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Istraživanja govora

Filozofski fakultet, Zagreb, Hrvatska

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Uvodna riječ

Deveti znanstveni skup s međunarodnim sudjelovanjem "Istraživanja govora" u suorganizaciji Odjela za fonetiku Hrvatskoga filološkog društva i Odsjeka za fonetiku Filozofskoga fakulteta Sveučilišta u Zagrebu održava se na Filozofskom fakultetu u Zagrebu od 8. do 10. prosinca 2016. godine.

"Istraživanja govora" je hrvatski znanstveni skup s međunarodnim sudjelovanjem koji omogućuje predstavljanje novih znanstvenih istraživanja i spoznaja s područja fonetike. Fonetika kao znanost o govoru interdisciplinarnoga je karaktera pa je Skup prigoda da se okupe stručnjaci i znanstvenici iz različitih područja.

Prvi skup održan je 1984. godine pod nazivom "Govorne komunikacije", a od drugog skupa 1995. godine skup "Istraživanja govora" održava se svake treće godine u prosincu: 1998, 2001, 2004, 2007, 2010. i 2013. godine. Službeni jezici skupa su hrvatski i engleski. Glavne teme prethodnih skupova bile su percepcija govora, proizvodnja govora, neurofonetika, kvaliteta glasa, fonetika hrvatskoga jezika, umjetnički glas, retorika i druge.

Središnja tema Devetog znanstvenog skupa "Istraživanja govora" je prozodija govora. Pozvani plenarni govornici skupa su Carlos Gussenhoven (Sveučilište Radboud Nijmegen, Nizozemska) s temom "Evidence-based word prosodic structures" i Bettina Braun (Sveučilište Konstanz, Njemačka) s predavanjem "On the interplay between intonation and lexical processing in intonation languages". U okviru središnje teme jednu sesiju posvećujemo profesoru Branku Vuletiću koji je hrvatskoj fonetici pridonio istraživanjem vrednota govornoga jezika u percepciji književnih djela.

Programski i organizacijski odbor skupa preporučili su sudionicima širok popis tema:

1. Prozodija govora

- Intonacija
- Ritam, tempo, stanke
- Kvaliteta glasa: fonacija, spektar, modulacije
- Prozodija u fonetici i fonologiji
- Usvajanje i učenje prozodije
- Stilistika prozodijskih sredstava
- Vrednote govornoga jezika
- Sintaksa, semantika i pragmatika prozodije
- Prozodija riječi tonskih, visinskih i udarnih jezika
- Prozodijski aspekti govorne i jezične patologije
- Psiholingvistički, kognitivni i neuralni korelati prozodije
- Prozodija u sintezi govora i automatskom prepoznavanju govora

- Prozodija u računalnoj lingvistici
- Prozodija u jeziku i glazbi
- Paralingvistička komunikacija
- Prozodija znakovnoga jezika

2. Ostale fonetske i retoričke teme

- Fonetika i fonologija hrvatskoga jezika
- Proizvodnja govora
- Percepcija govora
- Razvoj govora
- Neurofonetika
- Poremećaji i rehabilitacija govora i slušanja
- Sociofonetika
- Govorne i jezične tehnologije
- Fonetika u učenju stranih jezika
- Umjetnički govor: scenski govor, filmski govor
- Retorika: u obrazovanju, u medijima, u politici, u znanosti, u filozofiji

Na skup je prijavljeno ukupno 68 radova. Prema prijavljenim temama i sažetcima izlaganja vidljivo je da će znanstvenici i stručnjaci iz različitih kutova rasvijetliti mnoga pitanja povezana s prozodijom govora. Zastupljene su mnoge prozodijske teme: intonacija, naglasak riječi, poučavanje prozodije, tempo, ritam, glas. Prijavljeni su radovi koji se bave analizom govora u medijima i u kazalištu, te retorikom i argumentacijom. Zastupljene su i usko fonetske teme analize proizvodnje i percepcije govora, procjene atipičnoga govora i rehabilitacije.

