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### **Lidija Cvikić**

University of Zagreb, Faculty of Teacher Education

Savska 77, HR-10020 Zagreb

orcid.org/0000-0003-4090-0268

*lidija.cvikic@ufzg.hr*

### **Ivana Trtanj**

J. J. Strossmayer University of Osijek, Faculty of Education

Ul. cara Hadrijana 10, HR-31000 Osijek

orcid.org/0000-0002-4700-8443

*itrtanj@foozos.hr*

## EXPRESSING CAUSALITY IN CROATIAN L1 AND L2 ARGUMENTATIVE WRITING

An argumentative text should present evidence that prove the author's claims, which implies logical organization of the text and expression of a cause-and-effect relationship. This paper explores the way of expressing causality in argumentative writing in Croatian as a mother tongue (L1), and a foreign language (L2). The study investigates Croatian L1 and L2 speakers' use of causative connectives in various types of syntactic structures, based on the corpus of 110 argumentative essays (Croatian L1 N=55, Croatian L2 N=55). The results show that in order to express causality, L1 and L2 speakers use the same connectives, in the same syntactic types, but not at the same frequency. Croatian L1 speakers showed strong preference for using *pa* as a typical causal connective for coordinated and *jer* for subordinate compound sentences. In comparison to Croatian L1 speakers, L2 speakers showed two tendencies: to overuse some connectives (*jer*, *zato što*), and to underuse the others (*pa*).

### **1. Introduction**

The main objective of language learning within contemporary language teaching approaches is to develop learners' communicative language competence. In that theoretical frame, a text, as "any sequence or discourse (spoken and/or

written”), forms the core of any language activity “whether as a support or as a goal, as product or process” (CEFRL 2002: 10), and the development of students’ discourse competence is of special importance in language teaching/learning. Even though various theoretical models of communicative competence<sup>1</sup> (e.g. Canale 1983; Celce-Murcia, Dörnyei and Thurrell 1995 etc.) differ considerably in their understanding of the nature, role and components of discourse competence, Pavičić Takač and Bagarić Medve (2013: 176) claim that cohesion, coherence and text composition are the three main elements of discourse competence common to all theoretical models. Text cohesion, a way in which sentences are linked in the text, is achieved by grammatical and/or lexical cohesive markers, i.e. it can be observed and investigated at the surface level of the text (c.f. Mikić Čolić and Trtanj 2019). In contrast to text cohesion, text coherence is a more abstract notion (Pavičić Takač and Vakanjac Ivezić 2019). It is defined as the intelligibility of the text, i.e. inner relatedness of all text parts to its main message (Sanford 2006). More precisely, a coherent text must have clauses clearly connected and logically related to one another, while at the same time each sentence “must somehow be relevant to the overall topic of the discourse” (Sanford 2006: 585). Mikić Čolić and Trtanj (2019) claim that coherence, as inner logical and semantic connection of the text sentences perceived by readers or listeners, can be defined as a subjective phenomenon, since the perception of coherence might depend on the recipient’s interpretation of the text.

Although text cohesion and text coherence are the main elements of discourse competence, little is still known about their importance for discourse competence in Croatian, both as a first (L1) and foreign language (L2). Several studies have investigated discourse competence in Croatian L1 (Aladrović Slovaček 2019; Bogetić, Arapović and Kuvač-Kraljević 2008; Gabaj and Kuvač Kraljević 2019; Kuvač-Kraljević, Hržica and Vdović Gorup 2020; Radić Tatar 2013; Trtanj and Kuvač Kraljević 2017; Trtanj 2019), while only a few dealt with it in Croatian L2 (Mikić Čolić and Trtanj 2019, 2020). The aim of this study is to fill that gap.

The purpose of this study is to explore the way in which Croatian native speakers and foreign language users express causality in their argumentative writing. Argumentative texts should present different points of view with a clearly

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<sup>1</sup> A critical overview of theoretical approaches to communicative competence is given in Pavičić Takač and Bagarić Medve (2013).

expressed author's opinion supported by arguments. Therefore, it is crucial for an argumentative essay to have a strong logical organization, and that cause-and-effect relationship of text parts is clearly expressed. Sandorf (2006) claims that one way of establishing a link between various text parts is by expressing a causal relation. The following section will set the theoretical background of the study by describing causality in Croatian language, and syntactic and discourse development in L1 and L2.

