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THE PROSODIC PROPERTIES OF CLAUSAL PARENTHETICALS IN SERBIAN

The aim of this paper is to present an analysis of the prosodic properties of clausal parentheticals in Serbian in terms of their pitch, intensity, articulation rate and intonational domain in relation the surrounding anchor clauses. Regarding the pitch and intensity, the results indicate that the utterance seems to follow a downward trend regardless of the parenthetical interpolation. Considering the rate of articulation, no pattern can be established in the behavior of clausal parentheticals in relation to their anchor clauses. When it comes to the intonational domain, the clausal parentheticals in Serbian tend to form separate intonational phrases, thus belonging to the group of ‘prototypical parenthesis’, in Dehé’s (2014) terms.

Key words: parentheticals, pitch, intensity, articulation rate, intonational contour

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1. Introduction

Parenthetical expressions are a linguistic phenomenon that has become the subject of great interest for linguists rather recently. The reason might lie in the fact that there are no clear boundaries as to which domain of linguistics their study should belong, and the fact that they form a heterogeneous group of expressions due to the inability to determine the set of criteria that would qualify an expression as a parenthetical. The definition that encompasses the majority of features relevant for understanding the phenomenon of parentheticals is provided by Dehé & Kavalova (2007):

Parentheticals are expressions that are linearly represented in a given string of utterance (a host sentence), but seem structurally independent at the same time. They have been argued to interrupt the prosodic flow of an utterance, introducing intonational breaks and featuring prosodic properties different from those of their host. They are outside the focus-background structure of their host utterance and are usually associated with non-truth conditional meaning. Parentheticals typically function as modifiers, additions to or comments on the current talk. They often convey the attitude of the speaker towards the content of the utterance, and/or the degree of speaker endorsement. (Dehé & Kavalova 2007: 1)

Even though parenthetical expressions form a heterogeneous group of expressions varying in length, complexity, syntactic category and function, Dehé (2014) made an attempt at providing a systematization of the syntactic types of parentheticals in spoken English, given in (1) (for an exhaustive list of references cf. Dehé 2014).

1) a. Clauses

When we were on a holiday – that reminds me, I must pick up the photos – we saw so many interesting places.

b. Clauses introduced by a conjunction

Ames, as the FBI eventually discovered, was a spy.

c. Elliptical clauses

For those of us who remember nineteen sixty-five one or two of our listeners may Tory party leadership contests used to be as the cardinals in Rome and leaders would emerge

d. Adverbial clauses

John smokes, ‘cos his place is full of dirty ashtrays.

e. Non-finite clauses

The most fundamental of our parental wishes to educate our children in our

own morality is indoctrination and a denial of their free development.

f. Non-restrictive relative clauses

He shouldn't have pushed that kid, who is so conscientious, out that door.

g. Nominal appositions

A university lecturer, Dr Brown, was arrested for the crime.

h. Lexical phrases

The secretary well-mannered as anybody will present an apology.

i. Interrogative parentheticals

Is he going do you know/think

j. Question tags

Lucy can play the viola, can she? I didn't know that.

k. Statement tag(s) and imperative tag(s)

John will go to Spain, he will.

l. Reporting verbs

The Hawks will win, says John, by at least 10 points.

m. Comment clauses

There was no other applicants, I believe, for that job.

n. Vocatives (noun phrases)

If Mary had tutored him, John, Bill would have passed.

o. Sentence adverbs

He is, unfortunately, ill.

p. One-word expressions (other than sentence adverbs)

I've been dreaming of winning a gold medal for what 20 years now

q. Interjections and filled pauses

My knowledge of this sort of thing, I admit, comes chiefly from the – um – popular press.

r. Right node raising

Amanda is, or at least she used to be, my best friend.

s. Syntactic amalgamation

John invited you'll never guess how many people to his party.

Parentheticals can also be classified into anchored, free/floating (cf. Kluck 2001; Kavalova 2007), and detached Dehé (2014: 8). Both anchored and free parentheticals are semantically related to the host. Anchored parentheticals (or an anaphoric element that they contain) refer back to an anchor in the host, usually a noun phrase, as in (2 a. and b). Free parentheticals, or any anaphoric element contained in them, do not refer to any particular element in the host, but to the main proposition as a whole. Free parentheticals provide further informa-

tion about something expressed in the host sentence or comment on the main proposition, as in (2 c). Detached parentheticals are related to the host utterance through the discourse situation, or contribute to the relation between the interlocutors in the situational context (Dehé 2014:9). Detached parentheticals are exemplified in (2 c).

2) a. Anchored parentheticals

I saw that Bob, who just got fired, was booking a flight to Brazil.

b. Free parentheticals

Bill – and this is so typical – was dating several women at the same time.

c. Detached parentheticals

The main point – Why not have a seat? – is outlined in the middle paragraph.

2. Previous studies

In the linguistic literature, the properties of parentheticals have been analyzed in terms of prosodic phrasing, as well as intonation. The features that have been taken into account are intensity, articulation rate, fundamental frequency, pauses before and after a parenthetical construction, and the intonation contour of parenthetical constructions.

Regarding the intensity of parenthetical constructions, the general conclusion is that parenthetical constructions differ from their surrounding either by decreasing or increasing in intensity (Bolinger 1986: 186; Öhlschläger 1996: 317; Wichmann 2001: 180f). Some authors, however, insist on a reduction in intensity of a parenthetical construction (Crystal 1969; Jung 1980: 116). When it comes to the changes in articulation rate, parenthetical expressions are described as increasing in tempo (Crystal 1969: 174; Jung 1980: 161; Schwyzer 1939: 31f). Authors like Bolinger (1989: 186), Öhlschläger (1996: 317), and Wichmann (2001: 180f) speak in more general terms, saying that parenthetical constructions may involve a change in the rate of articulation which can be realized as an increase or decrease in tempo dependent on the articulation rate of the anchor clause. A change is also posited between the pitch of parenthetical constructions in comparison to that of their anchor clause (Öhlschläger 1996: 317). Some authors regard the pitch of parentheticals as potentially lower or higher (Schwyzer 1939: 31; Bolinger 1989: 186; Wichmann 2001: 181), while some suggest that they are necessarily of a lower (Crystal 1969: 174; Jung 1980: 161) or a narrower pitch range (Brandt 1994: 10).

Attitudes towards pauses being a distinctive feature of parentheticals also differ. Pierrehumbert (1987) says that parenthetical constructions do not necessarily

have to be indicated by pauses, as boundaries are not necessarily marked by pauses, but can be marked by the lengthening of the last syllable in the phrase. For Altmann (1981: 202) they are clearly set off by pauses, while there are some authors who are less exclusive and say that parentheticals are often, but not obligatorily, marked by pauses (Schwyzer 1939: 31; Bolinger 1989: 186; Brandt 1994: 10; Öhlschläger 1996: 317).