Tekstovi u Knjizi sažetaka donose se na hrvatskome i engleskome jeziku ili samo na engleskome jeziku. Tekstovi su podijeljeni tako da najprije donose pozvana plenarna izlaganja, a nakon toga i sva druga izlaganja abecednim redom prema prezimenima autora. Napominjemo da je jezična redakcija autorska.

Zahvaljujemo sudionicima skupa što su se odazvali pozivu za sudjelovanjem i želimo im ugodan boravak i rad. Zahvaljujemo i pokroviteljima skupa: rektoru Sveučilišta u Zagrebu, prof. dr. sc. Damiru Borasu i Ministarstvu znanosti i obrazovanja RH na osobitoj časti koju su nam iskazali svojim visokim pokroviteljstvom.

Predsjednik Programskoga odbora
Prof. dr. sc. Nikolaž Lazić

Predsjednica Organizacijskoga odbora
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Introduction

The conference *Speech Research 2016* is co-organized by Phonetics Section of the Croatian Philological Association and Department of Phonetics at the Faculty of Humanities and Social Sciences University of Zagreb. It will be held in Zagreb on 8th, 9th and 10th December 2016 at the Faculty of Humanities and Social Sciences of the University of Zagreb.

Speech Research is a Croatian scientific conference with international participation which allows the presentation of new scientific research and knowledge in the field of phonetics. Phonetics as speech science has an interdisciplinary character, so the conference provides an opportunity to gather experts and researchers from different disciplines.

The first conference took place in 1984 under the name *Speech communications*, and since the 2nd conference in 1995, the conference with the name *Speech Research* is organized triennially 1998, 2001, 2004, 2007, 2010 and 2013 in Zagreb, Croatia. The official languages are Croatian and English. The conference usually has one main topic. At the previous conferences the main topics were speech perception, speech production, neurophonetics, voice quality, phonetics of the Croatian language, artistic voice, rhetoric and others.

The main topic of this year's conference is speech prosody. Keynote speakers are Carlos Gussenhoven (Radboud University Nijmegen, Netherlands) with the talk "Evidence-based word prosodic structures" and Bettina Braun (University of Konstanz, Germany) with the topic "On the interplay between intonation and lexical processing in intonation languages". As a part of the central topic, a session will be devoted to Professor Branko Vuletić, who contributed to the Croatian phonetics with his research of spoken language in the perception of literary works.

The Program and the Organizing Committee have offered for consideration a wide array of topics:

1. Speech prosody

- Intonation
- Rhythm and timing, tempo, pauses
- Voice quality, phonation, and vocal dynamics
- Phonology and phonetics of prosody
- Acquisition of first language prosody
- Prosody in language contact and second language acquisition
- Communicative situation and speaking style
- Syntax, semantics, and pragmatics
- Prosody in tone languages, pitch-accent languages and stress accent languages
- Prosodic aspects of speech and language pathology

- Psycholinguistic, cognitive, neural correlates of prosody
- Prosody in automatic speech synthesis, recognition and understanding
- Prosody in computational linguistics
- Prosody in language and music
- Meta-linguistic and para-linguistic communication
- Prosody of sign language

2. General phonetic topics and rhetoric

- Phonetics and Phonology of Croatian language
- Speech Production
- Speech Perception
- Speech development
- Neurophonetics
- Speech and hearing disorders and their rehabilitation
- Sociophonetics
- Speech and language technologies
- Foreign language learning
- Artistic speech: Stage speech, film speech
- Rhetoric: in education, in media, in politics, in science, in philosophy

There are 68 abstracts accepted for presentation at the conference. Researchers participating in the conference will shed light on numerous questions related to speech prosody. Papers cover topics in intonation, word prosody, accentology, teaching prosody in L2, speech rate, voice, timbre, speech in media, stage speech, rhetoric and argumentation, speech production and perception, as well as atypical speech and rehabilitation.

This Book of Abstracts contains abstracts which are both in Croatian and English and those which are only in English. Abstracts of the keynote lectures are given first. They are followed by abstracts provided by other conference participants in the alphabetical order according to the participants' last name. Abstracts appear in their original form and have not been changed or edited.