## 2. Theoretical background

### 2.1. Expressing causality in the Croatian language

As in other Slavic languages, in the Croatian language causality is not a grammatical, but semantic-pragmatic category (Mihaljević 2016). Cvikić and Cvitanušić (2021) state that causal relations in a Croatian text can be establish explicitly, by grammatical and lexical means, or implicitly, by discourse content, as in (1).

- (1) Još pada kiša. Ne idemo van. 'It is still raining. We are not going out.'

In an explicitly expressed causal relation, cause and effect segments can be connected in various syntactic types: in a simple sentence (2), and in a compound sentence – with a coordinate (3) or a subordinate clause (4).

- (2) Ne idem van zbog kiše. 'I am not going out because of the rain.'
- (3) Pada kiša pa ne idem van. 'It is raining, so I am not going out.'
- (4) Ne idem van zato što pada kiša. 'I am not going out because it's raining.'

The cause-effect relation can also be established between sentences by using a text connector marker, as in (5) or a discourse marker<sup>2</sup>, as in (6).

- (5) Pada kiša. Stoga ne idem van. 'It is raining. Therefore, I am not going out.'
- (6) Pada kiša. Znači, ne idem van. 'It is raining. It means, I am not going

<sup>2</sup> For the difference between text connectives and discourse markers compare Nigoević (2011).

out.’

In general, in a compound sentence it is possible to express forward or backward causality. Forward causality is expressed in sentences where a cause (*It is raining.*) precedes an effect (*I am not going out.*), as in (3), while backward causality is expressed in sentences where an effect (*I am not going out.*) precedes a cause (*It is raining*), as in (4).

The contemporary comprehensive grammars of the Croatian language (Barić et al. 1997; Silić and Pranjković 2005; Težak and Babić 2000) mostly describe explicit causality, expressed by a subordinate compound sentence<sup>3</sup>, and list its connectives. Barić et al. (1997) distinguish between stylistically unmarked (e.g. *jer, što, kad(a)*, etc.) and marked connectives (e.g. *jerbo, pošto, gdje*, etc.), while Silić and Pranjković (2005) differentiate between simple (e.g. *jer, kako, čim*, etc.) and complex connectives (e.g. *stoga što, zato što*, etc.). The latter grammar also contains information on the Croatian language at the discourse level and lists text connectors, including causal-consecutive connectors, such as: *zato* ‘therefore’, *zbog toga* ‘because of it’, *uslijed toga* ‘hereupon’, etc. (Silić and Pranjković 2005: 361).

Croatian grammar books do not differentiate between forward and backward causality. However, the information regarding the constraints on using a connective is implied, i.e. Croatian grammars describe the obligatory order of clauses in a causal compound sentence, with regard to the connectives used. For example, the connective *budući da* ‘since’ can be used in an unmarked clause order (the main clause precedes the subordinate clause), as in (7), and in inversion – when a subordinate clause precedes the main clause, as in (8) (Silić and Pranjković 2005: 342).

(7) Ne idemo van, budući da/jer pada kiša. ‘We are not going out, since it is raining.’

(8) Budući da/\*jer pada kiša, ne idemo van. ‘Since it is raining, we are not going out.’

On the other hand, the connective *jer* ‘because’ can be used only in an unmarked order (7), while its use in inversion is ungrammatical (8).

<sup>3</sup> Silić and Pranjković (2005) state that one of the semantic relations between clauses in a coordinate compound sentence is the cause-effect relationship, which can be expressed by the connective *pa* ‘so’.

In other words, the examples show that the Croatian connective *budući da* can be used to express both forward and backward causality, while the connective *jer* can be used only to express backward causality.

Even though grammar books contain general information on the clause order in causal subordinate sentences, they lack more detailed information on semantic, pragmatic and stylistic features of causal connectives. This might be of special importance for language learners who need sufficient input in order to master the expression of causality. Cvikić and Cvitanušić (2021) emphasize that due to its non-grammatical nature, causality is not explicitly taught to Croatian L2 speakers, but its acquisition will emerge as a result of Croatian learners' morphological, lexical, syntactic and discourse development.

Taking into consideration all facts that have been presented here, one may assume that the use of causal connectives in Croatian as L1 and L2 will depend on the level of users' syntactic and discourse competence. In the following section, a brief overview of syntactic and discourse development in L1 and L2 will be given.

