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The role and structure of pauses in Slovenian media speech

Summary

This paper explores pauses in terms of the roles they play in speech and their structural composition. They are perceived as the indispensable acoustic and/or semantic break in the flow of speech and are considered an important marker and organizer of speech. The study, based on a corpus of selected Slovenian talk shows (i.e. authentic and relatively spontaneous media speech), showed that 1) on average cognitive or communicative pauses (not physiological ones) predominate among the speakers analyzed, 2) speakers most often interrupt their speech to look for the right formulation and to plan syntactic structures and the segmentation of the flow of speech, 3) on average, empty or silent pauses, which primarily but not exclusively perform the role of breathing, are the most common among the speakers analyzed, and 4) with all the speakers analyzed, drawn-out schwas (*uh* sounds) occur most often among filled and "silent-filled" pauses.

Key words: text phonetics, pause, role of pauses, structure of pauses, media speech

1. INTRODUCTION

Prosodic characteristics – which, according to Toporišič (1976), include pauses, sentence stress, intonation, register, speech tempo, and tone – have been researched relatively little in Slovenian linguistics. Toporišič defines them as "auditory characteristics of a simple or multclause sentence" (Toporišič, 1992, p. 308), which in writing can be partially replaced by punctuation. In his definition of spoken language, Toporišič proceeds from a unit of written text (rules mostly promote more correct and easier reading of written texts), primarily having in mind the clause as the research unit:

Because the smallest possible message is a sentence in the syntactic form of a clause or multiple clauses which can also simply be referred to as sentence phonetics. In principle, text phonetics should cover the auditory characteristics of a text as a whole; however, in its current state, it only covers the auditory features between the individual sentences at most, whereas it barely deals in any detail with the auditory characteristics of a sentence and, of course, especially a clause. (Toporišič, 2000, p. 533).

Several weaknesses in the research premises can be observed with past researchers (or better, reporters) of (spontaneous) Slovenian speech: their studies were not based on authentic or spontaneously spoken material, but on a reading of a written text; in addition, researchers primarily used literary texts, which from the present research perspective most likely do not provide the most representative sample of spoken language, and their findings were largely not the result of extensive research, but more or less subjective observation of individuals (e.g. Podbevšek, 2006; Toporišič, 1972). From the perspective of more recent text-phonetic research, combining both media (i.e. spoken and written) or studying text phonetics based on the methodological principles of the written medium is a major weakness. The principles of spoken language are completely different from written language and therefore different research premises apply to it; for example, for a relevant analysis of pauses speech must be transcribed without punctuation and capitalization, otherwise possible locations and lengths of pauses may be implicitly suggested to the person tested. With the development of new software tools for the analysis of speech production (e.g. Praat; Boersma & Weenink, 2013) and corpus linguistics, studies of Slovenian speech also tend to be increasingly based on representative corpora of audio material or on real

and spontaneous speech – that is, the most authentic part of speech (e.g. Tivadar, 2009; Valh Lopert, 2005).

The speech of politicians appearing on talk shows and the speech of TV presenters are part of media speech, which viewers often completely unconsciously or unknowingly perceive as a speech model, example, ideal, or standard: "Under the influence of spoken mass media and the school system, today the majority of people have a certain idea of what standard pronunciation should sound like. This idea is more or less superficial, or naive, but it does exist." (Škarić, 1988/1999, p. 205). Because "media speech is in principle the *'ideal speech realization'* or a speech realization most harmonized with the norm" (Vitez, 1999, p. 42), it offers an ideal opportunity to observe how the speech of trained speakers deviates from an ideal or a language norm. Media speech, "as a rule, entails consistent actualization of a prescribed language system and its bearers are speakers that, despite consciously taking the system into account, are simultaneously subjected to the influence of spontaneous phenomena and their changes in general spoken usage." (Vitez, 1999, p. 42).

2. THEORETICAL BACKGROUND AND PREVIOUS FINDINGS

When studying speech, one must take into account the fact that the success of communication also often depends on the (at least partial) semantic overlap between what one wants or intends to say and what one actually says, or between an idea and the realization of that idea. Especially speakers that are somewhat less skillful at public speaking (as well as well-versed speakers) often ask themselves "Where was I?" during speech, which for various reasons is interrupted for a shorter or longer period of time. According to psycholinguistic theories (e.g. Garman, 1990), a break in the flow of speech must not be too long in order to successfully complete a speech act. Even though the human memory for sticking to the central theme of the conversation is relatively long compared to that for grammatical forms, it often happens that due to a short grammatical memory, speakers also have problems with content organization and ultimately reach a point where they can no longer continue a conversation because they have forgotten both the grammatical and semantic beginning of the speech unit (Garman, 1990). This problem can most easily be resolved by starting a specific utterance again, whereby various pauses or breaks in the flow of speech can also be used. Hence, for example, vocalized or filled pauses of the type *veš* 'you know', *vidiš* 'you see', *hm*, *aha*, and *Kaj sem že hotel reči?* 'Where was I?' are used in dialog speech

when speakers want to communicate to their listeners that they have not yet finished speaking or that they do not yet intend to pass the role of the speaker to someone else. The opposite is true for empty pauses, which are used when the speaker finishes speaking and wants to pass the role of the speaker to someone else. In the context of dialog, filled pauses refer to speech overlaps, various repetitions, false starts, self-corrections, and so on. All of these pauses in the speech chain are indicators of the cognitive process at various levels, from planning the conversation topic to searching for words and structuring utterances (Horga, 1996; Kranjc, 1996/1997).

In spontaneous speech, planning the production of speech is often incomplete, leading to various disruptions in the flow of speech. The concomitance of planning and carrying out spontaneous speech production causes hesitancy, repetition, correction, and so on in speech. This can be referred to as unevenly distributed continuous and discontinuous phases of speech, in which speech researchers have detected a tendency for breaks in the flow of speech to occur more frequently in completely unprepared speech situations, whereas in less spontaneous situations (e.g. reading or reciting) they are slightly less frequent. In addition, spontaneous speech often contains pauses in processing or planning, including articulated pauses with repetitions and drawn-out sounds, and unarticulated loud pauses, whereas in non-spontaneous or prepared speech syntactically logical pauses are more common (e.g. Campione & Vérinos, 2002; Garman, 1990; Horga, 1996; Horga & Mukić, 2000).

Good/trained/professional speakers distinguish themselves from poor/untrained/unprofessional speakers primarily by the successfulness of preparing speech production and less by its implementation. Professional speakers are usually much more successful in preparing speeches, which also affects the fluency of implementation: a well-prepared speech contains less hesitation (fewer empty or silent pauses as well as filled or acoustic pauses), which also affects the speech tempo. Slow speakers thus make significantly more breaks in their flow of speech than fast or faster speakers (Horga, 1996).