Regarding the intonation contour of parenthetical expressions, Nespor & Vogel (1989: 1988-90) assume that parentheticals are obligatorily phrased in a separate intonation phrase (IP), as well as that the strings preceding and following a parenthetical form their own IPs, which would not necessarily happen had not the parenthetical been inserted. According to Bolinger (1989: 195), parenthetical expressions are said to interrupt the prosodic flow of the frame utterance. Ladd (1986) suggests the analysis in terms of a compound prosodic domain (CPD), where the matrix clause forms a single domain (the outer IP) across which declination applies, regardless of it being interrupted by the parenthetical domain. The CPD analysis is compatible with Wichmann's (2001: 181) view that parentheticals, being asides, should not interrupt the overall downtrend of the utterance, and that editing parentheticals out of the host utterance should result in coherent contours. Wichmann (2001: 186-8) also adds pitch compression, and possibly pitch extension, as a means of marking a parenthetical, which could interfere with the overall downtrend of the utterance. Supposedly, a downward trend begun before the parenthetical may be picked up at a higher level after a parenthetical with expanded pitch, or at a lower level, following a parenthetical with compressed pitch. Selkirk (2005:6) analyzes parentheticals as Comma Phrases, which are "performed as distinct speech acts and set off by Intonational Phrase edges from what surrounds them." A Comma Phrase is a +comma marked constituent, where a +comma feature results in "comma intonation" and CI semantics, and enables the distinction between parentheticals and other adjoined phrases which also appear in "routine modifier structures" (Potts 2005).

An interesting account of the prosodic properties of parentheticals is given in Döring (2007). In accounting for prosodic properties of parenthetical expression, Döring (2007) focuses on sentential and non-sentential parenthetical constructions in modern German.

To test the hypothesis that parenthetical expressions are quieter than their surrounding anchor clauses, Döring (2007: 293) compared the average intensity of a parenthetical construction to the average intensity of their surrounding anchor clauses. The results indicated that there are examples where the average

intensity of the parenthetical constructions is lower than the intensity of their surrounding anchor clauses, where the intensity of the parenthetical construction is equal to the average of the whole utterance, and where the parenthetical has higher intensity than the average of the whole utterance. When comparing the intensity of a parenthetical construction to the intensity of the part of the anchor clause preceding the parenthetical construction (PAPPC), no examples are found in which the parenthetical construction increases in intensity in comparison to the PAPPC. However, there is a case where no difference in intensity between the PAPPC and the parenthetical construction can be confirmed, or where the difference is very small because it is not between two sounds but between two longer units. Regarding the hypothesis that parentheticals are faster than their surrounding anchor clause, Döring (2007: 293) detected an acceleration throughout the parenthetical construction, especially when compared to the PAPPC, which is quite often reduced in articulation rate compared to the average articulation rate of the whole utterance. Concerning the pitch of parenthetical expressions, Döring (2007: 294) found that parenthetical constructions tend to be lower in fundamental frequency than their anchor clause, especially in comparison to the PAPPC. When it comes to the hypothesis that parentheticals are set off by pauses, Döring (2007: 295-6) found examples where parenthetical constructions are clearly set off by pauses, where a parenthetical does not have to be surrounded by pauses but it may be set off by a preceding pause only, and where there is no pause marking the parenthetical construction either before or after the parenthetical.

Concerning the hypothesis that parentheticals have a clear intonation contour of their own Döring (2007: 297) says that it would mean that they have to be set off from their surrounding anchor clause or, at least, from the PAPPC. Therefore, it is necessary to study the transition zone, i.e. the right boundary of the PAPPC and the potential pause. It would also be useful to analyze the change in range of pitch and/or intensity instead of comparing the average results. For these reasons, Döring (2007) focuses on the pitch jump within the transition zone and looks into the phonological domain of the parenthetical construction. To complete the picture of the transition zone, she also analyzes the phonological domains of the PAPPC. According to Döring (2007), the end of the PAPPC is often clearly indicated as such. The right tone of the PAPPC tends to be a leading tone. Prepausal lengthening is often to be considered a boundary marker. This lengthening, however, is by no means obligatory, even if a fricative is involved. The last tone of the PAPPC is often neither a high- nor a low-level tone but rather a mid-level tone. Both criteria, lengthening and tone, are independent and can be combined,

but they do not apply to all cases. If they occur in combination, the edge is clearly marked (298-299). Döring (2007: 299) says that no distinctive characteristics can be derived from the analysis of pauses. When focusing on the possibility of pauses between the PAPPCs and the parenthetical construction, it can be inferred that in all examples the parenthetical construction is preceded by a position in the anchor clause where pauses may be introduced. This means that the transition zone has to provide a potential pause position, which may be realized as a silent pause.

Parenthetical constructions can be lower in fundamental frequency and intensity than their surroundings, but this characteristic is not distinctive. For this reason, Döring (2007: 300) focuses on changes in pitch and intensity range instead of focusing on the relation between the average fundamental frequency and intensity. There are two possibilities – that the PAPPC has a wider range in pitch and/or intensity and the parenthetical construction a narrower, or the opposite. Döring (2007: 300) shows that the pitch range of the parenthetical construction is considerably narrower than the pitch range of the whole utterance. Regarding the pitch range in comparison the PAPPC, this observation is not consistent. In some cases there is a change in the pitch range, but in some no change in pitch range between the PAPPC and the parenthetical construction can be confirmed. The change in pitch range is a very common occurrence, but it is by no means distinctive.

Döring (2007) has shown that parenthetical constructions tend to be lower in fundamental frequency than their surrounding anchor clauses, especially in comparison to the PAPPC. Döring (2007: 302) further focuses on the pitch(es) within the transition zone, in particular on the realization of the shift and on the first pitch of the parenthetical construction. She finds examples with a clear pitch jump downwards (measuring the onset) over the pause, examples where the parenthetical construction starts on a rise-fall tone, and examples where the parenthetical construction starts on a falling pitch with an observed clear pitch jump upwards.

Pitch jumps appear to be a current but not obligatory characteristic of the transition zone. They are likely to occur in combination with a silent pause, but not necessarily, and they are not limited in direction, but tend to be downwards. Consequently, the pitch that sets off the parenthetical construction tends to be lower than the pitch that ends the PAPPC. Therefore, the left edge of a parenthetical construction is often realized after a pitch jump in comparison to the PAPPC. Moreover, the parenthetical construction often starts on a rise-fall pitch, but this too is by no means obligatory (2007: 303).

In Döring's (2007) corpus, the parenthetical constructions in all examples have their own intonation contour and form an IP of their own. She further obser-

ves that left boundary tones of the IP of the parenthetical construction are always established, which is not consistent with right boundary tones. Some parenthetical constructions do not have a proper end, meaning that the boundary between the right end of the parenthetical construction and the beginning of the second part of the anchor clause is sometimes fuzzy. The left boundary marker is always realized (cf. comments on potential pause, pitch jump, rise-fall tone), because it plays an indicative role. The right boundary marker, however, is not necessary to detect the parenthetical construction. This observation fits her theory that the transition zone is more important than the end of the parenthetical construction (304).

The phonological domain of the PAPPC tends to be hierarchically lower than an IP. It can form a phonological phrase, but it can also form the domain of a prosodic word. However, the phonological phrase cannot be established as the maximal phonological domain of the PAPPC, because examples of PAPPCs forming an IP can be found in the corpus.

A more recent account of the prosodic properties of parenthetical constructions is given in Dehé (2014), where she explores the relation between syntactic and prosodic parenthesis, and proves that one-to-one relation between the syntactic and prosodic parenthesis, in the sense that "strings that are parentheticals in the syntax are marked by certain defining prosodic characteristics in speech" (261), does not exist. Dehé (2014) focuses on sentential parentheticals, comment clauses and one-word parentheticals (what, say) to show that what could be argued to be a 'prototypical' parenthetical in that it matches both the syntactic and the prosodic criteria cannot be considered a rule in actual speech. It is not true that strings that are parentheticals in the syntax are always realized with a specific prosodic pattern. Particularly, they are not always set off by intonational breaks.