## 2.2. Development of syntax and discourse in L1 and L2

Syntactic and discourse competence play an important role in the ability of an author to create a coherent text. The development of syntax is about levels of syntactic complexity, i.e. syntactic maturity, which is understood as a capacity enabling speakers to produce complex syntactic units (Silva et al. 2010). The production of compound-complex sentences, which emerge at the beginning of formal education, is influenced by education (Aladrović Slovaček 2019; Radić Tatar 2013; Mamula and Trtanj 2018).

By the age of 12, Croatian L1 children acquire grammatical case, plurals, gender, comparison of adjectives, finite and non-finite forms of inflected words, all of which enables them to form simple and, later, complex types of sentences (Jelaska 2010). In the Croatian language, there are numerous accounts of the development of syntax among children who are at the language automatization stage (see Jelaska 2007; Kuvač 2004) and children of preschool and early school age (Mamula and Trtanj 2018; Radić Tatar 2013; Trtanj and Kuvač Kraljević

2017). However, there is a lack of research on the syntactic development of children after the language automatization stage and among older school children. According to Češi (2018), at the end of compulsory education, Croatian L1 students have mastered more complex syntactic structures and they are expected to possess higher levels of syntactic competence, such as the use of complex sentences with different types of relative clauses.

Second language speakers acquire complex language structures later than native speakers; these structures are considered a feature of higher L2 competence and the production of more difficult and advanced structures is an indicator of a ‘better’, more mature, more advanced, i.e. more complex language (Bulté and Housen 2014: 45). Trtanj and Mikić Čolić (2019) examined syntactic complexity and subordination in the written discourse of speakers of Croatian L2. The findings confirmed individual differences among study participants and showed that measures of syntactic complexity were good predictors of L2 syntactic development.

Syntax is an important factor used for describing features of text production because it refers to the nature of syntactic constructions in oral and written discourse. As for discourse competence, the most important indicators of language maturation are cohesion and coherence. Crowhurst (1987) wrote about a decline in the use of temporal and causal conjunctions in narrative texts of learners in grades 6, 10 and 12, and concluded that texts written by older learners show greater diversity of connectives but not necessarily more connectives than narratives produced by younger learners.

Aladrović Slovaček (2011) found that sentence length in coherent texts produced by Croatian L1 learners at the primary level of education depended on the functional style of the text. Learners only partially managed to master the ability of creating a coherent text when following an open task design and explicit guidelines (Aladrović Slovaček 2011). More specifically, once again the results of the study on discourse competence confirmed the complexity of the writing process and its dependence on various factors. Discourse competence seems to be mainly influenced by general abilities of an individual (Češi 2018).

Numerous studies on the use of connectives in L2 texts show that non-native speakers use connectives either too often or incorrectly, and this is often the

case with connectives typical for lower levels of language proficiency (Bagarić Medve and Čelebić 2012; Chen 2006; Jaroszek 2008; Milton and Tsang 1993; Pavičić Takač and Bagarić Medve 2013; Tankó 2004). An interesting study by Chen (2006), who compared native and non-native speakers, showed that the latter group used more connectives although no significant statistical difference was found in the type of connectives used. The analysis of the use of connectives in English and German in the studies conducted by Bagarić Medve and Čelebić (2012) and Bagarić Medve and Pavičić Takač (2013) showed that foreign language learners overuse connectives *und/and*, *aber/but*, *wenn/when*, *dass/that*, which is typical for lower levels of language competence, although the learners' competence level was higher (B2). In contrast to these studies, Carrió-Pastor (2013) examined the use of connectives *therefore*, *meanwhile*, *for example*, *to sum up*, *originally* and failed to find a difference between English L1 and L2 speakers. The study showed equal use of some connectives by both groups of participants, such as *in brief*, *in short*, *eventually*, *in sum*, and the researcher explained that the text authors, native or non-native, often used semantically equivalent sentence connectives, thus, preferred using *in conclusion*, *in summary*, *to conclude* to *in sum*. In his longitudinal study, Jaroszek (2008) explored L1 influence, exposure to authentic language input, teacher talk, and teaching methods on a sample of 13 high school learners of English as a foreign language (EFL) in Poland. He concluded that these factors influence the development of discourse competence but, despite exposure, the learners failed to display a more complex or skillful use of connectives. Namely, the most frequently employed connectives were those typical of lower levels of language competence (*and*, *but*, *then*, *because*, *so* and *or*), but they were able to use them in a way which was equally appropriate to the way these conjunctions were used by native speakers. Zuferey and Gygax (2017) confirmed that French L2 learners have difficulties with understanding the meaning of connectives with a complex form-function mapping, one of the functions being causative.