2.1. The roles of pauses in speech

Variety of roles performed by pauses in the flow of speech were mentioned in previous studies. Authors most often use various combinations of both basic categories (i.e. *physiological* and *communicative*), and merge or introduce additional (sub)categories, which mainly depends on the research purpose. In producing speech,

speakers must continuously coordinate the biological process of breathing with speech production, resulting in pauses conditioned by breathing because it is impossible to coordinate both processes (i.e. breathing and speaking) perfectly (Horga, 1996). Respiratory pauses appear as part of phonation or sound formation, most often in agreement with grammatical units, such as words, word combinations, and clauses. Butcher (1981, as cited in Garman, 1990) studied German speech and determined that the respiratory pauses that the speakers made while reading, reciting, or speaking spontaneously were 2.5 times more frequent between than within sentences. Respiratory pauses between clauses were also more frequent than those within clauses, even though in spontaneous speech that was slightly less common than in reading and reciting (i.e. in prepared speech). From the psycholinguistic perspective, Goldman-Eisler (1972, as cited in Garman, 1990) distinguishes the cognitive role (planning speech; e.g. syntax, searching for words, etc.) and the communicative role (the speaker communicates divisions in the flow of speech to the listener) of pauses from the physiological role (i.e. breathing). Breaks in the speech chain most often develop before the occurrence of new thought units that can be interpreted as speech planning points. Especially in spontaneous speech, pauses are accompanied by various gestures, gesticulation, and facial expressions, which need to be distinguished from the same phenomena in a continuous speech flow, where, for example, they emphasize the individual parts articulated.

Zellner (1994) uses two classifications of pauses. As part of the first classification, she refers to the physical and linguistic functions of pauses, and as part of the second she refers to their psychological and psycholinguistic functions. Perceptual pauses – that is, speakers' pauses that listeners perceive – do not completely overlap with physiological ones because people often have a higher visual or hearing threshold of perception than the actual physiological stimulus. Hence on the one hand, the occurrence and duration of pauses depends on the physiological characteristics of speech or the speaker's physical activity during speech and, on the other, on cognitive processes or speech planning. Sabol and Zimmermann (1978) refer to pauses with a physiological role (breathing), a communicative role (successful communication), and an expressive role (emphasizing important parts of the speech chain), and pauses that occur due to the speaker's hesitation. Pauses are classified similarly by Viola and Madureira (2008): speakers make respiratory pauses to take a breath, discursive pauses to plan the discourse structure, and expressive pauses to express their attitude or feelings toward something or someone. In their study of pauses used by native and

second-language speakers of English and German, Bilá and Džambová (2011) established that pauses are more frequently used by second-language speakers and that discursive pauses predominate with both (native and second-language speakers); in addition to discursive pauses, they also report hesitation, politeness, multifunctional, and expressive pauses as well as respiratory and nonfunctional pauses.

Škarić (1991) refers to vocalized (filled) and non-vocalized (empty or silent) pauses. With regard to filled pauses in particular, he mentions the delimiting role (syntactically logical and rhythmic pauses), culminative role (pauses used to emphasize or highlight something), lexical role (a pause used instead of a specific word that has the same meaning as the word that has not been spoken), processing role (slowing the communicational speech flow down in order to attract attention or check whether the listener has understood what has been said), and the role of interrupting the flow of speech (coughing, sneezing, swallowing, inhaling, drinking water, gesticulating, etc.). An almost identical classification is used by Horga and Mukić (2000), who divided pauses into six main categories in terms of their duration and function: delimiting pauses (syntactically logical pauses setting apart syntactic and logical speech units, and rhythmic pauses form rhythmic units), pauses between speech segments (setting apart longer semantic-syntactic units), emphasizing or highlighting pauses (stressing the word following a pause within a sentence), lexical pauses (replacing a specifically defined word in speech), mixed pauses (simultaneously delimiting and highlighting a specific word at the same time), and processing or planning pauses (expressed through both non-vocalized or empty pauses and drawn-out sounds, various forms of hesitation and corrections of articulated parts of speech – such as syllables, words, word combinations, and entire sentences – and non-articulated, non-phonemic sounds, as well as various forms of speech defects and their corrections).

Podbevšek (2006) studied pauses in Slovenian theater speech and classified them as follows: content-rhythmic pauses (logical distribution of pauses across text, following the logic of speech rather than writing; used especially by trained speakers), syntactically logical pauses (placing more emphasis on punctuation when reading or interpreting written texts; used primarily by untrained speakers), emotional, emphasizing, or highlighting pauses (giving special meaning to words in front of them; they are usually longer than others and therefore slow down the speech tempo at the same time), slowing-down pauses (they are short and have a rising intonation), and pauses as errors (illogical and unplanned).

Most researchers agree that the physiological need to breathe is the most important (but not the only) factor for pausing:

Speech is produced by modulating the airflow from the lungs. As a consequence, it is necessary for all speakers to insert a certain number of respiratory pauses while speaking. Respiratory pauses, which represent only a part of all pauses, can be considered physiological necessities. The constraints due to the production apparatus explain the basic similarities in pausing between languages. The probability of occurrence of a pause during continuous speech seems to depend on the amount of residual air in the lungs. It has been shown (...) that breathing during speech exerts an influence at similar time intervals independently of the language spoken (...) The most striking similarity between languages is that breathing (respiratory pausing) occurs at grammatical junctures. At fast rates, the physiological need to breathe is the sole determinant of pausing (...) Breathing is dependent on syntax: speakers will only breathe when allowed to do so, as it were, by the constituent structure of the utterance. (Vaissière, 1983, pp. 54–55).

2.2. The structural composition of pauses

Despite various theories about what can be classified as pauses, the term pause continues to be conceived primarily as silence in the flow of speech (e.g. Toporišič, 1972, 2000). The speech chain is thus interrupted in certain places, which in writing is most often replaced by punctuation. Some pauses (e.g. respiratory pauses) can indeed be heard primarily as silence in the acoustic sense, but there are also pauses in speech that can be heard as drawing out various sounds, words, and the like, or as a mix between the two types. In terms of the presence or absence of a sound signal, what fundamentally appears in speech are silent (or empty, unfilled, non-vocalized, absolute, and physiological) pauses and filled (or vocalized, acoustic, and relative) pauses. Pauses filled with individual sounds, words, and so on have primarily been discussed by speech researchers outside Slovenia, with differences occurring in the subcategories of filled pauses. According to Garman (1990), verbal fillers also include certain autosemantic words and word combinations that are not proper sentence elements (they perform the role of presenting a specific opinion, etc.), do not have a semantic role in the current speech, and primarily depend on other utterances, but perform the highly important role of fillers. These are words of the type *torej* 'so', *vidiš* 'you see', *veš* 'you know', and *mislím* 'I think', which under certain circumstances serve as preparation for maintaining speech production. Cruttenden (1986),

Zellner (1994), and Viola and Madureira (2008) also refer to silent (unfilled) and filled pauses. With silent pauses, listeners perceive a silent or an interrupted part in the sound signal (e.g. after taking a breath or when swallowing), whereas with filled pauses they perceive an additional vocalized part in the speech signal, such as drawn-out sounds, repeated utterances, words, syllables or sounds, and false starts. Similarly, Horga (1996) also differentiates between empty or silent and filled or vocalized pauses. He divides breaks in the flow of speech filled by vocalization (according to Horga, these often include speech defects) further into repetitions, false starts without repetition, false starts with repetition, corrections, exclamations, stuttering, and awkward pronunciation. Horga recognizes that not all pauses or breaks in the speech chain are errors, but that they are also structural elements of ideal speech. Škarić (1991) divides pauses into vocalized and non-vocalized pauses, in which a sound in the pause can be articulated (repetitions of syllables, words, and word combinations, drawn-out sounds, and fillers) or unarticulated (the schwa, rounded and/or nasal vowels, drawn-out /m/, sighs, and so on).

