

## On Rising Intonation in Balkan Slavic

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**ABSTRACT**

Crosslinguistic work on the meanings of intonational tunes across clause types remains rare. Rudin (2018a) notes an apparent correlation between the behavior of declarative and imperative sentences with rising terminal contours. Languages in which ‘rising declaratives’ comprise non-canonical biased questions allow for ‘rising imperatives’, interpreted as suggestions, while languages in which rising declaratives comprise canonical neutral questions disallow rising imperatives. Bulgarian and Macedonian, closely related languages which differ in the status of their rising declaratives, provide an ideal test case for investigating this correlation. Initial investigation of these two Balkan Slavic languages lends support to the prediction that rising imperatives occur only in languages whose rising declaratives are biased questions.

**KEYWORDS** Balkan · Bulgarian · Macedonian · Rising Intonation · Imperatives

### 1 INTRODUCTION

A growing literature is focused on explaining why an English sentence with declarative syntax but rising intonation functions as a biased, non-canonical question (Malamud & Stephenson 2015, Farkas & Roelofsen 2017, Westera 2017, Jeong 2018, Rudin 2018a):

- (1) a. Paul was at the party?
- b. Was Paul at the party?

Though both sentences intuitively ask a question, (1-a) suggests that the speaker expects the answer to be “yes,” either double-checking the truth of the sentence or expressing surprise that it might be true, whereas (1-b) expresses no such bias. Some accounts analyze “rising declaratives” as irreducible constructions, but others give a general-purpose account of the meaning of the rising tune (Pierrehumbert & Hirschberg 1990, Bartels 1999, Gunlogson 2001, Farkas & Roelofsen 2017, Westera 2017, Rudin 2018a, 2020). Such accounts make predictions not just about declaratives with rising intonation, but also about imperatives with rising intonation, which are interpreted as weaker or more suggestion-like than falling imperatives (2-a) and allow for sequences of mutually incompatible imperatives that are contradictory with falling intonation (2-b):

- (2) a. Buy me a drink?
- b. Work on your paper? Blow it off and go to the beach?

Despite the relevance of imperatives to general-purpose proposals for the meaning of rising intonation, the literature on rising imperatives is quite small (to our knowledge: Portner 2018, Keough et al. 2016, Rudin 2018a,b, and Condoravdi et al. 2019). Indeed, there is very little literature on the meaning of imperative intonation of any kind (though see Bolinger 1985, 1989, Han 1998 and Jeong & Condoravdi 2018).

Work on intonational meaning has focused predominantly on English, though rising declaratives have been investigated in other languages as well. Notably, in some languages, e.g. Hindi-Urdu (Bhatt & Dayal 2020) and Brazilian Portuguese (Truckenbrodt et al. 2008), rising declaratives are canonical neutral questions. This distinction highlights the importance of comparative, crosslinguistic work on intonational meaning, to clarify the extent to which the meaning of rising intonation

varies across languages.

Rudin (2018a) makes a preliminary generalization about the connection between the interpretation of rising declaratives and the availability of rising imperatives. Namely: if a language's rising declaratives comprise biased, non-canonical questions, that language will allow rising imperatives; if a language's rising declaratives comprise unbiased, canonical questions, that language will disallow rising imperatives. This may be connected to the status of rising intonation as an illocutionary modifier in languages of the former type, and the status of rising intonation as a semantic question-forming operator in languages of the latter type. However, Rudin's generalization is based on a very small sample of languages (English, French, German, Dutch, Hebrew, and Hindi) which differ from each other in many unrelated ways that may pose confounds.

In this paper, we present a preliminary investigation of Rudin's generalization in Balkan Slavic. Bulgarian and Macedonian have long been known to differ with respect to whether they form canonical questions using rising intonation alone (Macedonian) or using a question particle (Bulgarian); correspondingly, rising declaratives are interpreted as canonical (i.e. unbiased) questions in Macedonian, but non-canonical questions in Bulgarian. Thus, Rudin's generalization predicts that Bulgarian will allow rising imperatives, and Macedonian will not. Because the two languages are so closely related, they represent a more controlled pair than any of the languages Rudin discusses. We find preliminary support for Rudin's generalization, though the facts are not completely clear.