Overall, the evidence presented in this section confirms the complex nature of syntactic and discourse development in both L1 and L2. Therefore, the acquisition of a semantic category which can be expressed by various syntactic and discourse means, as is the category of causality in Croatian, might pose a challenge for language learners. In order to enhance our knowledge about the process of syntactic and discourse development in Croatian, the present research explores

for the first time how Croatian L1 and L2 speakers express explicit causality by using causal connectives.

### 3. Study

#### 3.1. Aim of the study

The main aim of this study is to gain more insight into the use of various connectives for expressing causality in argumentative essays by Croatian native speakers (L1) and non-native (L2) speakers.

The study was conducted to address the following research questions:

1. Do Croatian L1 and L2 speakers use causal connectives equally frequently?
2. Which connectives do Croatian L1 and L2 speakers most often use to express causal relations?
3. Do Croatian L1 and L2 speakers show any preference in using particular connectives?

Based on the research questions three hypotheses were made:

- H1: According to the findings on the L2 speakers' overuse of connectives, it is expected that Croatian L2 speakers will use more causal connectives than Croatian L1 speakers.
- H2: It is expected that the two groups of users will differ in the type of causal connectives they use, in relation to the used syntactic structures. Since L2 speakers acquire complex language structures later than L1 speakers, it is expected that Croatian L2 speakers will use more causal connectives in more simple syntactic structures, i.e. in simple sentences.
- H3: Both, Croatian L1 and L2 speakers will show strong preference for using particular connectives, but the preference for use will be different for each group of language speakers. It is expected that Croatian L1 speakers will most frequently use causal connectives that can express both forward and backward causality (e.g. *zato što*). Since the use of some causal connectives requires a certain level of grammar competence, it is

expected that Croatian L2 speakers will not frequently use connectives with complex form-meaning relation (e.g. *pa*).

### 3.2. Methods

In order to explore the use of various connectives for expressing causality in argumentative essays written by Croatian L1 and L2 language users, a corpus of argumentative essays was investigated. The corpus was created for the research project *Textual coherence in foreign language writing: Croatian, German, English, French and Hungarian in comparison* (IP-2016-06-5736) comprising essays written by native and non-native speakers of all five investigated languages. The participants signed an informed consent form and before writing they were given short instructions for writing in the target language. All essays were written on the same topic (*Life in the city*) and comprised 200-250 words. All texts were handwritten and were not corrected for grammar and/or spelling mistakes. The texts were transcribed, coded for participant ID and his/her L1, and prepared for computational analysis.

For this study, 110 essays written by two groups of authors were analyzed – 55 essays written by Croatian native speakers, all students of foreign languages at various Croatian universities, and 55 essays written by Croatian L2 learners at the B1 level, speakers of English (N=20), German (N=14), French (N=6) and Hungarian as L1 (N=15)<sup>4</sup>. The Croatian L2 speakers were students of Croatian at foreign universities and in *Croaticum – Center for Croatian as L2* at the University of Zagreb. All Croatian L2 speakers were assessed for the level of Croatian language competence prior to their participation in the project. The texts were used to create two sub-corpora, Croatian as L1 and Croatian as L2 sub-corpus, which were analyzed by the corpus linguistic tool *Sketch Engine* (Kilgarriff et al. 2014). A qualitative analysis of the type and frequency of causal connectives was conducted.

<sup>4</sup> Individual differences and L1 transfer are not in the focus of this study, therefore the age, gender and L1 were not considered independent variables. However, to ensure a certain level of text quality, all L2 participants were controlled for their Croatian language competence.

## 4. Results

In order to prove that the collected Croatian L1 and L2 data are comparable, a structural analysis of the two investigated sub-corpora was performed. Data presented in Table 1 show that the two sub-corpora are comparable, since they are similar in all features investigated: number of sentences, number of lemmas and number of tokens. Croatian L1 corpus consists of 911 sentences, while Croatian L2 corpus comprises 944 sentences. Croatian L1 corpus is smaller than Croatian L2 corpus also at the level of lemmas, i.e. Croatian L1 consists of 2,348, and Croatian L2 of 2,722 lemmas. However, at the level of tokens Croatian L1 corpus is larger than Croatian L2 corpus. There were 16,724 tokens in Croatian L1 and 14,424 in Croatian L2 essays.