In exceptional cases, Slovenian researchers also divide pauses in terms of the presence or absence of the sound signal in speech. Because respiratory organs function as producers of speech, text-phonetic characteristics may already form during breathing: with absolute or physiological pauses, the flow of speech is completely interrupted for a while. Speech is usually interrupted by taking a breath because the exhaled air is used in speaking, and breaks are organized so that they create an impression of speech continuity (Bezljaj, 1971; Podbevšek, 2006). With relative pauses, the flow of speech is merely dampened and not completely interrupted, and, according to Bezljaj (1971), additional segmentation of relative pauses is unnecessary. Podbevšek (2006) mentions silence as a special type of pause, meaning the absence of speech or any other human sound activity. Of course, not every silence is part of communication, but, if it is, it is an important component with many meanings. As part of her analysis of dialog speech, Zemljarič Miklavčič (2008) also refers to the following typical breaks in the spontaneous speech chain in addition to traditional (i.e. silent) pauses: repetitions often occur immediately after a silent pause, false starts, corrections (paraphrasing) are a widespread category of false starts (words and word combinations are fully vocalized but the speaker corrects them or vocalizes again in a different grammatical form, order, or with a different word, etc.), overlapping or simultaneous speech by several speakers, and other acoustic events, such as laughter, which can also cause breaks in speech fluency.

3. AIMS OF THE STUDY AND HYPOTHESES

Because relatively little text-phonetic research has been performed on Slovenian material (e.g. Podbevšek, 2006; Volk, 2011), one of the goals of this study is to test the approaches already established abroad (e.g. Cruttenden, 1986; Horga, 1996) on Slovenian material because, regardless of the characteristics of individual languages, researchers (Vaissière, 1983, and studies cited therein) have established that practically all speakers have the same or at least very similar production and perception capabilities. This means they face the same physiological constraints in speech production and reception. Acoustic analyses of speech production in different languages (Vaissière, 1983, and analyses cited therein) show that speakers insert a relatively large number of pauses into their speech and that the ratios between the sequences of pure articulation and the total speech duration (i.e. including pauses) barely differ from one language to another.

This study uses two methodological approaches (analysis of pauses from the perspective of their roles in speech and their structural composition; see section 4) to test the research hypotheses that derive from Slovenian linguistic reality and the observation of Slovenian media (political) speech. The first hypothesis proposes that physiological pauses (not cognitive or communicative ones)¹ – and, among them, respiratory pauses in particular – predominate in the speech of both politicians and TV presenters. This hypothesis is based on the subjective premise that speakers predominantly make respiratory pauses and on the common conception of pauses being nothing but vocally unfilled segments of speech or instances in which the flow of speech is interrupted by silence.

The second hypothesis presumes that among cognitive or communicative pauses both politicians and TV presenters primarily make pauses to look for the right formulations and to plan syntactic structures of speech. A hypothesis framed this way is very difficult to prove if one cannot read speakers' minds or does not ask them why they made a particular pause, and because speakers may often make a particular pause for more than one reason at the same time (several different roles can be identified

¹ The terms physiological, cognitive, communicative, discursive, and other pauses are defined in greater detail in section 4 (especially in Table 1); basically, this involves division into pauses that the speakers make primarily because of breathing (a human physiological need) and pauses that speakers make to facilitate communication (planning and segmenting speech, emphasis, alternating the role of speaker, etc.).

within an individual pause). Although the analysis involves a certain degree of assumption of why speakers made pauses, this involves a systematic assumption by the researcher, who defines the role of pauses in the entire corpus according to the same (albeit also subjective) criteria. One therefore does not obtain absolute values this way – which was also not the basic purpose of the study – but instead relative relations, and thereby the tendencies for the occurrence of pauses in terms of their roles among the speakers analyzed in the corpus. This hypothesis is based on the results of similar studies performed on non-Slovenian material (e.g. Bilá & Džambová, 2011; Butcher, 1981; Goldman-Eisler, 1972; Horga & Mukić, 2000; Viola & Madureira, 2008; Zellner, 1994; for a more detailed explanation, see section 2.1.). A study by Bilá and Džambová (2011) shows that speakers primarily make discursive pauses (see note 1 and section 4). Hence it can be presumed that, among all the cognitive or communicative roles, both politicians and TV presenters make the majority of pauses to look for the right formulations and to plan syntactic structures of speech. However, this does not mean that these pauses also dominate the speech of both types of speakers in general; as suggested by the first hypothesis, physiological pauses and especially respiratory pauses predominate.

The third hypothesis claims that the filled pauses used by both politicians and TV presenters primarily include various repetitions and lengthening of language units. Like the first hypothesis, this hypothesis is also based on the subjective premise that filled pauses in speech primarily include various repetitions (of syllables, words, word combinations, etc.) and lengthening of language units (especially individual sounds).

4. MATERIAL, SPEAKERS, AND RESEARCH METHODS

To analyze pauses in Slovenian media speech, a corpus of authentic and more or less spontaneous speech of three male and three female politicians and five male and four female national TV presenters was compiled. It includes dialogues, multilogues, and monologues that turn into dialogues recorded in the Ljubljana studios of TV Slovenia without an audience. The specialized speech corpus is composed of ten segments of the talk shows *Intervju*, *Pogovor s predsednikom vlade*, *Vroči stol*, *Pod žarometom*, *Omizje*, and *Studio City* with a total duration of over two hours, and was compiled for the purposes of a broader combined auditory-experimental method of studying

the speech of TV presenters (trained speakers) and politicians (probably less trained speakers) on selected TV Slovenia talk shows (Huber, 2013). It was used as one of the sources for constructing the research hypotheses and as the only source for testing them. All the talk shows analyzed, which were aired between 2006 and 2007 during evening slots, have a similar concept: a conversation between the presenter and the politician(s) about current or recent political developments. The politicians speak mostly spontaneously, whereas the presenters speak both spontaneously and partially spontaneously, or even non-spontaneously (for instance, when presenting the guests and the show's theme); a similar methodological approach to the analysis of pauses from the perspective of the roles they play in speech among (non)professionals on Croatian daily television news was used in the study by Horga and Mukić (2000). The focus was primarily on analyzing spontaneous speech – that is, the speech of politicians (male politicians: 44 min 51 s, female politicians: 37 min 51 s, male presenters: 20 min 35 s, female presenters: 15 min 23 s), which is also the reason why considerably more speech by politicians (the study focused on spontaneous speech) was analyzed than speech by television presenters (spontaneous and non-spontaneous speech). All the selected speakers are well-known media or political personalities, are Slovenian native speakers, have a university degree in a social science field, were born between 1941 and 1970, mostly live and work in Ljubljana, spent their childhood and teenage years in various places around Slovenia, have no speech defects, and segment their speech normally in a neutral and unemotional speech situation (for more details on the material and speakers, see Huber, 2017).