The fact that parenthetical strings are external to the syntactic structure of the host does not mean that the necessarily interrupt the prosodic flow of the utterance. A large number is found of syntactic parentheticals that are prosodically integrated into an adjacent domain as a part of the prehead or tail, or function as transitional material/pause fillers. Such cases do not qualify as prosodic parentheses (2014: 280).

Together with integrated patterns, a number of other options exists. Longer, more complex interpolations exhibit one of the following patterns:

3) a. They represent cases of prosodic parenthesis being different from the surrounding prosodic pattern (e.g., marked by a change in pitch, intonational breaks, speeding-up in tempo), but the boundaries of the prosodic domain do not correspond to the edges of the corresponding syntactic constituent (2014: 280).

b. They form a separate intonation domain, i.e., syntactic and prosodic boundaries coincide, but the relevant domain is not prosodically different at all but simply replicates a previous prosodic pattern and, therefore, does not qualify as prosodic parenthesis (2014: 280).

Shorter syntactic interpolations may be assigned the nucleus of an intonational domain, and may be joined by some material from the host utterance to form one syntactic unit, regardless of the syntactic boundaries. In certain utterances, the parenthetical interpolation makes an important contribution to the overall well-formedness complementing a tonal contour, and thus allowing for tonal parallelism and similar sizes of adjacent prosodic domains (2014: 280).

Dehé (2014) concludes that a definition which includes both syntactic and intonational criteria is problematic, and that, therefore, both a syntactic and a prosodic definition are necessary. This assumption leads to some straightforward predictions. Firstly, there are cases of parenthetical expressions which match both the syntactic and the prosodic criteria – 'prototypical parentheticals'. Secondly, there are expressions which are external to the syntax of the host, but do not correspond to the prosodic definition of interrupting the prosodic flow of the utterance in any way. These can exemplify 'integrated parentheticals', or cases of syntactic interpolations that are not 'prosodically integrated' but are not 'prosodically different'. Thirdly, examples of purely prosodic parenthesis which meet the prosodic criteria of interrupting the prosodic flow of an utterance but do not correspond to syntactic constituents wedged into another syntactic structure are expected to be found (2014: 281).

Based on the finding of the previous studies presented, research questions are formulated and presented in Section 3.

3. Methodology

3.1 The aim of the study

The aim of this paper is to describe the prosodic properties of anchored and free parentheticals is Serbian, focusing on the types that Dehé (2014) labels as clauses introduced by a conjunction, elliptical clauses, adverbial clauses, non-finite clauses, non-restrictive relative clauses, interrogative parentheticals, and reporting verbs.

3.2 Hypotheses and parameters measured

The hypotheses that this paper aims at testing are the following:

4) Clausal parentheticals in Serbian exhibit some special prosodic features

5) Clausal parentheticals in Serbian belong to the group of 'prosodically different parenthesis' in Dehé's (2014) terms

In testing these hypotheses, the following parameters are taken into account:

6) The intensity of the parenthetical expression is measured and compared to the intensity of the PAPPC, and to the intensity of the PAFPC (part of the anchor following parenthetical clause).

7) The articulation rate of the parenthetical expression is measured and compared to the articulation rate of the PAPPC and the articulation rate of the PAFPC.

8) The mean pitch of the parenthetical expression is measured and compared to the mean pitch of the PAPPC, and the mean pitch of the PAPPC.

9) The intonational contours of PAPPC, PAFPC and the parenthetical are analyzed with the aim of determining whether parenthetical constructions form separate intonational phrases.

3.3 Participants

The participants in the study are five native speakers of Serbian. The participants are aged between 24 and 55, and are of different educational backgrounds. Participants that are later in the paper referred to as "Participant 2" and "Participant 4" are male participants, while 1, 3, and 5 are female participants. The participants have no hearing or speaking conditions or problems. During the conduction of the research, ethical norms were respected.

3.4 Corpus

The corpus consists of seven sentences written in standard Serbian, all of which host one anchored or free parenthetical expression. The sentences were read by five native speakers of Serbian (35 sentences in total). The sentences host parenthetical expressions that Dehé (2014) labels as clauses introduced by a conjunction, elliptical clauses, adverbial clauses, non-finite clauses, non-restrictive relative clauses, interrogative parentheticals, and reporting verbs.

3.5 Procedure

The participants were presented with a list of sentences hosting the abovementioned types of clausal parenthetical expressions. They were given time to read the sentences for themselves, and were invited to ask questions should there be any unclear points about the structure and meaning of the sentences. All of the participants noticed the absence of commas in the places where they would expect them. They were told that the author did not want to suggest the potential places for pauses, and were invited to make a pause wherever they considered it to be necessary. Once the participants indicated that they were ready, they read the sentences aloud and were recorded. The recording wasdone in a sound proof room in order to avoid possible distractions. The recordings were then analyzed using PRAAT.

4. Results and discussion

4.1 The prosodic properties of clauses introduced by a conjunction

The prosodic properties of clauses introduced by a conjunction were analyzed using the example of a sentence given in 10) (the sentences in b. – that were given under the examples in Serbian – are translations given for the purpose of the article):

10) a. Bilo je zaista mnogo učesnika na takmičenju. Međutim Anja je kao što se očekivalo osvojila prvo mesto.

b. A lot of participants attended the competition. However, Anja, as expected, won the first place.

Regarding the mean pitch of the parenthetical clause introduced by a conjunction compared to the mean pitch of the surrounding PAPPC and PAFPC, it has been noticed that the parenthetical tends to be lower in pitch than the PAPPC, but higher in pitch than the PAFPC. In other words, a tendency has been noticed for the utterance to follow a downward trend regardless of the parenthetical interpolation. This is partially consistent with Döring's (2007) findings that parenthetical interpolations are lower in pitch than the surrounding material.

Considering the intensity of the parenthetical clause introduced by a conjunction compared to the intensity of the surrounding PAPPC and PAFPC, it can be noticed that the utterance seems to fall in intensity regardless of the parenthetical interpolation. In other words, the parenthetical clause introduced by a conjunction tends to be lower in intensity than the PAPPC, but higher in intensity than the PAFPC. This corroborates Döring's (2007) finding that intensity of parentheticals does not increase in comparison to the PAPPC.

When it comes to the changes in the articulation rate, no regular pattern has been noticed. Three out of five participants made no significant differences in the articulation rate of the PAPPC, the parenthetical, and the PAPPC. One participant pronounced the PAPPC more slowly than the parenthetical and the PAFPC, and one pronounced it more rapidly than the parenthetical and the PAFPC.

Considering the pauses preceding and following the parenthetical clause introduced by a conjunction, a strong tendency has been noticed to put a pause preceding the parenthetical interpolation, while only one participant made a pause following the parenthetical clause.

Regarding the intonational domain of the parenthetical clause introduced by a conjunction, it can be concluded that it tends to form a separate intonational phrase. This tendency was noticed and described by Döring (2007) (see p.8). The first participant

indicated the intonational separateness of the parenthetical clause introduced by a conjunction using the pause preceding the parenthetical, the pitch reset at the beginning of the parenthetical, and the pitch rise at its end, which is followed by the pitch reset at the beginning of the PAFPC. The second and the fourth participant indicated the separate IP of the parenthetical by the pause preceding the parenthetical, and the pitch rise at the end of the parenthetical, which is followed by the pitch reset at the beginning of the PAFPC. In the third case, the separate IP of the parenthetical is indicated by the pauses surrounding the parenthetical, as well as by a serious pitch rise at its end, which is followed by the pitch reset at the beginning of the PAFPC. In the fifth case, there are no pauses surrounding the parenthetical, but the separate intonational domain of the parenthetical is indicated by the pitch reset at the beginning of the parenthetical, and the pitch rise at its end, which is followed by the pitch reset at the beginning of the PAFPC. The results of each participant are given in Table 1.