Table 1: General data on sub-corpora

	Croatian L1	Croatian L2
Number of sentences	911	944
Number of lemma	2348	2722
Number of tokens	16,724	14,424
Average essay length	304	262
Average sentence length	18.36	15.28

Table 1 shows that in comparison to Croatian L2 speakers, Croatian L1 speakers on average produced longer essays (Croatian L1=304, Croatian L2=262) with longer sentences (Croatian L1=18.36, Croatian L2=15.28), both expressed in the number of tokens used. However, the obtained results on the type-token ratio (Croatian L1=0.14, Croatian L2=0.18) show greater lexical richness in Croatian L2 essays, i.e. Croatian L1 speakers tended to repeat the same words while Croatian L2 users tended to use different words in the texts.

In order to explore the frequency of causal connectives, a total frequency word list was created for each sub-corpus from which the data on frequency of causal connectives was excerpted. For connectives with more than one meaning (such as *pa*), an additional analysis was undertaken to calculate only the number of sentences in which the causal meaning was expressed. The results are shown in Table 2.

Table 2: Frequency list of causal connectives

	Croatian L1	Croatian L2
jer	38	56
pa	18	9
stoga	5	6
zato	5	12
zato što	3	29
zbog	40	34
zbog toga	11	18
budući da	3	1
<b>total</b>	123	165

Table 2 shows that Croatian L1 and L2 speakers used eight connectives to express the causative function: *jer*, *pa*, *stoga*, *zato*, *zato što*, *zbog*, *zbog toga* and *budući da*. However, the connectives are not used at the same frequency by the two groups of speakers. In general, Croatian L2 speakers use causal connectives more frequently than Croatian L1 speakers, i.e. the total frequency of all causal connectives in Croatian L1 was 123, and in Croatian L2 it was 165. Thus, some connectives are used more frequently by Croatian L1 than by Croatian L2 speakers, for example connective *pa* (Croatian L1  $f=18$ , Croatian L2  $f=9$ ) or *zbog* (Croatian L1  $f=40$ , Croatian L2  $f=34$ ). The results in Table 2 also confirm the difference in the use of various connectives within each group of speakers. The most frequently used connective by Croatian L1 speakers is *zbog* ‘because’ ( $f=40$ ), while the least used is *zato što* and *budući da* ‘since/because’ ( $f=3$ ). The most frequently used connective by Croatian L2 speakers is *jer* ‘because’ ( $f=56$ ), while the least frequently used is *budući da* ‘since’ ( $f=1$ ).

Since causal connectives can be used in different types of syntactic structures, an additional analysis was performed to investigate the types of syntactic structures Croatian L1 and L2 speakers used to express causality. Table 3 presents the results of the conducted analysis.

Table 3: Number of causal syntactic structures and its ratio in the corpus

Type of causal syntactic structure	Croatian L1		Croatian L2	
	number	ratio	number	ratio
simple sentences	40	.04	34	.04
coordinated sentences	24	.03	23	.02
subordinate sentences	50	.05	95	.1
sentences with text connectors	6	.01	13	.01
<b>total</b>	<b>123</b>	<b>.14</b>	<b>165</b>	<b>.17</b>

The results presented in Table 3 show the number of different causal syntactic structures produced by each group of speakers, as well as its ratio in each sub-corpus. To express causality both groups of speakers most frequently used subordinated sentences, followed by simple sentences (Table 3). Coordinated sentences were less frequently used by both groups of speakers, and the least used were sentences with text connector that express causality (Table 3). The total ratio of all syntactic types that express causality in Croatian L1 corpora is .14 and in Croatian L2 is .17 (Table 3). Interestingly, the two groups of speakers differ in the frequency with which they use each syntactic type (Table 3). Causative simple sentences were more frequently used by Croatian L1 ( $f=40$ ) than by Croatian L2 speakers ( $f=34$ ), the same as coordinated compound sentences (for Croatian L1  $f=24$ , for Croatian L2 speakers  $f=23$ ), although in the latter with smaller difference between the two groups. In contrast, in subordinate compound sentences the causal connectives were almost two times more frequently used by Croatian L2 ( $f=95$ ) than by Croatian L1 speakers ( $f=50$ ). The same was also the case with the use of text connectors - Croatian L2 speakers used causative text connectors more frequently ( $f=13$ ), than Croatian L1 speakers ( $f=6$ ).