The pauses in the audio material analyzed were first identified auditorily (the author of the paper first listened to the recordings and manually tagged places where pauses in speech were detected), after which they were examined (confirmed, excluded, or added) and measured using the Praat program, where in addition to a detailed acoustic or phonetic analysis of the pauses (the final analysis took into account pauses at least 50 ms long²) speech transcription and segmentation were also

² Here, the research presented in Sabol and Zimmermann (1978) is primarily relied on, with certain adaptations. In comparison with their division, this study does not tag pauses shorter than 50 ms, and the threshold level for auditory perception of pauses is traditionally defined at 200 to 250 ms. There are various theories on how long an acoustic break in speech should be for listeners to even perceive the pause (anywhere from 0 to 100 ms, 200 ms, and 250 ms, and up to 2 s). The most frequent threshold value of perceiving silent pauses is between 200 and 250 ms (Bakran, 1996; Campione & Vérinos, 2002;

carried out. In interpreting the results obtained through computer measurement, use was also made of some other intralinguistic features (e.g. text-phonetic characteristics, such as the speed of speech and sentence stress) as well as extralinguistic ones, such as televised images, which can also show nonverbal parts of communication (e.g. mimicking, gesticulating, etc.).

This paper conceives of pauses as an indispensable acoustic and/or semantic break in the flow of speech, which means that they are not necessarily conditioned by silence or empty, but can be filled with a wide range of sounds, autosemantic or synsemantic words, and other (non)verbal elements. Like other prosodic or text-phonetic characteristics (sentence stress, intonation, register, speech tempo, and tone; see Toporišič, 1976), they are considered an important marker and organizer of speech, and various methodological approaches can be used to analyze them. Thus, pauses can be examined in relation to punctuation, typical locations or distribution in speech, their role in speech, structural elements, duration, frequency in speech, and syllable length, in comparison to other (text-) phonetic characteristics, such as intonation, sentence stress, and speech tempo, and, in terms of nonverbal elements, (non)spontaneous and stylistically (un)marked speech, (non)professional speakers, the speaker's sex and social status, (un)known information, (non)dialogism of communication, and so on.

Based on various methodological approaches mentioned in the previous paragraph, the first part of the study developed a specific methodology adapted to the research goal to study pauses in terms of their role in speech (see Table 1). Based on the assumption that both politicians and TV presenters segment text primarily due to their physiological needs (breathing), the hypothesis put forward also suggested that the physiological role of pausing predominates with both politicians and TV presenters, and that in terms of cognitive or communicative pauses both politicians and TV presenters most often interrupt their speech to look for the right formulations and to plan syntactic speech structures.

Horga & Mukić, 2000; Viola & Madureira, 2008; Zellner, 1994), even though on the one hand listeners can also perceive pauses even shorter than that, but on the other they do not even perceive pauses longer than these values. Horga and Mukić (2000) argue that this points to the multilayered nature of this prosodic characteristic, which can be observed and studied not only as a psychological abstraction defined only in the physiological sense (i.e. through silence or a break in the flow of speech), but also via the syntactic structure of uttering and drawing out segments.

Table 1. The roles of pauses in speech: abbreviations and descriptions
Tablica 1. Uloge stanki u govoru: kratice i opisi

Role / Uloga	Features / Karakteristike
Physiological role / Fiziološka uloga (PR)	Respiratory pauses / Stanke disanja (PRRe); e.g. <i>je pa to šlo vse zelo hitro [PRRe] ti dogodki v Sloveniji</i> 'this however all came to pass very fast [PRRe] these events in Slovenia', <i>SpkrPm3³</i> , Text 2 Reflex pauses, such as coughing, sneezing, laughing, and swallowing pauses / Stanke zbog kašljanja, kihanja, smijeha, gutanja (PRR); e.g. <i>po dolgem obdobju vladanja [SWALLOWING] nastopi trenutek prenove</i> 'after a long period in power [SWALLOWING] there was time for reform', <i>SpkrPm5</i> , Text 3
Cognitive or communicative role / Kognitivna ili komunikacijska uloga (CR)	Pauses as a result of searching for the right formulation and planning the syntactic structure of speech (repeating the same words, drawn-out schwa (<i>uh</i> sounds) and other sounds, the speaker not yet being completely sure what to say next) / Stanke zbog traženja odgovarajućih formulacija i planiranja sintaktičke strukture govora, npr. ponavljanje istih riječi, produživanje poluglasnika i drugih glasova; govornik nije potpuno siguran što će u nastavku govora reći (CRSP); e.g. <i>kaj lahko [əə; CRSP] rečete na to</i> 'what can you [<i>uh</i> ; CRSP] say to this', <i>SpkrJf6</i> , Text 3 Pauses due to inappropriate planning of speech (false starts of words or longer language units that speakers go on to correct or add to) / Stanke zbog neodgovarajućega misaonog planiranja govora, npr. krivi počeci riječi i dužih jezičnih jedinica koje u nastavku govornici ispravljaju ili nadopunjavaju (CRIP); e.g. <i>pa velikokrat bli okrcani da smo šli [predrobno; CRIP] prepodrobno</i>

³ Abbreviations / Objašnjenje kratica: Spkr = male/female speaker / govornici/govornice; P = male/female politician / političar/političarka; J = male/female journalist/presenter / novinar/ka odn. voditelj/ica; m = male / muški, f = female / ženski; individual numbers 1–22 indicate individual speakers / brojkama 1–22 označeni su pojedini govornici. PRRe = physiological role of respiration, PRR = physiological role of a reflex, CRSP = cognitive role of searching/planning, CRIP = cognitive role of inappropriate planning, CRURo = cognitive role of unsuccessful role switching, CRUD = cognitive role of unsuccessful delimitation, CRURe = cognitive role of unsuccessful response, CRE = cognitive role of emphasis, CRH = cognitive role of hesitation. The author is aware that it is not possible to assert with certainty that, for example, all physiological pauses tagged in the corpus in fact belong to this category because characteristics that essentially point to a physiological pause may also be of cognitive origin. It is also necessary to add that a particular structure of a filled pause may appear as part of several different roles of pauses; for example, a schwa is found not only in the role of "pauses as a result of searching for the right formulation and planning the syntactic structure of speech," but also in the role of "pauses due to inappropriate planning of speech", and so on.

'and we were often scolded for having gone [into too much detail; CRIP] into far too much detail', *SpkrJf8*, Text 4

Pauses due to speakers' (un)successful role switching in a dialog, including in simultaneous speech of two or more speakers / Stanke zbog (ne)uspješne zamjene uloge govornika u dijalogu, kao i zbog istovremenoga govora dvaju ili više govornika (CRURo); e.g. *zgodila ta zgodba [CRURo] torej takšno možnost* 'this story happened [CRURo], that is, we got this opportunity', *SpkrJf8* and *SpkrPf7*, Text 4

Pauses resulting from delimiting (segmenting) the flow of speech (between words and longer language units; the speaker knows what to say next) / Stanke zbog segmentiranja govornog tijeka, npr. između riječi i većih jezičnih jedinica; govornik zna što će u nastavku reći (CRUD); e.g. *da tu vzpostavmo mednarodno [CRUD] pravno [CRUD] pomoč* 'to establish international [CRUD] legal [CRUD] assistance here', *SpkrPf7*, Text 4