Table 1The prosodic properties of clauses introduced by a conjunction

CLAUSE INTRODUCED BY A CONJUNCTION						
Parameter	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Average
mean pitch in the parenthetical	184.8 Hz	137.5 Hz	180 Hz	140.8 Hz	230 Hz	174.62 Hz
mean pitch in the PAPPC	201.5 Hz	140.9 Hz	180 Hz	159.8 Hz	200.8 Hz	176.6 Hz
mean pitch in the PAFPC	152.8 Hz	122.2 Hz	164 Hz	126.5 Hz	190.5 Hz	151.2 Hz
lowest pitch in the PAPPC	194 Hz	124.9 Hz	163.6 Hz	120 Hz	181.8 Hz	156.86 Hz
highest pitch in the PAPPC	249 Hz	151.7 Hz	204.3 Hz	195 Hz	328.7 Hz	227 Hz
lowest pitch in the parenthetical	176 Hz	116. 9 Hz	137 Hz	113.6 Hz	166 Hz	141.9 Hz
highest pitch in the parenthetical	212.9 Hz	157.6 Hz	265 Hz	171 Hz	360 Hz	233.3 Hz
lowest pitch in the PAFPC	135.6 Hz	113 Hz	134 Hz	103.1 Hz	149.8 Hz	127.1 Hz
highest pitch in the PAFPC	172.1 Hz	155.4 Hz	195.4 Hz	202.6 Hz	215 Hz	188.1 Hz
intensity of the PAPPC	77.3 dB	75.6 dB	76.6 dB	72 dB	76.1 dB	75.52 dB

intensity of the parenthetical	73. 6 dB	75 dB	74.4 dB	68.7 dB	73.9 dB	73.12 dB
intensity of the PAFPC	72.2 dB	72.9 dB	74.1 dB	67.1 dB	78.7 dB	73 dB
articulation rate in PAPPC	0.21	0.10	0.18	0.14	0.12	0.15
articulation rate in the parenthetical	0.15	0.11	0.16	0.13	0.15	0.14
articulation rate in the PAFPC	0.15	0.13	0.16	0.15	0.15	0.12
duration of the pause preceding the parenthetical	0.05s	0.07s	0.06s	0.02s	no pause	0.04s
duration of the pause following the parenthetical	no pause	no pause	0.22s	no pause	no pause	0.04s
duration of the pause following the parenthetical	no pause	no pause	0.22s	no pause	no pause	0.04s

4.2 The prosodic properties of elliptical clauses

The prosodic properties of elliptical clauses were analyzed using the sentence in 11):

11) a. One koji prođu u drugi krug takmičenja možda dvoje-troje naših kandidata hoće očekuje besplatan put u Rim.

b. Those who enter the second round of the competition one or two of our candidates may get a free trip to Rome.

Regarding the mean pitch of the parenthetical elliptical clause compared to the mean pitch of the surrounding PAPPC and PAFPC, it can be said that the parenthetical tends to be lower in pitch than the PAPPC, but higher in pitch than the PAFPC. In other words, a tendency has been noticed for the utterance to follow a downward trend regardless of the parenthetical interpolation. This is in line with Wichmann's (2001) view that a downward trend begun before the parenthetical may be picked up at a higher level after a parenthetical with expanded pitch, or at a lower level, following a parenthetical with compressed pitch.

Considering the intensity of the parenthetical elliptical clause compared to the intensity of the surrounding PAPPC and PAFPC, it can be noticed that the utterance seems to fall in intensity regardless of the parenthetical interpolation. In other words, the elliptical clause tends to be lower in intensity than the PAPPC, but higher in intensity than the PAFPC. Only one participant pronounced the parenthetical with the intensity lower than in the PAPPC and the PAFPC. This is in line with Döring's (2007) view that parentheticals fall in intensity compared to the PAPPC.

When it comes to the change in the articulation rate, three out of five participant made insignificant changes throughout the utterance. One participant pronounced the parenthetical more rapidly than the surrounding material, while one participant pronounced the parenthetical as slower than the PAPPC, but more rapid than the PAFPC.

Considering the pauses preceding and following the parenthetical elliptical clause, no pattern can be established. Two participants marked the parenthetical interpolation by strong pauses preceding and following it. One participant put only the pause between the parenthetical and the PAFPC, one put it between the PAPPC and the parenthetical, while one participants used no pauses.

Regarding the intonational domain of the parenthetical elliptical clause, it can be concluded that it tends to form a separate intonational phrase (four out of five participants pronounced it as a separate IP), which is in line with Döring's (2007) results of the analysis of parentheticals' intonational domains. The first participant indicated the intonational boundary between the PAPPC and the parenthetical by the pitch rise at the end of the PAPPC, followed by the pitch reset at the beginning of the parenthetical; the intonational boundary between the parenthetical and the PAFPC is indicated by a strong pause, and by a major pitch movement at the end of the parenthetical, followed by the pitch reset at the beginning of the PAFPC. The second and the third participant indicated the separate intonational domain of the parenthetical by strong pauses surrounding it, the pitch reset at the beginning of the parenthetical, its major upward pitch movement, and the pitch reset at the beginning of the PAFPC. In the fourth case, there are no pauses between the PAPPC and the parenthetical, and the PAPPC ends at almost the same pitch that the parenthetical starts with, which might suggest that they form a single IP. This potential IP ends with a rise, and the PAFPC begins with a pitch reset, following its own downward movement. The fifth participant indicated the intonational separateness of the parenthetical by the pause preceding it, the pitch reset at its beginning, its ending with a rise, and the pitch reset at the beginning of the PAFPC.

The numerical representation of the participants' results is given in Table 2.

Table 2 The prosodic properties of elliptical clauses

ELLIPTICAL CLAUSE						
Parameter	**Participant 1**	**Participant 2**	**Participant 3**	**Participant 4**	**Participant 5**	**Average**
mean pitch in the parenthetical	175.1 Hz	145.4 Hz	188 Hz	130.5 Hz	229.9 Hz	173.8 Hz
mean pitch in the PAPPC	211.8 Hz	150.2 Hz	213.2 Hz	169.6 Hz	268.2 Hz	202.6 Hz
mean pitch in the PAFPC	161.8 Hz	143.4 Hz	180.6 Hz	125.14 Hz	232.6 Hz	168.71 Hz
lowest pitch in the PAPPC	150.1 Hz	128 Hz	140.2 Hz	128.8 Hz	210.9 Hz	151.6 Hz
highest pitch in the PAPPC	276.6 Hz	208.7 Hz	321.1 Hz	208.1 Hz	420 Hz	286.9 Hz
lowest pitch in the parenthetical	142.5 Hz	119.2 Hz	141.1 Hz	100.6 Hz	143.2 Hz	129.32 Hz
highest pitch in the parenthetical	223.8 Hz	202.1 Hz	327.9 Hz	172.1 Hz	348.5 Hz	254.88 Hz
lowest pitch in the PAFPC	149.4 Hz	112.4 Hz	100.9 Hz	97.9		
Hz	219.9 Hz	136.1 Hz				
highest pitch in the PAFPC	198.9 Hz	164 Hz	290.1 Hz	163.6 Hz	362.3 Hz	235.78 Hz
intensity of the PAPPC	74.3 dB	74.2 dB	76.5 dB	70.4 dB	77.1 dB	74.5 dB
intensity of the parenthetical	72.1 dB	72.9 dB	76 dB	68.6 dB	76.4 dB	73.2 dB
intensity of the PAFPC	70.2 dB	73.5 dB	76.1 dB	64.1 dB	75.9 dB	71.96 dB
articulation rate in PAPPC	0.21	0.19	0.17	0.13	0.26	0.19
articulation rate in the parenthetical	0.18	0.17	0.18	0.17	0.25	0.19