This paper contributes to the literature in three ways. First, it adds to the nascent literature on the meaning of imperative intonation; second, it expands the crosslinguistic coverage of the literature on intonational meaning by way of a comparative study; third, it provides the first comparative study of which we are aware on intonational meaning in Balkan Slavic.<sup>1</sup> The structure of this paper is as follows: In §2, we present the empirical facts regarding rising declaratives in Bulgarian and Macedonian. In §3, we present the empirical facts regarding rising imperatives in Bulgarian and Macedonian. In §4, we highlight avenues for future work. In §5, we present our conclusions.

## 2 RISING DECLARATIVES IN BALKAN SLAVIC

In spite of their close relation and generally similar grammars, Bulgarian and Macedonian differ quite sharply along the parameter of interest here; that is, rising intonation does not have the same effect in the two languages. In Macedonian, a declarative sentence accompanied by rising intonation, like (3-b), comprises a neutral yes/no question with no particular bias or emphasis. Throughout, we use a sentence-final question mark to indicate that the sentence is accompanied by the L\* H-H% tune. For more details on the intonational phonology of Balkan Slavic, see Penchev (1980), Grice et al. (1995), Sawicka & Spasov (1997), Miševa & Nikov (1998), Andreeva (2009).

- (3) a. *Ėe odiš na kino.*  
FUT go.2.SG to cinema  
'You're going to the movies.' (Macedonian)
- b. *Ėe odiš na kino?*  
FUT go.2.SG to cinema  
'Are you going to the movies?' (Macedonian)

In Bulgarian, on the other hand, neutral yes-no questions are formed with the interrogative particle *li* following the verb (4-a). Rising declaratives (4-b) are interpretationally marked, much like rising declaratives in English. The nature of this markedness is detailed below.

- (4) a. *Šte xodiš li na kino?*  
FUT go.2.SG Q to cinema  
'Are you going to the movies?' (Bulgarian)
- b. *Šte xodiš na kino?*  
FUT go.2.SG to cinema  
'You're going to the movies?!' (Bulgarian)

<sup>1</sup>For a prior study of intonational meaning in Bulgarian, see Andreeva (2009).

	Bulgarian	Macedonian
intonation alone	19.9%	44.1%
li	60.4%	30.0%
other	19.7%	25.9%

Table 1: Percent of yes/no questions with no particle and with *li* in Bulgarian and Macedonian (Englund 1977:127)

*Li* questions do also exist in Macedonian (see (5)) but their semantics necessarily involves focus; they “emphasize a particular sentence element” (Kramer 2003:17), namely the constituent preceding *li*, in this case the verb.

- (5)    *Ķe odiš li na kino?*  
          FUT go.2.SG Q to cinema  
          ‘Are you (really) GOING to the movies?’ (Macedonian)

There is a rich literature on *li* questions and questions with other yes-no particles in both Balkan Slavic languages.<sup>2</sup> In contrast, rising declaratives have received very little attention in either Bulgarian or Macedonian, beyond noting their existence. Nonetheless, the few mentions of rising declaratives in the literature on Balkan Slavic confirm that the function of rising intonation differs between the two languages, as do all speakers we have consulted. To reiterate, the crucial fact is that in Macedonian, rising declaratives are neutral, canonical questions, whereas in Bulgarian they are biased, non-canonical questions.