Pauses as a reaction to another speaker interrupting the current speaker's speech / Stanke kao reakcija na intervenciju sugovornika u govoru trenutnoga govornika (CRURe); e.g. *prej izkoriščena [PRRe]* 'used before' [PRRe] (*SpkrPf7*) *ni bila* 'was not' (*SpkrJf8*) *vsekakor [CRURe] vsekakor moram reč* 'and by all means [CRURe] by all means I have to say', *SpkrPf7*, Text 4

Pauses emphasizing or highlighting the importance of what follows or what has already been said, but not every emphasis behind the pause is the result of that pause / Stanke zbog isticanja, davanja važnosti nastavku govora ili već rečenome; no, svako isticanje iza stanke nije zbog same stanke (CRE); e.g. *velik [CRE] projekt* 'big [CRE] project', *SpkrPm10*, Text 5

Hesitation pauses / Stanke oklijevanja (CRH); e.g. *eni vam učitajo [CRH] da ste rdeči* 'some reproach you with [CRH] being red', *SpkrJm2*, Text 1

Pauses were divided into two basic categories (i.e. the physiological and cognitive or communicative roles), which were divided into further subcategories. In addition, a specific pause can have several different physiological and cognitive/communicative roles at the same time: hence the presumed predominating role or roles (perhaps two or three)⁴ of a selected pause were most often tagged in the corpus, even though the

⁴ In defining the predominant role or roles for a particular pause, the following measures were used: taking into account context and the television image (mimicking, gestures, etc.), familiarity with the speaker (well-known media speakers were analyzed), and a uniform approach by the researcher throughout the study (the roles in the entire corpus were defined by the author of the paper). This ensured relative relations between the individual roles of pauses (therefore it is not the concrete percentage

fact is that the same pause can often perform several roles at once. At this stage of the research, the structure of pauses was not important – that is, whether a specific pause was empty or filled⁵ – because they were treated as equivalent. Likewise, with pauses that perform several roles it is also irrelevant in what order individual roles are written (and appear in speech), which means that from the perspective of the study conducted it was completely irrelevant whether the order of components of a pause analyzed was PRRe + CRSP or CRSP + PRRe, and so on.

The second part of the study analyzed pauses from the perspective of their structural composition. Just like in exploring the roles of pauses in speech, in this part of the research pauses were divided into two main categories: *silent* and *filled* pauses. Silent pauses were not further divided, whereas filled pauses were divided into the following subcategories and sub-subcategories: schwa, drawn-out sounds, various repetitions, false starts, simultaneous speech, and so on (see Table 2). Structurally, pauses can be *pure* or *non-composite* – that is, silent (SPa)⁶ or filled (FPa) – or *composite* – that is, composed of a silent pause and one or more filled structural units (SPa + FPa). Composite (silent-filled or filled-silent) pauses are conceived as a single break in the speech chain, which includes silence (SPa) and at least one filled pause structure, such as a drawn-out schwa (SLS), or repeating words (SRW). A silent pause (SPa) is thus an indispensable element of a composite pause and is, for example, followed by the drawn-out schwa (SLS) and a repeated word (SRW) within the same break in the flow of speech. With regard to composite pauses, it is irrelevant in what order individual (silent and/or filled) elements are written (or appear in speech), which means that from the perspective of the study conducted it was completely irrelevant whether the order of components of a pause analyzed was SPa + SLS or SLS + SPa

of the occurrence of individual types of pauses that is important, but the relationship between the individual roles of pauses).

⁵ For more on silent/empty/unfilled, filled, and "silent-filled" pauses, see also the following paragraph and section 2.2. In identifying the number of pauses or words that appear between two silent and/or filled pauses, the words spoken as part of simultaneous speech and all forms of filled pauses (repetitions, false starts, etc.) were eliminated. Simultaneous speech and other forms of filled pauses were thus understood as equivalent to silent pauses.

⁶ Abbreviations: SPa = silent pause, FPa = filled pause, SLS = structure with long (drawn-out) schwa, SRW = structure with repeating words, SS = structure with schwa, SDoS = structure with drawn-out sounds, SRep = structure with repetition, SFS = structure with false starts, SSS = structure with simultaneous speech, SOF = structure with other filler, SNE = structure with nonverbal event, SLSO = structure with long (drawn-out) other sounds, SRS = structure with repeating syllables, SRWC = structure with repeating word combinations, SRSU = structure with repeating longer syntactic units, SFSWR = structure with false starts without repetition, SFSR = structure with false starts with repetition.

because they were treated completely equally. In addition, at this stage it was also irrelevant what role individual pauses performed in speech because all roles were treated equally.

Table 2. The structures of pauses: abbreviations and descriptions

Tablica 2. Struktura stanki: kratice i opisi

Structure / Struktura	Description / Opis
Silent pauses / Prazne stanke (SPa); e.g. <i>bil bi zelo samouščen [SPa] če bi trdil kaj drugega</i> 'I'd be very self-complacent [SPa] to claim otherwise', <i>SpkrPm3</i> , Text 2	
Filled pauses / Pune stanke (FPa)	Schwa / Poluglasnik (SS); e.g. <i>pravzaprav [ə] napisala</i> 'actually [uh] wrote', <i>SpkrJm6</i> , Text 3
	Drawn-out sounds / Produživanje (SDoS)
	The schwa / Poluglasnika (SLS); e.g. <i>poglejmo [əə] javnost naj se spomni</i> 'let's see [uh] the public should remember', <i>SpkrJf8</i> , Text 4
	Other sounds / Drugih glasova (SLSO); e.g. <i>ne vem mogoče [mmm] <u>ma</u>l celo</i> 'I don't know [mmm] <u>ma</u> ybe or even', <i>SpkrPf14</i> , Text 7
Repeating / Ponavljanje (SRep)	Syllables / Slogova (SRS); e.g. <i>pa vendarle [ne] <u>ne</u>kako</i> 'but nonetheless [so] <u>so</u> mehow', <i>SpkrJf15</i> , Text 7
	Words / Riječi (SRW); e.g. <i>ampak hotla sem <u>eno</u> [eno] stvar</i> 'but I wanted to say <u>one</u> [one] thing', <i>SpkrPf20</i> , Text 10
	Word combinations / Sintagmi (SRWC); e.g. <i>z <u>neko</u> [z neko] etiko</i> ' <u>with certain</u> [with certain] ethics', <i>SpkrPf1</i> , Text 1
	Longer syntactic units (clauses, sentences, etc.) / Duljih sintaktičkih jedinica (rečenice, iskazi i sl.) (SRSU); there was no such example in the corpus
False starts / Krivi počeci (SFS)	Without subsequently repeating parts of a false start / Bez ponavljanja dijelova krivih početaka u nastavku govora (SFSWR); e.g. <i>čepnav [je blo] sem takoj vidla da je</i> 'although [it was] I immediately saw that it', <i>SpkrPf14</i> , Text 7
	With subsequently repeated parts of a false start / Ponavljanje dijelova krivih početaka u nastavku

govora (SFSR); e.g. *vaša recimo politična opcija si [žəž] želi seveda* 'your let's say political option [wawa] wants of course', *SpkrJm11*, Text 5

Simultaneous speech / Istovremeni govor (SSS); e.g. *državo* 'the country' (*SpkrPfl*) and *ja* 'yes' (*SpkrJm2*), Text 1

Nonverbal communication elements or other fillers, such as *mhm, əm 'um'; aja, ne, a ne?* 'Right?' / Neverbalna komunikacijska sredstva ili druge čestice i nefonemski glasnici, tj. *mhm, əm, aja, ne, a ne?* (SOF); e.g. *ker igra [əəm] pravzaprav* 'because it plays [um] actually', *SpkrPfl*, Text 1

Nonverbal events, such as sighs, laughter, coughing, sneezing, and swallowing / Neverbalni događaji kao udisaj, smijeh, kašljanje, kihanje, gutanje (SNE), e.g. *ker včasih je [LAUGHTER] nekdo drug uporablu* 'because sometimes [LAUGHTER] someone else used', *SpkrPm12*, Text 6

5. RESEARCH RESULTS AND DISCUSSION

The results of the research are first presented from the perspective of the roles that pauses play in speech, and the second part presents the results from the perspective of their structural composition.