articulation rate in the PAFPC	0.22	0.16	0.19	0.22	0.25	0.21
duration of the pause preceding the parenthetical	no pause	0.31s	0.19s	no pause	0.08s	0.12s
duration of the pause following the parenthetical	0.27s	0.13s	0.28s	no pause	no pause	0.14s

4.3 The prosodic properties of adverbial clauses

The example in 12) served as the basis for the analysis of the prosodic properties of adverbial clauses:

12) a. Nisam siguran čime su se dedina braća bavila. Dejan je jer soba mu je prepuna trofeja sigurno nekad bio uspešan sportista.

b. I'm not sure what my grandpa's brothers did for a living. Dejan because his room is full of trophies must have been a successful sportsman.

Regarding the mean pitch of the parenthetical adverbial clause compared to the mean pitch of the PAPPC, it has been noticed that the parenthetical is lower in pitch than the PAPPC, as seen in Table 3. This goes in favor of Döring's (2007) analysis of parentheticals being lower in pitch than their surrounding.

Considering the intensity of the parenthetical adverbial clause compared to the intensity of the PAPPC, it has been noticed that the parenthetical tends to be quieter than the PAPPC. This finding is in line with Crystal's (1969) and Jung's (1980) insisting on the reduction in parentheticals' intensity compared to their surrounding.

When it comes to the changes in the articulation rate, no pattern has been noticed. Two participants made no significant differences in the articulation rate of the PAPPC and the parenthetical, two pronounced the PAPPC more rapidly, and one pronounced the parenthetical more rapidly.

Considering the pause between the PAPPC and the parenthetical, three participants made a pause, while two did not.

Regarding the intonational domain of the parenthetical adverbial clause, a tendency has been noticed for it to form a separate IP, as already noticed by Döring (2007). The first participant indicated the intonational separateness of the parenthetical adverbial clause using the pause before the parenthetical and a major upward pitch movement in the middle of the parenthetical. The second parti-

cipant indicated the parenthetical's intonational separateness with the pitch rise with which the PAPPC ends, the pause before the parenthetical, the pitch reset the parenthetical starts with, and the rise that occurs in the middle of the parenthetical. In the third case, it is indicated by the strong pause separating the PAPPC and the parenthetical, the major pitch rise at the end of the PAPPC, and the pitch reset at the beginning of the parenthetical. In the fourth case, the parenthetical's separate intonational domain is indicated by the significantly lower pitch at its beginning compared to the ending of the PAPPC, as well as by a major upward pitch movement at its ending. The fifth participant indicated the separate IP of the parenthetical by a major rise at the end of the PAPPC, followed by the pitch reset at the beginning of the parenthetical, and a major upward pitch movement in the parenthetical.

Table 3 The prosodic properties of adverbial clauses

ADVERBIAL CLAUSE						
Parameter	**Participant 1**	**Participant 2**	**Participant 3**	**Participant 4**	**Participant 5**	**Average**
mean pitch in the parenthetical	159.2 Hz	127.1 Hz	174. 9 Hz	126.4 Hz	212 Hz	159.92 Hz
mean pitch in the PAPPC	192.5 Hz	149.6 Hz	197.1 Hz	153 Hz	266.4 Hz	191.72 Hz
mean pitch in the PAFPC	/	/	/	/	/	/
lowest pitch in the PAPPC	156.1 Hz	119.1 Hz	142 Hz	118.8 Hz	157.2 Hz	138.64 Hz
highest pitch in the PAPPC	242.6 Hz	185.7 Hz	292.1 Hz	221.3 Hz	439 Hz	276.14 Hz
lowest pitch in the parenthetical	138.8 Hz	97.2 Hz	109.2 Hz	106.2 Hz	152.1 Hz	120.7 Hz
highest pitch in the parenthetical	195 Hz	159.6 Hz	231 Hz	141.1 Hz	356.9 Hz	216.72 Hz
lowest pitch in the PAFPC	/	/	/	/	/	/
highest pitch in the PAFPC	/	/	/	/	/	/
intensity of the PAPPC	75.5 dB	75 dB	75.8 dB	68 dB	77.2 dB	74.3 dB

intensity of the parenthetical	73 dB	74.7 dB	74.9 dB	64.4 dB	75.8 dB	72.56 dB
intensity of the PAFPC	/	/	/	/	/	/
articulation rate in PAPPC	0.14	0.15	0.18	0.15	0.19	0.16
articulation rate in the parenthetical	0.16	0.13	0.18	0.22	0.20	0.18
articulation rate in the PAFPC	/	/	/	/	/	/
duration of the pause preceding the parenthetical	0.05s	0.09s	0.22s	no pause	no pause	0.07s
duration of the pause following the parenthetical	no PAFPC	no PAFPC	no PAFPC	no PAFPC	no PAFPC	/

4.4 The prosodic properties of non-finite clauses

The prosodic properties of non-finite clauses were analyzed using the example given in 13):

13) a. Naš najvažniji cilj edukovati decu o važnosti mentalnog zdravlja je ispunjen.

b. Our most important goal to educate children about the importance of mental health has been accomplished.

Regarding the mean pitch of the parenthetical non-finite clause compared to the mean pitch of the surrounding PAPPC and PAFPC, it can be said that the parenthetical tends to be lower in pitch than the PAPPC, but higher in pitch than the PAFPC. In other words, a tendency has been noticed for the utterance to follow a downward trend regardless of the parenthetical interpolation, as noticed by Wichmann (2001).

Considering the intensity of the parenthetical non-finite clause compared to the intensity of the surrounding anchor material, it has been noticed the parenthetical is lower in intensity than the PAPPC, but higher in intensity than the PAFPC. In other words, the utterance follows a downtrend in intensity. This supports Döring's (2007) claim that the intensity of a parenthetical expression does

not increase in comparison to the PAPPC, as well as Crystal's (1969) and Jung's (1980) insisting on reduction in intensity.

When it comes to the articulation rate of the parenthetical non-finite clause compared to the articulation rate of the PAPPC and the PAFPC, no pattern can be established. Two participants pronounced the parenthetical more rapidly than the surrounding material, two participants pronounced the PAPPC in a slower manner than the parenthetical and the PAFPC, and in one case the utterance followed a downward trend in the rate of articulation.

Considering the pauses preceding and following the parenthetical, three participants put pauses both between the PAPPC and the parenthetical, and between the parenthetical and the PAFPC. One participant put only a pause preceding the parenthetical, while one participant pronounced the utterance without pauses surrounding the parenthetical.

