997), Rudin et al. (1999). This view is accepted for *li* in other South Slavic languages too, see King (1994, 1996), Cavar (1996), Rudin et al. (1999), Franks & Holloway King (2000), Bošković (2001, 2002), Franks (2006), a.m.o.

Based on this, I take *li*'s basic function to be to generate a set of alternatives from its host as a focus operator in the sense of Rooth (1992). In the case of broad focus polar questions, (1), (22-a), and more broadly, when its target is propositional, the alternatives are always polar, simply p and $\neg p$.⁹ In the case of narrow focus, as in (22-b), the alternatives are all the contextually salient things that Ivan might have bought. Armed with the assumptions in §3.1 of a whole range of projections above CP, I call this 'low *li*', as it operates within the propositional layer and the alternatives it generates are derived from lexical material. Next, we turn to the interpretations of *li* above CP.

3.2.2 TWO HIGH POSITIONS FOR *LI*: MIRATIVITY AND REFLECTIVITY

Armed with the understanding that *li*'s function is not specific to questions but more general as a focus operator that generates a set of alternatives, we can now turn to its role in WH+*li* questions. Recall that the presence or absence of *li* in WH questions determines their status as the special expressions described in this paper or canonical information seeking questions, respectively. Therefore, I take *li* to be an active contributor to the meaning of the constructions at hand. However, in the case of WH+*li*, the role of *li* is not to generate alternatives from its phonological, surface host, the WH-word, as the WH-word itself also generates alternatives. I propose, instead, that *li* is interpreted higher than its syntactic position, i.e. it undergoes covert movement. Its landing positions are speaker phrase GroundS and the addressee phrase GroundA discussed in §3.1, giving rise to mirative and reflective readings, respectively, as schematized below:

(23) $[_{\text{RESP}} \emptyset [_{\text{GROUND A}} [_{\text{GROUND S}} \text{MIR } li] [_{\text{CP}} \text{What did I. buy}]]]$

(24) $[_{\text{RESP}} \emptyset [_{\text{GROUND A}} \text{REFL } li] [_{\text{GROUND S}} [_{\text{CP}} \text{What did I. buy}]]]$

At those positions, high *li* has the same function as low *li*: it generates alternatives. The different meaning arises compositionally from the nature of the syntactic positions. Crucially, both positions encode the speaker's expectations. I propose that *li* is able to interact with them because of the very nature of expectations as a phenomenon involving scalar alternatives, an idea conveyed by Zanuttini & Portner (2003) on exclamatives more broadly, and by Torres Bustamante (2012) and Simeonova (2015) on mirativity specifically.

In mirative utterances, (23), high *li* is hosted in the GroundS layer and contributes emotional attitude by ranging over the speaker's expectations about the sentence's presupposition: for example, in (4) 'What+*li* did Ivan buy', the presupposition (arising at the CP level by the WH-phrase) is that Ivan bought something. In the *li*-less version of that utterance, a canonical WH-question ('What did I. buy?'), GroundS would trivially express that the presupposition is expected to be shared information among the conversational participants. *Li*-marked GroundS denotes that the presupposition is less expected than its alternative (that I. did not buy anything):

(25) $E^s = \{ \neg \exists x [I. \text{ bought } x], \exists x [I. \text{ bought } x] \}$
where E^s stands for speaker's expectations

The source of the emotional attitude in mirative WH+*li* is the fact that the expectation that he didn't buy anything is defeated through a clash with the sentence's presupposition that he bought something, i.e. the preferred or more expected alternative turns out to be

⁹Since the propositional interpretation of *li* is always polar, it does not suffer from the problem of exponentially large alternative sets identified by Mascarenhas (2021).

false; whether the attitude is positive or negative depends on the intonational contour of the utterance and context cues.¹⁰

I assume that emotive expressions such as *dovraga* ‘the hell’ are also interpreted in GroundS, as they express the speaker’s emotive attitude and are not interpreted truth-conditionally. This explains the availability of semantic concord between mirative WH+*li* and such expressions, as discussed in (8).