Englund (1977) is the only work to specifically compare the formation of questions in the two Balkan Slavic languages. Based on a corpus of literary works, Englund established that questions with no interrogative particle (that is, presumably rising declaratives) are far more frequent in Macedonian. By her count, summarized in Table 1, almost half of Macedonian yes-no questions contained no interrogative particle, while in Bulgarian less than 20 percent of yes-no questions had no particle and 60 percent contained *li*. Questions formed with other particles and discourse markers account for the remaining percentages.<sup>3</sup> Though Englund did not analyze the meaning or usage of the different types of questions, it seems evident that the questions which predominated in her literary sources were of the neutral type in each language: *li* questions in Bulgarian and rising declaratives in Macedonian.

Macedonian grammars (e.g. Kramer 2003, Tomić 2012) simply present rising declaratives as the norm. Bulgarian grammars, if they mention them at all, emphasize that they are not the norm but have a particular discourse function and flavor. For instance, Tilkov & Bojadžiev (1981:180) state that rising declaratives like (4-b) “can have a meaning of surprise, wonder, disapproval, etc.” and that “omission of *li* results in a question which to some extent is emotionally loaded”.

A few examples of this “emotional” usage are given in (6). The glosses in parentheses are from Bulgarian speakers, some of whom suggested punctuation like “?!” instead of just “?” to capture an exclamatory tone.

<sup>2</sup>Much of this work concerns questions in which *li* follows a fronted constituent rather than the verb; for instance, Bulgarian *NA KINO li šte xodiš?* ‘You’re going to the MOVIES?’; *SEGA li šte xodiš na kino?* ‘You’re going to the movies NOW?’ In both languages the phrase followed by *li* is interpreted as focused, or as having an element of surprise: see Minova-Gurkova (1987), Rudin et al. (1998), Tomić (1996), Lazarova-Nikovska (2003), Dukova-Zheleva (2010), Jordanoska & Meertens (2021) among many others.

Other work deals with syntactic and phonological interactions of *li* with negation and other clitic elements adjacent to the verb (Rudin et al. 1999, Franks 2006), or with the numerous other yes-no question particles available in Macedonian and/or Bulgarian (*nali* ‘isn’t it so?’, *dali* ‘whether, I wonder’, *nima* ‘can it really be’, and so on), which add various nuances including positive or negative bias (see e.g. Tisheva 2003). We set all of these issues aside here to focus only on the function of rising intonation.

<sup>3</sup>The yes-no question particles reported on by Englund are *dali*, *nima*, *zar*, *zarema*, *nali*, *neli*, *a*, and *da*. The frequencies found for each individual particle are low, but collectively they occur in a significant proportion of questions, especially in the Macedonian corpus, accounting for the relatively low percentage of pure intonation questions in this language.

- (6) a. Šte xodiš na more?  
FUT go.2.SG to sea  
'You're going to the seaside? (I don't believe that! Incredible! Wow!)' (Bulgarian)
- b. Tanja živee v Boston?  
T live.3.SG in Boston  
'Tanja lives in Boston? (I don't believe it! How come nobody told me?)' (Bulgarian)
- c. Nosiš pantaloni?  
wear.2.SG pants  
'You're wearing pants? (I've never seen you in pants! I like it/dislike it)' (Bulgarian)

Another common use of rising declaratives is to seek agreement. For instance, (Hauge 1999:217) gives (7) as a typical example in which the speaker uses a rising declarative "and wait[s] for the hearer to confirm or deny it." He adds that intonation questions often contain indications of conjecture, like *znači* 'so'.

- (7) Znači, vie ste nešto kato anarxist?  
it.means you are something like anarchist  
'So, you're an anarchist or something?' (Bulgarian)

Further examples similarly indicate drawing a conclusion.<sup>4</sup> If your friend earlier said she would not go to the party, but is now dressed up and leaving the house, (8-a) would be a felicitous way to express your deduction that she has changed her mind. (8-b) is an attested response to a culture shock story.

- (8) a. Znači, vse pak šte xodiš na partito, a?  
it.means still again FUT go.2.SG to party.DEF eh  
'So, you're going to the party after all?' (Bulgarian)
- b. Toest e pâr voto vi izlizane ot Bâlgarija?  
that.is is first.DEF your exiting from Bulgaria  
'So, it's the first time you've been out of Bulgaria?' (Bulgarian)

Rising declaratives can also express a simple conjecture, a guess, as in (9), which (Penchev 1980:111) gives as a response to someone saying "Guess what surprise I have for you".