Regarding the intonational domain of the parenthetical non-finite clause, it can be said that it tends to form a separate IP, even though in two cases the parenthetical and the PAFPC do not seem to form separate IPs. The first participant indicated that the PAPPC and the parenthetical form separate IPs using the pitch rise at the end of the PAPPC and the pitch reset at the beginning of the parenthetical. However, she apparently did not pronounce the parenthetical and the PAFPC as separate IPs, since the end of the parenthetical and the beginning of the PAFPC are at nearly the same frequency, and there are no pauses between them. In the second case, the separate intonational domain of the parenthetical is indicated by strong pauses preceding and following it, the pitch reset at the beginning of the parenthetical, the pitch rise at its end, and the pitch reset at the beginning of the PAFPC. In the third case, the separate intonational domain of the parenthetical is indicated by strong pauses before and after the parenthetical, and a major pitch rise at its ending, which is followed by pitch reset at the beginning of the PAFPC. The fourth participant indicated that the PAPPC and the parenthetical form separate intonational domains by making a pause between them, the pitch rise at the end of the PAPPC and the pitch reset at the beginning of the parenthetical. He, however, did not pronounce the parenthetical and the PAFPC as separate IPs, since one ends at the other begins at the same frequency, and the parenthetical does not have a significant pitch movement, but rather they together follow a downward trend. In the fifth case, the separate intonational domain of the parenthetical is indicated by the pauses surrounding it, as well as by the major pitch rise it is characterized by, which is followed by pitch reset in the PAFPC. The results that served as the basis for the analysis given above are given in Table 4.

Table 4 The prosodic properties on non-finite clauses

NON-FINITE CLAUSE						
Parameter	**Participant 1**	**Participant 2**	**Participant 3**	**Participant 4**	**Participant 5**	**Average**
mean pitch in the parenthetical	174.7	141 Hz	179 Hz	140.3 Hz	213.7 Hz	169.7 Hz
mean pitch in the PAPPC	195.3 Hz	162.8 Hz	196 Hz	185 Hz	312.4 Hz	210.3 Hz
mean pitch in the PAFPC	145.8 Hz	107.1 Hz	174 Hz	132.2 Hz	198.8 Hz	151.6 Hz
lowest pitch in the PAPPC	102.8 Hz	132 Hz	139.1 Hz	146 Hz	209.3 Hz	132.Hz
highest pitch in the PAPPC	229.6 Hz	179.5 Hz	303 Hz	212.6 Hz	450 Hz	275 Hz
lowest pitch in the parenthetical	102.8 Hz	120.3 Hz	128.3 Hz	123.3 Hz	185.2 Hz	132 Hz
highest pitch in the parenthetical	274.5 Hz	178.3 Hz	251.5 Hz	211.6 Hz	311.5 Hz	245.5 Hz
lowest pitch in the PAFPC	81.38 Hz	107.1 Hz	136.5 Hz	118.1 Hz	138.5 Hz	116.32 Hz
highest pitch in the PAFPC	176.8 Hz	142.7 Hz	206.7 Hz	144 Hz	182.3 Hz	134.1 Hz
intensity of the PAPPC	74.9 dB	77 dB	76.2 dB	72.8 dB	81.7 dB	76.5 dB
intensity of the parenthetical	72.5 dB	77 dB	75.8 dB	69.7 dB	76.6 dB	74.3 dB
intensity of the PAFPC	67.7 dB	74.3 dB	72.5 dB	65 dB	71.5 dB	70.2 dB
articulation rate in PAPPC	0.26	0.20	0.25	0.21	0.26	0.24
articulation rate in the parenthetical	0.16	0.16	0.18	0.16	0.24	0.18
articulation rate in the PAFPC	0.26	0.20	0.20	0.16	0.23	0.21

duration of the pause preceding the parenthetical	no pause	0.30s	0.35s	0.04s	0.05s	0.15s
duration of the pause following the parenthetical	no pause	0.26s	0.13s	no pause	0.07s	0.09s

4.5 The prosodic properties non-restrictive relative clauses

The example given in 14) served to analyze the prosodic properties of non-restrictive relative clauses:

14) a. Nije trebalo da dozvole da to dete koje je tako mirno i dobro bude žrtva vršnjačkog nasilja.

b. They shouldn't have permitted that child who is so calm and good to be a victim of his peers.

Regarding the mean pitch of the parenthetical non-restrictive relative clause compared to the pitch of the PAPPC and the PAFPC, it can be said that the utterance follows a downward trend regardless of the parenthetical interpolation (which is in line with Döring's (2007) and Wichmann's (2001) findings. Only in one case, the parenthetical is higher in pitch than the surrounding anchor material, as seen in Table 5.

Considering the intensity of the parenthetical non-restrictive relative clause compared to the intensity of the surrounding anchor material, it can be noticed that the utterance follows a downward trend in intensity regardless of the parenthetical interpolation.

When it comes to the articulation rate of the parenthetical non-restrictive relative clause compared to the PAPPC and the PAFPC, no pattern has been noticed. In three cases, the parenthetical is pronounced more rapidly than the surrounding material, in one case the change in the articulation rate throughout the utterance is insignificant, while in one case the utterance is getting slower throughout its course.

Considering the pauses preceding and following the parenthetical non-restrictive relative clause, a strong tendency has been noticed to put the pauses both between the PAPPC and the parenthetical, and between the parenthetical and the PAFPC. Only one participant did not put the pause between the PAPPC and the parenthetical. These results are in line with Altman's (1981) findings.

Regarding the intonational domain, it can be said that the parenthetical non-restrictive relative clause tends to form a separate IP, which is consistent

with Döring's (2007) view of parentheticals as obligatorily forming separate IPs. The first participant indicated the intonational separateness of the non-restrictive relative clause by the pauses surrounding it, as well as by the major pitch rise in its middle. The second participant indicated the separate intonational domain of the parenthetical by the pauses preceding and following it, the pitch reset at its beginning, and the pitch rise at its ending, which is followed by the pitch reset at the beginning of the PAFPC. The third and the fourth participant indicated the separate IP of the parenthetical only by the pauses surrounding it. In the case of the fifth participant, the separate intonational domain of the parenthetical is indicated by the difference in the frequency at the end of the PAPPC and the beginning of the parenthetical, the major upward pitch movement of the parenthetical, and the pause between the parenthetical and the PAFPC.