In the case of reflective questions, (24), *li* ranges over the speaker’s expectations about the addressee’s epistemic ability to provide a response. In a canonical information seeking question, GroundA denotes that the speaker expects the addressee to be able to answer the question, while in reflective questions, *li*-marked GroundA generates scalar alternatives of speaker expectations and denotes that the addressee not having an answer is more expected than the addressee having an answer, capturing the main property of reflective questions described in §2.2. This proposal explains why unlike mirative utterances, a reflective utterance does not express emotional attitude – there is no clash with the sentence’s presupposition (the expression of expectations does not entail that they are defeated).

- (26) $E^s = \{\neg[\text{addressee has an answer}], \text{addressee has an answer}\}$
 where E^s stands for speaker’s expectations

The last piece needed for the understanding of reflective questions is how they interact with modals. As Giannakidou & Mari (2019) point out, weak modals generate alternatives that partition the veridical domain and when used in questions, they are not interpreted canonically, but interact with the question operator.¹¹ I take this to mean that weak modals can be interpreted in GroundA with a result equivalent to that of *li*-marked reflective questions. What is interesting with regard to the phenomenon at hand is that this property of weak modals in questions arises precisely for the same reason that *li* is allowed to be interpreted high and also interact with the question: they give rise to alternatives. This explains why modals and *li* used concurrently give rise to a concord meaning, as described in §2.2.2.

The proposal also captures the lack of semantic concord between reflective WH+*li* and ‘the hell’ (also discussed in §2.2.2): because reflective *li* is in GroundA, it scopes over ‘the hell’, which is interpreted in GroundS.

4 DISCUSSION

This section discusses some of the broader implications of the findings presented above beyond South Slavic, as well as some open questions for future work.

A FORMAL RELATIONSHIP BETWEEN MIRATIVITY AND REFLECTIVITY

Perhaps the most significant theoretical implication of this paper is the established formal relationship between mirativity and reflectivity, which, to my knowledge, has not been explored before. Here I proposed that the two phenomena differ in their syntactic locus and what they interact with, but they share two related ingredients: alternatives and speaker expectations. While expectations have been a key ingredient in some of the formal theories of mirativity, e.g. Rett & Murray (2013), Simeonova (2015), this paper provides a novel angle on their role by taking a comparative approach and identifying the roles that expectations can play in different phenomena. It posits that the use of WH+*li* to express the two different meanings is not an idiosyncratic (or even areal) accident

¹⁰ Furthermore, the intonation of mirative and reflective utterances differs both between each of them and canonical questions, and between each other.

¹¹ Strong epistemic modals, on the other hand, do not interact with questions because they do not generate alternatives.

but rather it is made convenient by the shared semantic ingredients involved in each of the phenomena and the fortuitous availability of a marker that expresses part of these ingredients.

This finding opens up a novel question for future research: might we find other languages, beyond South Slavic, where the two phenomena are also morphologically related? This is also intriguing because the morphological relationship between evidentiality and mirativity, on one side, and between evidentiality and reflectivity, on the other, has been of great interest in the literature since DeLancey (1997) and Faller (2002), Littell et al. (2010), respectively. The findings presented in this paper can shed light on the future explorations of what properties of evidentials make them suitable for use in mirative or reflective utterances (see also more on evidentiality and reflectivity later in this section).

And within South Slavic, it allows us to ask why some of the languages only have one of the two readings, while others have both. This question is left to future work. The first step in such a program is a deeper understanding of the properties of each of the two readings, which the present paper has contributed towards.

4.1 A FORMAL RELATIONSHIP BETWEEN REFLECTIVITY AND MODALITY

The account of the role of *li* in reflective questions offered here provides novel support for Giannakidou & Mari's 2019 treatment of weak epistemic modals as giving rise to alternatives and interacting with questions. Since *li* is not an epistemic modal element, but generates alternatives, this paper presents a simpler case in support of Giannakidou & Mari's idea and suggests a causal relationship: it is precisely the property of generating alternatives that makes weak epistemic modals suitable for use to give rise to reflective questions.

In addition, the novel findings on how reflective *li*-marked questions interact with epistemic modals reported in §2.2.2 elucidate the relationship between reflectivity and modality further by demonstrating that their co-occurrence gives rise to semantic concord (and not, say, to a canonical epistemic interpretation of the modal). This also supports Giannakidou & Mari's 2019 proposal that the epistemic modal is interpreted in a different syntactic projection in reflective questions – the present paper makes an explicit commitment about the projection.