5.1. First part of the research: The roles of pauses

Table 3 presents the results of analyzing the occurrence of various roles of pauses inside the corpus, including data on the occurrence (number and percentage) of pauses in the main role categories – that is, the physiological role (PR), the cognitive or communicative role (CR), and the physiological-communicative role (PR + CR) – and the data on the number of words spoken between two pauses and the duration of pauses broken down by various groups of speakers (male and female politicians and presenters). The analysis included 16,629 spoken words (11,411 male and female politicians and 5,218 male and female presenters) and 4,479 silent, filled, or "silent-filled" (both silence and filled structures – e.g. a drawn-out sound – occur as part of one interruption in the speech flow or as part of one pause; see section 4, last paragraph) pauses longer than 50 ms, and the average duration of all 4,479 pauses analyzed in the corpus was 382.4 ms. The results show that male and female politicians tend to segment their speech with pauses more often than male and female presenters (every 3.59 words versus every 4.02 words), and that on average the pauses made by male and female politicians are somewhat shorter (375.9 ms) than those of

male and female presenters (398.1 ms). Male presenters tend to speak with the fewest pauses (they make a pause every 4.14 words), whereas female politicians tend to speak with the most pauses, using pauses more frequently than all other categories of speakers (they make a pause every 3.46 words). Even if all results are aggregated by sex, it can be established that male speakers make fewer pauses (every 3.85 words) than female speakers (every 3.57 words), and that both sexes together segment their speech every 3.71 words. It was interesting to compare the duration of pauses by sex because the ones made by male speakers were nearly 115 ms longer (437.6 ms) on average than those made by female speakers (322.8 ms).⁷

Table 3. The roles of pauses in speech: results

Tablica 3. Uloge stanki u govoru: rezultati

Speaker / Govornik	Role / Uloga							Words between pauses / Riječi između stanki (N)	Pause duration / Trajanje stanki (ms)
	PR		CR		PR + CR		Total / Ukupno		
	N	%	N	%	N	%	N		
Male and female politicians / Političari i političarke									
Pm	285	17.8	1,064	66.5	251	15.7	1,600	3.72	429.6
Pf	402	25.4	978	61.8	202	12.8	1,582	3.46	321.6
Pm + Pf	687	21.6	2,042	64.2	453	14.2	3,182	3.59	375.9
Male and female presenters / Voditelji i voditeljice									
Jm	89	12.3	545	75.5	88	12.2	722	4.14	455.3
Jf	93	16.2	407	70.8	75	13.0	575	3.88	326.3
Jm + Jf	182	14.0	952	73.4	163	12.6	1,297	4.02	398.1
Male and female politicians and presenters / Političari i političarke, voditelji i voditeljice									
Pm + Jm	374	16.1	1,609	69.3	339	14.6	2,322	3.85	437.6
Pf + Jf	495	22.9	1,385	64.2	277	12.8	2,157	3.57	322.8
P + J	869	19.4	2,994	66.8	616	13.8	4,479	3.71	382.4

⁷ The author is aware of the research shortcomings (e.g. a relatively small sample of material analyzed and the absence of suitable statistical analyses), and so as part of this analysis one cannot speak about absolute values but can permit random statistical deviations. This is the first analysis of pauses in Slovenian media speech, which will have to be built upon in the future with a greater quantity of material analyzed and more precise statistical analysis.

Hence in the entire corpus, 4,479 pauses were tagged and analyzed, of which 869 or 19.4% were physiological (PR), 2,994 or 66.8% were communicative (CR), and 616 or 13.8% were physiological-communicative (PR + CR). Communicative pauses predominate, which applies to all the speakers analyzed in the corpus. The least predominant role of communicative pauses was recorded with the politician *SpkrPm5* (46.5%, PR 33.5% and PR + CR 20.0%), whereas they predominated the most in the speech of presenters *SpkrJm6+13* (80.9%), especially in one of the two talk shows that the speaker *SpkrJm13* appeared on (i.e. 84.3%). This finding refutes the first part of the research hypothesis, according to which physiological pauses predominate in the speech of both male and female politicians and TV presenters. In contrast, the results confirm the second part of the hypothesis, according to which respiratory pauses predominate among the physiological pauses. In terms of individual roles within the two main categories, respiratory pauses (PRRe) predominate with all speakers in the physiological role category (856 pauses out of a total of 869), whereas the cognitive/communicative role category is dominated by pauses resulting from searching for the right formulation and planning the syntactic structure of speech (CRSP; 1,314 of 2,994), and pauses resulting from delimiting (segmenting) the flow of speech (CRUD; 1,247 of 2,994). In the mixed PR + CR category, respiratory pauses and pauses resulting from searching for the right formulation and planning the syntactic structure of speech (PRRe + CRSP) predominate with all speakers (559 of 616). This finding confirms the second hypothesis that, among cognitive or communicative pauses, both male and female politicians and TV presenters primarily make pauses resulting from searching for the right formulation and planning the syntactic structure of speech. Among communicative pauses, 141 pauses that emphasize or highlight the importance of what follows or what has already been said (CRE) were recorded out of the total of 2,994 in addition to 120 pauses due to speakers' (un)successful role switching in a dialog (CRURo) and 89 pauses due to inappropriate planning of speech (CRIP).

In terms of sex and various roles of pauses, there are minor differences in the ratios of individual categories, whereas the order of pause occurrence is identical with both male and female politicians and TV presenters (CR – PR – PR + CR): male speakers: 69.3% CR, 16.1% PR, and 14.6% PR + CR (male politicians: 66.5% CR, 17.8% PR, and 15.7% PR + CR; male presenters: 75.5% CR, 12.3% PR, and