Table 5 The prosodic properties of NRRC

NON-RESTRICTIVE RELATIVE CLAUSE						
Parameter	**Participant 1**	**Participant 2**	**Participant 3**	**Participant 4**	**Participant 5**	**Average**
mean pitch in the parenthetical	172.7 Hz	140.9 Hz	196.4 Hz	159.4 Hz	254.4 Hz	184.8 Hz
mean pitch in the PAPPC	176.5 Hz	145.9 Hz	204.6 Hz	168.6 Hz	223.9 Hz	183.9 Hz
mean pitch in the PAFPC	156.4 Hz	136.7 Hz	176.1 Hz	139.8 Hz	221.7 Hz	166.14 Hz
lowest pitch in the PAPPC	142.8 Hz	122.2 Hz	154.9 Hz	127.8 Hz	147.8 Hz	139.1 Hz
highest pitch in the PAPPC	268.7 Hz	186.5 Hz	366 Hz	240 Hz	384 Hz	289 Hz
lowest pitch in the parenthetical	146.5 Hz	119.6 Hz	138.3 Hz	119.7 Hz	167.6 Hz	138.3 Hz
highest pitch in the parenthetical	214.6 Hz	219.5 Hz	290 Hz	246.8 Hz	372.3 Hz	268.6 Hz
lowest pitch in the PAFPC	136.9 Hz	107.9 Hz	114.4 Hz	116.7 Hz	139.3 Hz	123 Hz
highest pitch in the PAFPC	167.6 Hz	150.3 Hz	233 Hz	168.7 Hz	321 Hz	208.1 Hz
intensity of the PAPPC	74.7 dB	76.8 dB	77.5 dB	71 dB	77.6 dB	75.5 dB

intensity of the parenthetical	72.5 dB	77 dB	77.5 dB	70.3 dB	78.2 dB	75.1 dB
intensity of the PAFPC	66.6 dB	73.2 dB	74.5 dB	63.7 dB	75 dB	70.6 dB
articulation rate in PAPPC	0.16	0.16	0.17	0.17	0.23	0.18
articulation rate in the parenthetical	0.13	0.14	0.16	0.16	0.25	0.17
articulation rate in the PAFPC	0.19	0.19	0.20	0.18	0.27	0.21
duration of the pause preceding the parenthetical	0.05	0.06s	0.04s	0.04s	no pause	0.04s
duration of the pause following the parenthetical	0.04s	0.26s	0.11s	0.12s	0.13s	0.13s

4.6 The prosodic properties of interrogative parentheticals

To analyze the prosodic properties of interrogative parentheticals, the participants read the example in 15):

15) a. Takmičenje je počelo prošle nedelje. Da li ćemo dogurati do drugog kruga šta misliš?

b. The competition started last week. Shall we reach the second round what do you think?

Regarding the mean pitch of the interrogative parenthetical compared to the PAPPC, it has been noticed that the parenthetical is lower in pitch than the PAPPC, which is consistent with Döring (2007). Only one participant pronounced the parenthetical as being higher in pitch than the PAPPC.

Considering the intensity of the interrogative parenthetical compared to the intensity of the PAPPC, a tendency has been noticed for the interrogative parenthetical to be quieter than the PAPPC. Only one participant pronounced the PAPPC more quietly than the parenthetical, which is not indicative of the possibility to refute the claim that the intensity of parentheticals does not increase in comparison to the PAPPC (Döring 2007).

When it comes to the articulation rate of the interrogative parenthetical compared to that of the PAPPC, it has been noticed that the parenthetical is signifi-

cantly slower than the PAPPC. This is partially in line with authors like Bolinger (1989: 186), Öhlschläger (1996: 317), and Wichmann (2001: 180f), who speak in more general terms, saying that parenthetical constructions may involve a change in the rate of articulation which can be realized as an increase or decrease in tempo dependent on the articulation rate of the anchor clause.

Considering the pause between the PAPPC and the interrogative parenthetical, in four out of five cases the pause is present, which is line with Altman's (1981) findings.

Regarding the intonational domain of the interrogative parenthetical, a tendency has been noticed for it to form a separate intonational phrase, which is in line with Döring's (2007) findings. The first, the second and the fifth participant indicated the separate intonational domain of the parenthetical by the pause preceding it, as well as by the pitch reset it starts with. The third participant indicated the intonational separateness of the parenthetical by the strong pause preceding it. In the fourth case, there is no pause between the PAPPC and the parenthetical, and the pitches at which the PAPPC ends and the parenthetical begins are very close, which might indicate that the parenthetical is pronounced as the tail of the PAPPC's intonational domain. The analysis of the interrogative parenthetical is based on the results given in Table 6.

Table 6The prosodic properties of interrogative clauses

INTERROGATIVE PARENTHETICAL						
Parameter	**Participant 1**	**Participant 2**	**Participant 3**	**Participant 4**	**Participant 5**	**Average**
mean pitch in the parenthetical	207.8 Hz	174.5 Hz	190 Hz	138.4 Hz	217.7 Hz	185.7 Hz
mean pitch in the PAPPC	190.2 Hz	154.7 Hz	206.6 Hz	153.8 Hz	262.4 Hz	193.5 Hz
mean pitch in the PAFPC	/	/	/	/	/	/
lowest pitch in the PAPPC	164.6 Hz	119.4 Hz	109.4 Hz	121.4 Hz	179.7 Hz	138.9 Hz
highest pitch in the PAPPC	257.7 Hz	213.6 Hz	371.1 Hz	230.3 Hz	422.4 Hz	299 Hz
lowest pitch in the parenthetical	153.9 Hz	122 Hz	137.3 Hz	107.7 Hz	136 Hz	131.4 Hz

highest pitch in the parenthetical	211.4 Hz	177.4 Hz	264.6 Hz	147.2 Hz	313 Hz	222.7 Hz
lowest pitch in the PAFPC	/	/	/	/	/	/
highest pitch in the PAFPC	/	/	/	/	/	/
intensity of the PAPPC	72.2 dB	76.8 dB	76.5 dB	70.3 dB	77.3 dB	74.6 dB
intensity of the parenthetical	66.7 dB	72 dB	73.2 dB	76.9 dB	75.1 dB	72.8 dB
intensity of the PAFPC	/	/	/	/	/	/
articulation rate in PAPPC	0.13	0.12	0.15	0.11	0.16	0.13
articulation rate in the parenthetical	0.24	0.33	0.29	0.29	0.40	0.31
articulation rate in the PAFPC	/	/	/	/	/	/
duration of the pause preceding the parenthetical	0.02s	0.16s	0.14			
s	no pause	0.12s	0.09s			
duration of the pause following the parenthetical	/	/	/	/	/	/

4.7 The prosodic properties of reporting verbs

The example in 16) served as the basis for analyzing the prosodic properties of reporting verbs:

16) a. Milan je prevelik zalogaj za nas. Zvezda će izgubiti kaže Marko sa bar 2 gola razlike.

b. Milan is too much for us. Zvezda will lose says Marko by at least two goals.

Regarding the mean pitch of the parenthetical reporting verb compared to the mean pitch of the PAPPC and the PAFPC, a tendency has been noticed for the utterance to follow a downward trend regardless of the parenthetical interpolati-

on. Only in one case, the parenthetical is pronounced at a higher pitch than the surrounding anchor material, as seen in Table 7.

Considering the intensity of parenthetical reporting verbs, two patterns have been noticed. In the first case, the difference in the intensity of the parenthetical and the surrounding material is too small to be considered significant. In the second case, the parenthetical is higher in intensity than the PAPPC, which is higher in intensity than the PAFPC.

When it comes to the articulation rate of the parenthetical reporting verb compared to the articulation rate of the PAPPC and PAFPC, no uniform pattern has been noticed. In two cases, the differences in the articulation rate throughout the utterance were insignificant. In three cases, the parenthetical is slower than the PAPPC and PAFPC.

Considering the pauses preceding and following the parenthetical reporting verb, a strong tendency has been noticed to put pauses both between the PAPPC and the parenthetical, and between the parenthetical and the PAFPC. Only one out of five participants omitted both potential slots for pauses.