In order to investigate a possible speakers' preference for the use of particular connectives, a more in-depth qualitative analysis was performed. Table 4 shows the frequency of causal connective use by syntactic types. The data shows that in coordinate sentences Croatian L1 speakers preferred to use the connective *pa* ( $f=18$ ) over other coordinate connectives ( $f=6$ ), while in subordinate sentences they preferred to use the connective *jer* ( $f=38$ ). Croatian L2 speakers also showed

preference to use the connective *jer* in subordinate compound sentences and the use of the text connector *zbog (toga)* (f=9) over *zato (što)* (f=4). Even though a statistical analysis was not performed, it is evident from the results presented in Table 4 that the causal connective *zato što* in subordinate compound sentences was overused by Croatian L2 speakers (f=29) in comparison to Croatian L1 speakers (f=1).

Table 4: Use of causal connectives by syntactic types

		Croatian L1	Croatian L2
<b>simple sentence</b>			
	<i>zbog</i>	40	34
<b>coordination</b>			
	<i>pa</i>	18	9
	<i>zato</i>	1	8
	<i>stoga</i>	5	6
subordination			
	<i>zato što</i>	1	29
	<i>jer</i>	38	56
	<i>zbog toga</i>	8	9
	<i>budući da</i>	3	1
<b>text connectors</b>			
	<i>zato (što)</i>	3	4
	<i>zbog (toga)</i>	3	9
<b>total</b>		123	165

## 5. Discussion

The aim of this study was to explore the use of various connectives for expressing causality in argumentative essays written by Croatian L1 and L2 speakers. Both groups have used the same eight connectives: *pa*, *jer*, *stoga*, *zato*, *zato što*, *zbog*, *zbog toga* and *budući da*, in syntactic structures that made 14% of all the sentences in texts produced by Croatian L1 speakers, and 17% by Croatian L2 speakers (Table 4).

Very little was found in the literature on the use of causal connectives in the Croatian language. Mamula and Trtanj (2018) have confirmed the use of causal compound sentence in narrative texts produced by Croatian L1 children between the ages of 8 and 10. Češi (2015: 147) reports that in their writing 76% of Croatian L1 speakers at the end of compulsory education (age 14) have produced at least one causal compound sentence. Unfortunately, none of the above studies list the connectives used by L1 speakers to express causal function. However, Grgić, Gulešić Machata and Nazalević Čučević (2013: 154–155) claim that Croatian L2 learners at the B1 level should be able to express causality by using the connectives *jer* ‘because’, *zato što* ‘because of’, *zbog* ‘since’, all of which are confirmed by the findings of this study.

Češi (2015) reports that causal compound sentences make a very low overall ratio in the produced L1 texts. Only 8% of all sentences in their writing were causal (Češi 2015: 148). Accordingly, in their research on syntactic complexity and subordination in Croatian L2, Trtanj and Mikić Čolić (2019) also report the low overall rate of causal subordinate sentences – only 3.27% of all sentences. The ratio of causative syntactic structures reported in this study is considerably higher (Croatian L1=14%, Croatian L2=17%), which might reflect the genre of writing (argumentative essay).

According to the first hypothesis, it was expected that Croatian L2 speakers would use more causal connectives than Croatian L1 speakers and the obtained results (Table 1) confirmed that expectation. This finding confirms the well documented L2 speakers’ tendency to overuse certain syntactic elements (c.f. Chen 2006; Tankó 2004; Milton and Tsang 1993; Zolotova 2014). Besides the general tendency of L2 speakers to use some syntactic features more often, another possible explanation for the results reported in this study is that L2 speakers tend to express causal meaning more explicitly by using causal connectives, as in (9), while L1 speakers express causative meanings more implicitly, with no lexical mean that would express causal relation, as in (10). This assumption would be in line with several studies (c.f. Haswell 2000; McCutchen and Perfetti 1982) that proved less frequent use of cohesive devices by native speakers in favor of their growing ability to bind ideas implicitly.

- (9) U gradu ima dosta veliki zgrada, ljudi, i auta, **pa** nema mjesta za prirodu. **Zbog toga** ljudima isto nedostaje čista voda i čist zrak.