12.2% PR + CR) and female speakers: 64.2% CR, 22.9% PR, and 12.8% PR + CR (female politicians: 61.8% CR, 25.4% PR, and 12.8% PR + CR; female presenters: 70.8% CR, 16.2% PR, and 13.0% PR + CR). It is especially interesting that on average male and female presenters make more communicative pauses than male and female politicians (73.4% versus 64.2%). Physiological pauses account for four-fifths of this 9.2% difference (male and female presenters 14.0%, male and female politicians 21.6%) and mixed PR + CR pauses account for the remaining fifth (male and female presenters 12.6%, male and female politicians 14.2%). In terms of individual speakers, 46.5% (*SpkrPm5*) or 54.4% (*SpkrPm5+16*) to 84.3% (*SpkrJm13*) or 80.9% (*SpkrJm6+13*) communicative pauses (CR) were recorded, followed by 6.7% (*SpkrPm21*) or 9.7% (*SpkrPm10+21*) to 32.0% (*SpkrPfl4*) or 27.5% (*SpkrPfl1+14*) physiological pauses (PR) and 5.0% (*SpkrPfl7*) or 8.9% (*SpkrPfl7+20*) to 21.9% (*SpkrPm3*) or 19.2% (*SpkrPm3+12*) mixed PR + CR pauses. As already established, more communicative pauses on average are used by male and female presenters, whereas on average more physiological pauses are used by male and female politicians (21.6% versus 14.0% compared to male and female presenters). This may suggest that when searching for the right formulation male and female politicians are simply silent or make a respiratory pause, even though one would not be necessary yet, whereas in that same situation male and female presenters seek to combine silence with various drawn-out sounds (for more on this, see section 4). Perhaps TV presenters are also more aware than politicians that the medium in question (i.e. TV or radio to an even greater extent) does not tolerate silence and (overly) frequent inhaling while searching for appropriate speech structures.

5.2. Second part of the research: The structure of pauses

Table 4 presents the results of the analysis (percentage by sex and category of the speakers: male and female politicians, male and female presenters) separately for silent pauses, individual types of filled pauses (the schwa and various drawn-out sounds, repetitions, and other filled structures), and in terms of combining silent pauses and individual filled structures (the schwa and various drawn-out sounds, repetitions, and other filled structures). Within individual groups of structures, the total results for all speakers in an individual structure are provided in addition to the total results within individual groups of structures (SPa, FPa, and SPa + FPa).

Table 4. The structures of pauses: results
Tablica 4. Struktura stanki: rezultati

		Structure / Struktura								
		FPa (%)				SPa + FPa (%)				
		Other /		Total /		SPa +		Total /		Total /
Speaker /	SS +	Drugi	Ukupno	SPa + SS +	SPa +	Other /	Ukupno	Ukupno		
Govornik	SPa (%)	SDoS	SRep	FPa	FPa	SDoS	SRep	Drugi FPa	SPa + FPa	(N)
Male and female politicians / Političari i političarke										
Pm	65.9	9.4	0.2	3.5	13.1	17.6	0.3	3.1	21.0	1,600
Pf	75.4	4.9	0.7	3.1	8.7	11.4	0.8	3.7	15.9	1,582
Pm + Pf	70.6	7.2	0.4	3.3	10.9	14.5	0.5	3.5	18.5	3,182
Male and female presenters / Voditelji i voditeljice										
Jm	66.1	7.8	1.8	8.3	17.9	12.6	0.7	2.7	16.0	722
Jf	71.7	5.6	0.5	3.8	9.9	15.5	0.9	2.0	18.4	575
Jm + Jf	68.5	6.8	1.2	6.3	14.3	13.9	0.8	2.5	17.2	1,297
Male and female politicians and presenters / Političari i političarke, voditelji i voditeljice										
Pm + Jm	66.0	8.9	0.7	5.0	14.6	16.0	0.4	3.0	19.4	2,322
Pf + Jf	74.4	5.1	0.6	3.3	9.0	12.5	0.8	3.3	16.6	2,157
P + J	70.0	7.1	0.7	4.1	11.9	14.3	0.6	3.2	18.1	4,479

More than two-thirds of all pauses in the corpus (i.e. 3,137 or 70.0% out of 4,479) were silent or non-vocalized (SPa). Silent pauses predominate with both male and female politicians (70.6%) and male and female presenters (68.5%). Women (74.4%) tend to use them slightly more frequently than men (66.0%), which is especially evident with male politicians (65.9%) and female politicians (75.4%) and somewhat less with male presenters (66.1%) and female presenters (71.7%). Thus when pausing women tend to be silent more frequently or make more silent pauses than men, whereas male speakers more frequently resort to drawn-out sounds, repeating words, and so on. It is interesting that with men silent pauses are significantly (i.e. on average 87.6 ms) longer than with women (301.7 ms versus 214.1 ms). Men thus tend to more rarely segment their speech with silent pauses, but, when they do decide to use them, their silent pauses are significantly longer than those used by women. With regard to individual speakers, the use of silent pauses ranges between 49.8% (*SpkrPm21*) and 95.7% (*SpkrPm16*) with male and female politicians,

and between 43.5% (*SpkrJm6*) and 93.1% (*SpkrJm19*) with male and female presenters.

The second most frequent type used (810 or 18.1%) is the "silent-filled" composite structures of the type SPa + FPa.⁸ They are used in a very similar percentage by both male and female politicians (18.5%) as well as male and female presenters (17.2%). Similar to silent pauses, here, too, the difference is more significant between male politicians (21.0%) and female politicians (15.9%) than between male presenters (16.0%) and female presenters (18.4%). Overall, composite pauses are slightly more common among male politicians and male presenters (19.4%) than female politicians and female presenters (16.6%). With regard to individual speakers analyzed, *SpkrPm16* (3.3%), *SpkrJm19* (5.0%), and *SpkrPf20* (89.9%) stand out in terms of the low percentage of composite pauses used, whereas with all other speakers the use recorded was over 10.0%, reaching up to 31.0% (*SpkrPm3*). Among composite pauses, by far the most silent pauses are used in combination with various drawn-out sounds (in Table 4 these combinations are indicated with SPa + SS + SDoS); their percentage is 14.3% (of 18.1% of all composite pauses in the corpus), with pauses composed of silent pauses and a drawn-out schwa being the predominant type. This type of composite pause predominates with all speakers; among the politicians they are slightly more common among men (17.6%) than women (11.4%), whereas their total average among both male and female politicians is 14.5%. Exactly the opposite tendency was recorded with TV presenters, where this type of pause is slightly more common among women (15.5%) than men (12.6%), with their total average among both male and female TV presenters being 13.9%. In the entire corpus, a slightly higher percentage of composite pauses of the type SPa + SS + SDoS was observed with male speakers (16.0% compared to 12.5% recorded among women). The percentage recorded with individual speakers ranged from 3.0% (*SpkrPm16*) to 22.6% (*SpkrPm21*). Among other composite pauses, another 1.0% were only accounted for by the types SPa + SFS (1.0%) and SPa + SS + SDoS + SFS (1.1%), whereas the remaining types (SPa + SRep, SPa + SS + SDoS + SRep, etc.) only accounted for 0.3% to 0.6% in the entire corpus. With regard to individual speakers, a deviation was recorded with speaker *SpkrJm2*, for whom a relatively frequent use of composite pauses of the type SPa + other FPa (8.3%) was typical; this type includes false starts,

⁸ In terms of frequency, the order SPa – SPa + FPa – FPa is switched around (SPa – FPa – SPa + FPa) only with five speakers (*SpkrPm21*, *SpkrPfl*, *SpkrJm2*, *SpkrJm6*, *SpkrJm13*) of the total of twenty-two.

simultaneous speech, nonverbal communication, nonverbal events, and various combinations of filled pauses.