- (9) Nameril si mi pisalkata?  
found AUX.2.SG me.DAT pen.DEF  
'You've found my pen?' (Bulgarian)

Requests for confirmation can express surprise or disbelief. In (10), a reporter challenges the politician she is interviewing to confirm a previous statement, with a sarcastic flavor: "are you really claiming you didn't write to them?"

- (10) Ne ste pisali do šefovete na instituciite?  
NEG AUX.2.PL written to heads.DEF of institutes.DEF  
'You didn't write to the heads of the institutes?' (Bulgarian)

Andreeva (2009) gives examples of rising declaratives functioning as "checks" (confirmation-seeking questions, checking one's understanding) in an experimental context.

In short, uses of Bulgarian rising declaratives closely parallel the range of senses of English rising declaratives like (1-a)—in both languages, a rising declarative indicates an expectation that the answer will be affirmative, whether the speaker is double-checking their own belief or expressing surprise at the addressee's belief. As such, rising declaratives in Bulgarian are amenable to the same analysis as rising declaratives in English. We focus here on proposals that derive the behavior of rising declaratives from an independent meaning of rising intonation (see §1). Following Truckenbrodt (2006) and Rudin (2018a), we assume that rising intonation, in Bulgarian as well as in English, is an

<sup>4</sup>We are grateful to Vesela Simeonova for providing examples (8) and (10).

illocutionary operator that calls off the speaker commitment portion of an assertion, resulting in a discourse move that highlights only one path forward for the conversation, as an assertion does, but does not throw the speaker's weight behind taking that path, necessitating addressee response, as a canonical question does. For the full formal details of such an account, see Rudin (2018a, 2020).

Because Macedonian rising declaratives are canonical neutral questions, they are not amenable to the same analysis as English rising declaratives. We assume that rising intonation in Macedonian contributes a semantic question-forming operator, along the lines of Farkas & Roelofsen's (2017) UP operator, or Bhatt & Dayal's (2020) account of intonational questions in Hindi-Urdu.

### 3 RISING IMPERATIVES IN BALKAN SLAVIC

Recall that Rudin (2018a) predicts a correlation between the status of rising declaratives as non-canonical biased questions and the acceptability of rising imperatives, and, likewise, a correlation between the status of rising declaratives as canonical neutral questions and the unacceptability of rising imperatives. This is because an illocutionary operator that calls off speaker commitment should be able to be applied to imperative utterances as well as declarative ones, resulting in a weakened meaning by which the speaker puts forward a potential course of action for the addressee without throwing their weight behind preferring that the addressee pursue that course of action; on the other hand, a semantic question-forming operator will not interact correctly with the semantics of an imperative clause. In this section we present preliminary data from Balkan Slavic bearing on this predicted correlation. To the best of our knowledge, rising imperatives have not previously been investigated in any Balkan or Slavic language. Our initial data from Bulgarian and Macedonian speakers supports the predicted correlation, with rising imperatives being possible in Bulgarian but impossible in Macedonian, though our findings are not entirely clear cut.

For Macedonian, the facts appear straightforward: as Rudin's hypothesis predicts, Macedonian does not have rising imperatives. Instead, Macedonian speakers make use of future/modal *ke* (11-a) or subjunctive mood with particle *da* (12-a) to express the kind of requests and suggestions typical of English rising imperatives. The (b) variants, with morphological imperatives and question-like rising intonation, are judged to be unacceptable: the # notation indicates that, although these sentences are well-formed syntactically, they are infelicitous in all contexts with the rising intonation indicated by the question mark.