4.2 THE NATURE OF THE SPEECH ACTS OF REFLECTIVE AND MIRATIVE UTTERANCES

While the morphology of the two constructions studied here looks superficially interrogative, neither of the two readings are truly interrogative, nor do they fall into any of the known types of non-canonical questions. In fact, both of them are conversationally puzzling since they lack any requirement not only for an answer, but for any specific reaction from the addressee – their truth-conditional meaning neither contributes new information to the addressee, nor asks for information. This has two implications of note:

One, it supports the view, voiced in Wiltschko & Heim (2016) and Giannakidou & Mari (2019), a.o., that speech acts are not as discrete as usually thought, but more of a continuum, as reflective *WH+li* blurs the lines between questions and assertions, and mirative *WH+li* blurs the lines between questions and exclamatives.

Two, it informs the nature of mirativity and especially reflectivity and expands the range of their possible morphosyntactic expression. Especially mirativity has – to my knowledge – not been discussed with regard to questions. It is easy to see why once we consider the nature of mirativity as surprise, and the nature of surprise as factive, entailing truth (we can only be surprised about *p* if we know that it holds in the first place). The only part of a *WH*-question that is entailed is its presupposition, hence the

meaning of the mirative is tied to it.¹²

4.3 BIAS

While bias is usually discussed in polar questions, Sudo (2013) points out that it could also sometimes arise with WH-questions, without going into detail. Whether the mirative reading discussed in this section can be construed as biased is an interesting idea to consider in future work. Whether reflective questions, which express ignorance, can be related to bias, also remains to be explored.

4.4 REFLECTIVE-LIKE QUESTIONS CROSS-LINGUISTICALLY

Recently, a whole host of expressions have been identified cross-linguistically, with similar properties and descriptive meanings, bearing labels such as ‘reflective’ (Giannakidou & Mari 2019), ‘conjectural’ (Littell et al. 2010), ‘deliberative’ (Truckenbrodt 2006), ‘non-intrusive’ (Farkas 2022) questions. The label chosen in this paper is motivated by the intimate relationship between modality and WH+*li* demonstrated in §2.2.2. But the question remains to what extent all these constructions differ and whether any variation is sufficient to label and analyze them as different phenomena.¹³

A case in point are conjectural questions, so called because they were identified in languages with conjectural evidential markers, such as Cuzco Quechua Faller (2002), St’át’imcets (Matthewson et al. 2007), and Gitksan (Littell et al. 2010). When used in declaratives, the conjectural evidential conveys that the utterance is based on conjecture or inference by the speaker, translated with an epistemic modal (and formally analyzed as such in the respective works), as in (27-a). When used in questions, it gives rise to what the authors translate as ‘I wonder’, cf. (27-c) or ‘Who knows’ and describe as ‘a non-interrogative utterance’ and ‘syntactically and semantically questions, but pragmatically they have the force of assertions’ (Littell et al. 2010: 91, 92). Example (27-b) shows a canonical question for reference, showing that the conjectural question contains the morphological ingredients of a canonical question.

- (27) a. *sdin=ima=hl xbiist* (Gitksan)
 be.heavy=INFER=CND box
 ‘The box might be heavy.’
 b. *nee=hl sdin=hl xbiist=a*
 YNQ=CND be.heavy=CND box=INTERROG
 ‘Is the box heavy?’
 c. *nee=ima=hl sdin=hl xbiist=a*
 YNQ=INFER=CND be.heavy=CND box=INTERROG
 ‘I wonder if the box is heavy.’ Littell et al. (2010): (6)

This raises the question whether conjectural questions are an evidential phenomenon or, alternatively, can be viewed – in light of the findings of Giannakidou & Mari (2019) and the discussion of modality in §2.2.2 – as another piece of evidence for the modal account of these specific evidentials.¹⁴ This point is also relevant with regard to German *wohl*, which Eckardt (2020) argues to be a conjectural evidential based on its similar properties to conjectural markers in Cuzco Quechua, Gitksan etc., in both declarative and interrogative sentences. The question of whether that meaning differs from that

¹²This also explains why *li* can give rise to mirative readings only with WH-questions and not with polar questions.