Filled pauses (FPa) proved to be the least common (11.9%), and they were mainly used by men (14.6% compared to 9.0% recorded among women). The difference is greater with male presenters (17.9%) and female presenters (9.9%), and smaller with male politicians (13.1%) and female politicians (8.7%). On average, they tend to be more frequently used by male and female presenters (14.3%), and less by male and female politicians (10.9%). The fewest filled pauses were used by male politician *SpkrPm16* (1.0%) and male presenter *SpkrJm19* (1.9%), whereas they were used most frequently by male presenters *SpkrJm6* (32.6%) and *SpkrJm2* (30.0%). Among filled pauses, by far the most common were various drawn-out sounds (7.1%), especially the schwa (in 222 cases out of 316). Drawn-out sounds are more common among men (male politicians 9.4%, male presenters 7.8%) than women (female politicians 4.9%, female presenters 5.6%). With regard to individual speakers, speakers *SpkrPm16* (0.3%) and *SpkrJm19* (0.6%) stand out with a low percentage and speakers *SpkrPm10+21* (18.0%) and *SpkrJm6+13* (17.5%) stand out with an above-average use. Among filled pauses, composite structures are also relatively common (2.6%), whereas all other categories account for only 0.7% (e.g. various repetitions) and 0.8%. With individual speakers, a deviation in using simultaneous speech was observed with speakers *SpkrJm2* (18.3%) and *SpkrPfl* (5.1%), and a deviation in using false starts was noted with speakers *SpkrJm4* (6.4%) and *SpkrJf8* (3.6%). In terms of mixed structures of filled pauses, male presenter *SpkrJm6+13* stands out with 8.2%.

With both filled pauses (7.1%) and composite "silent-filled" pauses (14.3%), structures with drawn-out sounds predominate, whereas structures with repetitions are relatively few (0.7% in FPa and 0.6% in SPa + FPa). Both findings only partially confirm the third hypothesis that various repetitions and drawn-out language units predominate among filled pauses with both politicians and TV presenters. This hypothesis can only be confirmed with regard to the drawn-out sounds, whereas a relatively frequent use of various repetitions cannot be confirmed for politicians or TV presenters.

6. CONCLUSION

The study presented in this paper explored pauses from the perspective of their roles in speech and their structural composition using a sample of fifteen politicians and TV presenters and a corpus of ten political talk shows broadcast on TV Slovenia with

a total duration of over two hours. Based on the methodological approaches established abroad, a special research methodology adapted to the goal of the study was designed and three hypotheses were formulated and tested on the material selected. The research findings show that on average empty or silent pauses, which perform the primarily (but not exclusively) physiological function of breathing, predominate among the speakers analyzed. Cognitive or communicative pauses (and not physiological ones) are most common on average, and speakers most often interrupt their speech to look for the right formulation and to plan syntactic structures and the segmentation of the flow of speech. Drawn-out schwas (*uh* sounds) occur most often among filled and "silent-filled" pauses with all the speakers analyzed. It should be noted that the results obtained could be influenced by a variety of linguistic and extralinguistic characteristics or completely personal traits of an individual speaker, such as the speed and manner of speaking, age, experiences, and emotional state.

The analysis of pauses presented in this paper, which is part of broader research on Slovenian media speech (cf. Huber, 2013), yields many new findings in Slovenian text phonetics, but there is still room for further research. Hence, with regard to pauses, it would also make sense to explore the relationship between the length of syllables and the duration of pauses, their correlation with speech tempo and intonation, and so on. Ultimately, it would also be interesting to examine the connection between pauses and nonverbal communication, and the results could additionally be confirmed through perception tests conducted on a larger number of individuals.

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Uloge i struktura stanki u slovenskom medijskom govoru

Sažetak

U radu je riječ o stankama koje se proučavaju s obzirom na uloge koje imaju u govoru, kao i s obzirom na njihovu strukturu. Stanke se smatraju nepogrešivim zvučnim i/ili značenjskim, odnosno sadržajnim prekidom govornog toka i uvrštavaju se među značajne označitelje i organizatore govora. Empirijsko istraživanje stanki napravljeno je na osnovi korpusa deset slovenskih televizijskih emisija, tj. u sklopu autentičnoga i uglavnom spontanoga govora odabranih političara i voditelja televizijskih emisija u ukupnom trajanju od oko dva sata (tri političara i tri političarke te pet voditelja i četiri voditeljice televizijskih emisija).

Rezultati pokazuju da u korpusu prevladavaju prazne stanke (SPa) koje se često povezuju s fiziološkom ulogom disanja, što međutim ne znači da SPa nailazimo isključivo u toj ulozi. Od 4 479 analiziranih stanki samo je 19,4 % onih koje imaju samo fiziološku ulogu (PR) i čak 66,8 % stanki koje imaju samo komunikacijsku ulogu (CR); osim njih, dobiveno je i 14,8 % fiziološko-komunikacijskih stanki (PR + CR).

Među pojedinim ulogama kod kategorije PR u prosjeku prevladavaju stanke zbog disanja (PRRe 98,5 %), kod kategorije CR prevladavaju stanke zbog traženja odgovarajućih formulacija i planiranja sintaktičkih struktura govora (CRSP 43,9 %) te stanke zbog segmentiranja govornog toka (CRUD 41,6 %), dok kod miješane kategorije PR + CR prevladavaju stanke zbog disanja i traženja odgovarajućih formulacija te planiranja sintaktičkih struktura govora (PRRe + CRSP 90,7 %). Voditelji/voditeljice naprave u prosjeku više komunikacijskih stanki nego političari/političarke (73,4 % prema 64,2 %). S jedne strane, više komunikacijskih stanki javlja se kod voditelja/voditeljica, a s druge je strane u prosjeku više fizioloških stanki kod političara/političarki, iz čega bi se moglo zaključiti da političari i političarke, tražeći odgovarajuće formulacije, jednostavno šute, odnosno naprave stanku zbog udisaja, iako on u toj situaciji još nije neophodan, dok voditelji i voditeljice, tražeći odgovarajuće formulacije i planirajući odgovarajuće sintaktičke strukture govora, pokušavaju tišinu kombinirati prije svega s različitim produživanjem glasova. Oni su, vjerojatno, više od

političara svjesni da medij (televizija) ne podnosi predugačke tišine između traženja odgovarajućih struktura.

Oko 70 % svih stanki u korpusu je praznih (SPa). Govornice nešto češće upotrebljavaju SPa nego govornici (74,4 % prema 66,0 %), što znači da govornice prilikom stanki najčešće šute, dok govornici češće produžuju glasove, ponavljaju riječi i sl. Na drugom su mjestu po čestotnosti sastavljene strukture SPa + FPa (u cijelom ih korpusu ima 18,1 %), među kojima se najčešće pojavljuje SPa u kombinaciji s različitim vrstama produživanja (i to u 14,3 % od 18,1 % svih sastavljenih stanki u korpusu), a prevladavaju stanke koje su sastavljene iz SPa i produženog poluglasnika. Najmanje je stanki u korpusu punih (FPa), i to 11,9 %, češće su kod govornika (14,6 %) nego kod govornica (9 %). Najčešće su pune stanke s produženim glasovima (7,1 %), riječ je prije svega o produženom poluglasniku (70,3 % svih produženja).

Ključne riječi: tekstna fonetika, stanaka, uloga stanki, struktura stanki, medijski govor