‘There are many large buildings, people and cars in the city, **so** there is no place for nature. **Therefore**, people also lack clean water and clean air.’

- (10) Ljudi u gradu su ponajviše prisiljeni živjeti u vrlo malom prostoru. Manje ljudi ima kućne ljubimce. ‘People in the city are mostly forced to live in a very small space. Fewer people have pets.’

The current study found that both groups of speakers show the same frequency path in using causal connectives, as presented in (11) - the causal connectives being the most frequently used in subordinate compound sentences, followed by simple sentences, less in coordinate compound sentences and the least as text connectors, linking two sentences.

- (11) subordination > simple sentence > coordination > text connectors

This result, together with data presented in Table 4, confirms the findings of several studies (Carrió-Pastor 2013; Jaroszek 2008) that L1 and L2 speakers use the same type of sentences and the same connectives, but not to the same frequency. Namely, although the same set of connectives was used by both groups of speakers, the study showed that Croatian L1 and L2 speakers express tendency to use different causal connectives as the most frequent. The most frequently used connectives by Croatian L1 speakers were *zbog, jer* and *pa*, while Croatian L2 speakers most frequently used the connective *jer* followed by *zbog* and *zato što*. The high frequency of the connective *jer* in this study reflects the findings in a previous work by Cvikić and Cvitanušić (2021) who established that *jer*, compared with *budući da* and *zato što* was over two times more frequently used causal connective in Croatian L1 texts.

However, the second hypothesis that Croatian L2 speakers would use more causal connectives in more simple syntactic structures than L1 speakers was not confirmed. On the contrary, the data presented in Table 4 show that Croatian L1 speakers have produced more simple sentences than Croatian L2 speakers. Even though this finding is contrary to the previous study by Bulté and Housen (2014) which suggested that L2 speakers will use more simple structures, the question is whether the use of *zbog* ‘because of’ could be considered a simple structure

for Croatian L2 speakers.<sup>5</sup> Namely, the connective *zbog* should be followed by a nominal phrase in the genitive case. The fact that genitive in Croatian is a case with the most complex form-function relation (Jelaska 2005, 2015; Jelaska and Cvikić 2005; Udier, Gulešić Machata and Čilaš Mikulić 2006), in which various morpho-phonological rules should be applied (Barić et. al 2005; Kuvač and Cvikić 2005), and the lexical elements that could be used after *zbog* are restricted to nominal word classes, could lead L2 learners to use the syntactic avoidance strategy (c.f. Moghizadeh 2008), i.e. to avoid the use of the connective *zbog*. Further research should be taken to prove this avoidance hypothesis.

The obtained results on the use of the connective *zbog* might at the same time be interpreted to contradict the second, but to support the third hypothesis. According to the third hypothesis it was expected that Croatian L1 and L2 speakers would show a strong preference for using particular connectives, but different for each group of speakers. In general, the hypothesis was confirmed. However, the hypothesis on the most frequent connective being *zato što* for Croatian L1 speakers was not confirmed. Croatian L1 speakers showed a strong preference of using the connective *pa* for expressing the causality in coordinative compound sentences, and the connective *jer* in subordinate compound sentences. Croatian L2 speakers only showed a strong preference for using the connective *jer* (in subordinate compound sentences), but no preference to use connective *pa*. The finding on Croatian L1 speakers is in line with the previous work by Cvikić and Cvitanušić (2021) who reported the high frequency of the causal connective *jer* in the corpus of Croatian L1 texts. However, since the usage of the connective *jer* is restricted to express only backward causality, Croatian L1 preference to *jer* over other subordinate connectives still remains unclear. This finding of the most preferred connectives by Croatian L2 speakers is consistent with that of Zuferey and Gyax (2017) who showed that French L2 learners had difficulties with understanding meaning of connectives with a complex form-function mapping. Namely, the connective *pa*, as a connective for coordinative compound sentences, has a primarily coordinative meaning, and only as secondary it can express one of the following meanings: time, manner, purpose, result

<sup>5</sup> The following example from Croatian L2 corpus proves grammatically incorrect forms used after *zbog*: *Ali život u gradu ima također nedostatki: zbog \*autima, \*vlakima i \*tramvaja*. 'But life in the city also has some disadvantages because of \*cars,\* trains and \*trams.'

etc. (Vukojević 2005). On the other hand, the connective *jer* has only one function - to express the cause-and-effect relation in a sentence.