- (11) a. *Ķe mi dadeš edna cigara?*  
will me.DAT give.2.SG a cigarette  
'Give me a cigarette? (lit: Will you give me a cigarette?)' (Macedonian)
- b. #*Daj mi edna cigara?*  
give.IMP me.DAT a cigarette  
Intended: 'Give me a cigarette?' (Macedonian)
- (12) a. *Da go pišeš referatot? Da se otkažeš pa da odiš na plaža?*  
SUBJ it write.2.SG paper.DEF SUBJ REFL give.up.2.SG and SUBJ go.2.SG to beach  
'Write your paper? Give up and go to the beach?' (Macedonian)
- b. #*Piši go referatot? #Odi na plaža?*  
write.IMP it paper.DEF go.IMP to beach  
Intended: 'Write your paper? Go to the beach?' (Macedonian)

The fact that a *da* clause is acceptable in (12-a) shows that there is no inherent incompatibility of rising intonation with an expression of directive function: a main-clause *da* clause with falling intonation is interpreted as a command, as in (13).<sup>5</sup> Rather, rising intonation is incompatible only with a syntactic imperative, as predicted if the interpretation of Macedonian rising declaratives is due to Macedonian rising intonation contributing a semantic question-forming operator that cannot compose with the denotation of an imperative clause.

<sup>5</sup>Prototypically, *da* constructions are subordinate, infinitive-like clauses: *Sakam da go pišeš referatot*. 'I want you to write the paper.'

- (13) Da go pišeš referatot.  
 SUBJ it write.2.SG paper.DEF  
 'Write the paper.' (Macedonian)

The Bulgarian facts are more complex. Although they have escaped notice in the literature – for instance, they are not mentioned in Penchev (1980), an otherwise thorough treatment of Bulgarian intonation – rising imperatives do exist in Bulgarian. However, judgments vary among speakers and it is far from clear what factors influence acceptability patterns. Nonetheless it is noteworthy that rising imperatives are available in Bulgarian, unlike in Macedonian. The split between impossibility in Macedonian and possibility in Bulgarian, whatever factors might influence *when* Bulgarian rising imperatives are possible, is in line with the prediction that rising imperatives will occur only in languages in which rising declaratives comprise noncanonical biased questions.

Several of the Bulgarian speakers we consulted readily accept rising imperatives, with much the same range of uses as in English. These speakers find combinations of morphological imperatives with rising intonation acceptable in tentative requests like (14) and alternative suggestions like (15). In both types of cases, Bulgarian rising imperatives are interpreted in parallel with English rising imperatives, as predicted by an account in which rising intonation is calling off the speaker's commitment to their utterance, proffering a course of action for the addressee without throwing the speaker's weight behind them pursuing it.

- (14) Daj mi edna cigara?  
 give.IMP me.DAT a cigarette  
 'Give me a cigarette?' (Bulgarian)
- (15) a. Kakvo da pravja dnes?  
 what to do.1.SG today  
 'What should I do today?' (Bulgarian)
- b. Napiši si doklada? Ela s mene na plaža?  
 write.IMP REFL paper.DEF come with me to beach.DEF  
 'Write your paper? Come to the beach with me?' (Bulgarian)

However, some Bulgarian speakers prefer rising *da* clauses like (16) to true (morphosyntactic) rising imperatives as in (15-b), similar to what we have seen in Macedonian.<sup>6</sup>

- (16) Da si napišeš doklada? Da dojdeš s men na plaža?  
 SUBJ REFL write.2.SG paper.DEF SUBJ come.2.SG with me to beach.DEF  
 'Write your paper? Come to the beach with me?' (Bulgarian)

As in Macedonian, main clause *da* constructions have directive force when spoken with falling intonation: *Da si napišeš doklada!* 'Write your paper!' It is less than clear why these rising "pseudoimperatives" should be preferred to true rising imperatives in Bulgarian.