Regarding the intonational domain of the parenthetical reporting verb, it has been noticed that it tends to form a separate intonational phrase, which is consistent with Döring (2007). The first participant indicated the intonational separateness of the parenthetical by the pauses surrounding it. The second participant indicated the separate IP of the parenthetical by the pauses surrounding it, as well as the major upward pitch movement it ends with, which is followed by the pitch reset in the PAFPC. The third participant indicated the intonational separateness of the parenthetical reporting verb by the pauses preceding and following it, the pitch reset it starts with, and the major pitch rise it ends with, which is followed by the pitch reset in the PAFPC. The fourth participant indicated the separate IP of the parenthetical by the pauses surrounding it, as well as the pitch rise at the end of the parenthetical, which is followed by the pitch reset in the PAFPC. The fifth participant did not use pauses to indicate the separate intonational domain of the parenthetical. However, she indicated it by the pitch rise at the end of the PAPPC, which is followed by the pitch reset at the beginning of the parenthetical, and the fact that each of the three potential IPs (PAPPC, parenthetical, and PAFPC) have their own major pitch movement.

Table 7The prosodic properties of reporting verbs

REPORTING VERBS						
Parameter	**Partici-pant 1**	**Partici-pant 2**	**Partici-pant 3**	**Partici-pant 4**	**Partici-pant 5**	**Average**
mean pitch in the parenthe-tical	201. 1 Hz	168.3 Hz	177.1 Hz	159.8 Hz	241.7 Hz	189.6 Hz
mean pitch in the PAPPC	204.6 Hz	154.4 Hz	207 Hz	166 Hz	263.1 Hz	199 Hz
mean pitch in the PAFPC	165.7 Hz	141.2 Hz	172 Hz	145.2 Hz	208.7 Hz	166.6 Hz
lowest pitch in the PAPPC	165.4 Hz	117.6 Hz	120 Hz	124.2 Hz	189.6 Hz	143.4 Hz
highest pitch in the PAPPC	240.4 Hz	240.6 Hz	328 Hz	204.7 Hz	393.5 Hz	281.4 Hz
lowest pitch in the paren-thetical	183.9 Hz	145.5 Hz	128.9 Hz	142.6 Hz	183.1 Hz	156.8 Hz
highest pitch in the paren-thetical	226 Hz	199.4 Hz	262.4 Hz	191 Hz	297.1 Hz	235.2 Hz
lowest pitch in the PAFPC	149.8 Hz	96.39 Hz	106.6 Hz	108.6 Hz	134.9 Hz	119.26 Hz
highest pitch in the PAFPC	239.3 Hz	177.9 Hz	260.5 Hz	178.2 Hz	356.7 Hz	242.5 Hz
intensity of the PAPPC	73.6 dB	76.4 dB	76 dB	68.2 dB	78 dB	74.4 dB
intensity of the parenthe-tical	76.9 dB	77 dB	77 dB	70.3 dB	77.5 dB	75.7 dB
intensity of the PAFPC	72.6 dB	75.4 dB	76 dB	67.7 dB	75.9 dB	73.5 dB
articulation rate in PA-PPC	0.16	0.16	0.17	0.15	0.20	0.17
articulation rate in the parenthetical	0.15	0.18	0.20	0.17	0.24	0.19
articulation rate in the PAFPC	0.16	0.17	0.19	0.15	0.23	0.18

duration of the pause preceding the parenthetical	0.07s	0.69s	0.16s	0.04s	no pause	0.19s
duration of the pause following the parenthetical	0.08s	0.17s	0.21s	0.06s	no pause	0.11s

5. Conclusion

In an attempt at answering the question whether clausal parenthetical in Serbian exhibit any special prosodic characteristics, the parameters taken into account were: pitch, intensity, articulation rate, pauses, and intonational separateness.

Regarding the pitch of the parenthetical constructions in comparison to the pitch of the surrounding material, the findings do not corroborate the view that parentheticals are potentially of a lower or higher pitch than the surrounding material. Instead, a strong tendency has been noticed for the utterance to follow a downward trend in pitch regardless of the parenthetical interpolation.

Considering the intensity of the parenthetical constructions compared to the intensity of the PAPPC and the PAFPC, the findings do not go in favor of the view that parenthetical constructions differ from their surrounding either by decreasing or increasing in intensity. Instead, a strong tendency has been noticed for the utterance to fall in intensity regardless of the parenthetical interpolation.

When it comes to the articulation rate of the parenthetical expressions in comparison to the articulation rate of the surrounding material, it is very difficult to establish a pattern. In numerous cases there were no significant differences in the articulation rate of the parenthetical and the surrounding material. In some cases, the PAPPC is slower or more rapid than the parenthetical and the PAFPC, which do not differ in articulation rate. There were also cases where the parenthetical is more rapid than the surrounding material, or slower than the PAPPC but more rapid than the PAFPC. In some cases, the utterance followed a downward trend in the articulation rate.

Considering the pauses surrounding the parenthetical expressions, the findings go in favor of the view that parenthetical are often but not obligatorily set off by pauses. In the vast majority of cases, the participant used pauses both between the PAPPC and the parenthetical, and between the parenthetical and the PAFPC. However, there were also cases where participants only used the pause preceding or following the parentheticals, or the cases where they used no pauses at all.

Regarding the question whether, in Dehé's (2014) terms, clausal parentheticals in Serbian belong to the group of 'prototypical parenthesis', 'integrated parenthesis' or 'prosodically different parenthesis', it can be said that the data suggest that the vast majority of clausal parentheticals belong to the group of 'prototypical parenthesis'. In other words, clausal parentheticals tend to form their own intonational phrases, and, thus, meet both prosodic and syntactic criteria for parenthesis. The intonational separateness of clausal parentheticals is often indicated by the pauses preceding and following them. However, other cues have also been noticed. For example, sometimes the separate intonational domains of the PAPPC and the parenthetical were indicated the pitch rise at the end of the PAPPC and the pitch reset at the beginning of the parenthetical. In the same manner, the intonational separateness of the parenthetical and the PAFPC was indicated by the pitch rise at the end of the parenthetical followed by pitch reset at the beginning of the PAFPC. The cases of 'integrated parentheticals' were indeed very sporadic. In one pronunciation of the parenthetical elliptical clause, the PAPPC and the parenthetical seem to form a single IP. In one case of the pronunciation of the parenthetical non-finite clause, it formed as single IP with the PAFPC. All other examples of clauses parentheticals in Serbian formed separate IPs, thus representing the examples of 'prototypical parenthesis'.

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Gordana B. Ćirić Ognjenović

PROZODIJSKE OSOBINE PARENTETIČKIH IZRAZA U FORMI KLAUZE U SRPSKOM JEZIKU

Sažetak

Cilj ovog rada jeste da predstavi analizu prozodijskih osobina parentetičkih izraza u formi klauze u srpskom jeziku. Pri analizi u obzir se uzima visina, intenzitet, brzina artikulacije, kao i intonacijski domen u odnosu na klauzu u kojoj se parentetički izraz nalazi. Govoreći o visini i intenzitetu, primećeno je da izgovor klauze domaćina prati silaznu putanju bez obzira na prisustvo parentetičkog izraza. Što se tiče brzine artikulacije, nije bilo moguće uočiti pravilnosti u ponašanju parentetičkog izraza u odnosu na klauzu domaćina. Uzimajući u obzir intonacijski domen, može se reći da parentetički izrazi u formi klauze u srpskom jeziku imaju tendenciju ka formiranju odvojenih intonacijskih fraza, bivajući tako svrstane u 'prototipske parentetičke izraze' prema podeli koju daje Dehé's (2014).

Ključne reči: parentetičke interpolacije, visina, intenzitet, brzina artikulacije, intonacijska kontura