The present results are significant in at least two major respects. First, the results showed that the most frequent syntactic type for expressing causality by Croatian L1 and L2 speakers was a compound sentence with subordination, and the least frequent way of expressing causative meaning was between sentences, by text connectors. The subordinate syntactic structure requires two activities (two verbs), and establishes order between cause and effect that is either forward or backward, i.e. it expresses explicit causality. In contrast to that, expressing causality over the sentence level (by using text connectors) can be used for expressing more implicit causality, even without the use of connectives. According to these data, we can infer that both groups of speakers showed preference to express causality explicitly, Croatian L2 speakers to a higher extent than Croatian L1 speakers. A further study with more focus on expression of different types of causality by Croatian L1 and L2 speakers is therefore needed. Second, the results suggest that for Croatian L2 speakers, grammatical features of causal connectives as well as their form-function mapping, might play an important role in the use of connectives. This is an important issue for future research, since it might enhance our knowledge about the factors influencing the process of syntactic and discourse development in Croatian L2.

## 6. Conclusion

This study investigated the use of connectives for expressing causality in argumentative essays written by Croatian L1 and L2 adult speakers. It has been one of the first attempts to investigate syntactic and discourse competence in Croatian by thorough examination of how a semantic category is expressed syntactically by L1 and L2 speakers. The results proved a between-group similarities in the variety of connectives and predominance of syntactic structures used to express causality, but also a great difference in the frequency of the used connectives. The findings indicate Croatian L1 and L2 speakers' preference to more overt expression of causality by using the subordinate sentences with explicit cause-and-effect relation. In general, this study gave more insight into the ways Croatian L1

and L2 speakers use the same syntactical means. Moreover, this work contributes to the existing knowledge of L2 discourse competence by providing a new evidence of the overuse of certain syntactic elements (in this case connectives) in L2 writings, and the importance of form-function mapping and grammatical features of the connectives for their use by L2 speakers. In that respect the study findings might also be relevant for language teaching of Croatian as L2 since evidence from the study suggests that the use of some syntactic structures for expressing causality might be more challenging for language learners.

The present study is the first step in our understanding of how Croatian L1 and L2 speakers express causality. More research is to be done to shed more lights onto this topic. Several questions are raised by this research that are worth future exploring: explicit vs. implicit expression of causality; the linguistic nature of L1 and L2 differences in expressing causality in Croatian (including the role of learners' L1), semantic and pragmatic features of Croatian causal connectives that influence their use, etc. Further studies on the topic of causality in Croatian will improve our knowledge about the Croatian language. This, on the other hand, will lead to a better understanding of the way speakers use their first and second language in general.

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## Izražavanje uzročnosti u argumentacijskim esejima na hrvatskome kao materinskome i inome jeziku

### Sažetak

Argumentacijskim se tekstom iznose dokazi kojima se potkrepljuju autorove tvrdnje, što podrazumijeva logičku organizaciju teksta i izražavanje uzročno-posljedičnih veza. U ovome se radu istažuju načini izražavanja uzročnosti u argumentacijskim esejima na hrvatskome kao materinskome (J1) i inome jeziku (J2). Na temelju analize 110 tekstova (za hrvatski J1 N=55, za hrvatski J2 N=55) istražuje se uporaba uzročnih vezničkih sredstava s obzirom na uporabljene sintaktičke strukture. Rezultati pokazuju da obje skupine govornika uzročnost iskazuju služeći se istim vezničkim sredstvima, u istim sintaktičkim strukturama, no ne i s istom čestotom uporabe. U tekstovima govornika hrvatskoga J1 pokazala se snažna tendencija uporabe veznika *pa* kao tipičnoga uzročnoga veznika nezavisnosloženih rečenica, a veznika *jer* kao tipičnoga uzročnoga veznika zavisnosloženih rečenica, dok tekstove govornika hrvatskoga J2 odlikuju dva obilježja: prekomjerna uporaba jedne skupine vezničkih sredstava (*jer, zato što*) i izbjegavanje drugih (*pa*).

**Keywords:** causality, connectives, subordinate compound sentences, Croatian language

**Ključne riječi:** uzročnost, veznička sredstva, zavisnosložene rečenice, hrvatski jezik