¹³This question is also discussed by Farkas (2022), who considers five properties of conjectural questions identified by Eckardt (2020) and concludes that Romanian *oare* marked questions lack three of them and therefore, as a proper subset, they are a sufficiently different phenomenon. Systematic comparison with all the phenomena listed above remains to be carried out.

¹⁴It is possible to analyze just one evidential marker in a paradigm as a modal without assuming that the rest are, as Faller (2002) does for Cuzco Quechua and as defended more broadly in Simeonova (2020). This could also explain why using just any evidential marker in a question does not give rise to the reflective reading.

of a reflective question with a modal as in (12) remains to be explored, which would be particularly fruitful to do in a language like German that has many modal markers. Teasing apart why some weak modals can give rise to reflective/conjectural readings and others cannot can inform in a novel, finer-grained way both the nature of these modals and the necessary ingredients of reflectivity.

What Farkas (2022) calls non-intrusive questions in Romanian contain the particle *oare*, which is morphologically a WH-derived element but in questions gives rise to the ‘I wonder’ flavor and the addressee properties described in §2.2.1 for WH+*li*. Farkas (2022) provides a pragmatic account of *oare* couched in the Table framework of Farkas & Bruce (2010), which is in principle not mutually exclusive with the syntax-semantics account of the present paper. Another reason to go that direction is the similarity between *oare* questions, discussed in detail for the polar counterparts of reflective questions in Bulgarian (which are marked with *dali*, not *li*) by Simeonova & Kamali (2024), who conclude that the meanings are equivalent with regard to the properties of *oare* marked questions listed by Farkas (2022).

4.5 INTONATION

A desideratum for future work is exploring the role of intonation. I suggested informally above that both readings have non-canonical intonation and that it plays at least two roles: one is in deriving the two meanings, especially in languages that allow both, where it could serve to disambiguate them (together with contextual information); the second one is in disambiguating between the positive and the negative meaning of mirative expressions. Intonation has already been identified as an important factor in mirative utterances by Simeonova (2015) and in reflective/non-intrusive ones by Simeonova & Kamali (2024). Analyzing it formally will be an important contribution to the understanding of these expressions.

5 CONCLUSION

This paper explored the semantic microvariation of the WH+*li* construction in South Slavic languages. WH+*li* utterances have two readings, neither of which has been explored in depth in previous works. Here, one was identified as mirative in the sense of DeLancey (1997) and the other as a ‘reflective question’ a term proposed by Giannakidou & Mari (2019).

I proposed that the common core shared by the two readings of WH+*li* derives from the well-known role of South Slavic *li* as a focus particle to generate alternatives. The differences between them were attributed to their syntactic positions and what material they can interact with at those positions. I proposed that *li* can be interpreted high, in the syntactic projection cluster encoding the relationship between the speaker and the addressee and their epistemic and emotional attitudes (as well as possibly other context factors), cf. Wiltschko & Heim (2016). The mirative interpretation arises when *li* is interpreted in the syntactic layer encoding the speakers emotive attitude and interacts with the presupposition of the sentence, while the reflective interpretation arises when *li* is interpreted in the layer encoding the expectations of the speaker towards the addressee. One of the questions that remain open for future work is what determines which language gets which reading, and why both readings are not available in all languages.

The findings have a number of broader theoretically important implications, discussed in §4. The most important among them are (i) these constructions provide novel evidence for the non-discrete nature of speech acts, blurring the lines between interrogative and declarative/exclamative speech acts, and (ii) this paper identified a formal relationship between mirativity and reflectivity, on one hand, and reflectivity and weak epistemic modality, on the other. The locus of these relationships, alternatives, suggests that in exploring these phenomena cross-linguistically we need to go granular and look

at their ingredients and how and where they are able to compose in order to gain a better understanding of their nature and properties.

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ABBREVIATIONS

ACC	accusative	PL	plural
AUX	auxiliary	POSS	possessive
BCS	Bosnian/Croatian/Serbian	PP	past participle
CND	common noun determiner	PRES	present
DAT	dative	PST	past
DEF	definite	SG	singular
INFER	inferential evidential	YNQ	polar question morpheme
INTERROG	interrogative particle		

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