A third group of Bulgarian speakers have split judgments, accepting some rising imperatives but not others. For instance one speaker judges rising imperatives good only as suggestions, not requests; she accepts (15-b) but not (14). On the other hand, she finds rising *da*-clauses good as requests (*Da mi dađeš cigara?* 'Give me a cigarette?') but rejects rising *da*-clauses as alternative suggestions (so she finds (16)) unacceptable, unlike speakers of group 2.

The intricate variation in acceptability of rising imperatives among Bulgarian speakers could be due to a number of factors. One is surely context and register: given the colloquial, spoken nature of Bulgarian rising intonation constructions and their dependence on appropriate context, it is not surprising that speakers vary in their willingness to accept them as presented in judgment tasks that have none of the ecological richness of naturally occurring speech. Regional or social dialect differences may also come into play. Southwestern dialects in Bulgaria share many features with standard Macedonian, and the colloquial speech of the capital city, Sofia, is

<sup>6</sup>Bulgarian can also make requests using future and other modal forms.

influenced by in-migration from those southwestern areas (Kânčeva 2008). Finally, some individuals may simply idiosyncratically prefer other ways to express requests and suggestions—it's not clear that a preference for alternative formulations entails the grammatical unavailability of rising imperatives. A systematic study of all of these factors is not necessary to draw a tentative conclusion. Rudin's hypotheses predicts only that rising imperatives should be *possible* in Bulgarian, not that must always be acceptable to all speakers in all contexts.

In spite of considerable messiness in the data, the basic split between the two Balkan Slavic languages remains: Rising imperatives are absent in Macedonian but present in Bulgarian, albeit not in all circumstances and for all speakers. We conclude that Balkan Slavic provides additional empirical support to Rudin's generalization, and, therefore, lends additional plausibility to the analysis of rising intonation as obviating speaker commitment in languages where rising declaratives comprise noncanonical biased questions.

#### 4 FURTHER ISSUES

This preliminary investigation leaves several issues unexamined, of which we highlight two here. One of these is dialect. Given that standard Bulgarian and standard Macedonian are segments of a dialect continuum, geographic variability is likely and may account for some speaker variation, potentially among Macedonians as well as Bulgarians. Intonation questions are more common in Western dialects of Macedonian and *li* is used more in some Eastern dialects (Tilkov & Bojadžiev 1981, Koneski 1965, Englund 1977). Standard Macedonian is based on Western dialects. It seems conceivable that eastern Macedonian speakers might have neutral *li* questions and correspondingly allow both biased rising declaratives and rising imperatives. As noted above, Bulgarians from the western part of the country may have more Macedonian-like judgments.

Another area for future research is differences between two types of rising imperatives. A particularly interesting result that emerges from both the Macedonian and Bulgarian facts is that request-type rising imperatives have rather different status from suggestion-type rising imperatives, in a way that was not obvious from English alone. This distinction is manifested in the greater acceptability of the suggestion type than the request type, for some Bulgarian speakers, as well as differences in how the two types are translated, with future vs. *da* clause (subjunctive).

#### 5 CONCLUSION

This paper is the first study, to our knowledge, of rising imperatives in Slavic. To summarize this paper's core empirical results: First, there is a contrast between Bulgarian and Macedonian with respect to the interpretation of rising declaratives: they comprise canonical neutral questions in Macedonian, but noncanonical biased questions, parallel to English rising declaratives, in Bulgarian. Second, there is a corresponding contrast in the availability of rising imperatives: they are impossible in Macedonian, but possible in Bulgarian, albeit with a distribution of acceptability that remains to be rigorously explored.

Taken together, these results strengthen Rudin's (2018a) tentative crosslinguistic generalization that there is a correlation between the status of rising declaratives as noncanonical biased questions and the availability of rising imperatives, and between the status of rising declaratives as canonical neutral questions and the unavailability of rising imperatives.

#### ABBREVIATIONS

AUX	auxiliary	NEG	negation
DAT	dative	PL	plural
DEF	definite	REFL	reflexive
IMP	imperative	SG	singular
FUT	future	SUBJ	subjunctive

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