First of all we wish to thank all participants for submitting their abstracts and for participation at Speech Research. Our gratitude goes to Mr. Damir Boras, Ph. D., the Zagreb University Chancellor, under whose auspices the conference is held. We also thank the Ministry of Science and Education of the Republic of Croatia for the financial support.

On behalf of the Program committee
Assoc. Prof. Nikolaj Lazić, Ph. D.

On behalf of the Organizing committee
Asst. Prof. Elenmari Pletikos Olof, Ph. D.

PLENARNA IZLAGANJA
PLENARY LECTURES

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Evidence-based word prosodic structures

Languages can be grouped as in this diagram:

	Stress	No stress
Tone	English	Yoruba, Mandarin, Cantonese
No tone	Swedish, Limburgish	French, Indonesian

I will argue that this typology does not provide a complete picture of word prosodic typology. One dimension to be added is the distinction between lexical and post-lexical prosodic structure. For tone, this distinction has traditionally been strictly applied. ‘Tone’ in this sense refers to tones that are included in phonological representations of words (lexical tone) or affixes (grammatical tone; Hyman 2016), and so exclude tones that are assigned post-lexically. For stress, the picture is more blurred.

Within each part of the phonological grammar, further distinctions can be made. For instance, despite the stresslessness and tonelessness of French, words will receive (intonational) tones on the final syllables of words in phonological-phrase-final position. Moreover, ‘stress’ has been given distributional definitions (‘obligatory’ and ‘culminative’; Hyman 2014) as well as phonetic ones (‘stress accent’ vs ‘non-stress accent’; Beckman 1986).

In my talk, I will deal with three languages which have recently been investigated. Ambonese Malay is an example of a language without either lexical or post-lexical word prosodic structure and is thus located at the ‘emptiest’ extreme, unlike French. Persian is an example of a language that has a post-lexical tone on a syllable that has generally been described as stressed, yet does not qualify under any definition of that term. Zwara Berber is shown to be a language with lexical stress, but one with a remarkable tendency to place syllabic consonants in the penultimate stressed syllables. The distinction between lexical and post-lexical word prosodic structure will be shown to have behavioral consequences.

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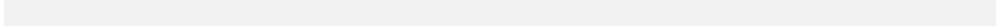
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On the interplay between intonation and lexical processing in intonation languages

In intonation languages such as English, Dutch and German, intonation is argued to signal non-lexical information (e.g., Ladd 2008). Many models of speech perception and lexical access do not account for f_0 (e.g., Norris & McQueen 2008, Norris 1994). Meanwhile, present results from offline and online speech processing tasks (identification, eyetracking, headturn preference paradigm) show that f_0 affects segmental processes. In this talk, I will review data on (i) adult speech segmentation in French and English (Welby 2007, Ladd & Schepman 2003, Welby & Niebuhr 2016), (ii) infant speech segmentation in German (Zahner, Schönhuber & Braun 2016) and (iii) lexical access in Dutch and German (Braun, Dainora & Ernestus 2010, Zahner, Schönhuber, Grijzenhout & Braun 2016, Egger 2015). Based on these processing data, I will discuss the interplay between intonation and lexical processing and implications for models of lexical access.

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IZLAGANJA

PRESENTATIONS

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Disfluencies in spontaneous speech today and 40 years ago

As the society, language itself is changing continuously (Wardhaugh 1995, Labov 2006). It affects not only the speech production but also the speech planning (Hay et al. 2015). The speech planning process works hidden which appears on the surface only as disfluencies (Gósy 2005). Disfluencies are inherent in spontaneous speech (Shriberg 2001). Gósy and Gyarmathy (2008) compared disfluencies occurring in spontaneous speech across six decades. Based on data, they confirmed that the strategies speakers used to resolve the disharmony during spontaneous speech have been changed. They found that the activation of the mental lexicon and the lexical access presented difficulties for the speakers in the 40s of the last century (informants of the Hegedűs-archive), while grammatical and articulation planning, and phonological transformation meant larger problem for the present speakers.

Hegedűs-archive was recorded in the 1940–50s, ‘Szalag’ corpus in the 1970–80s. The aim of the present research was to carry out a comparative study on Szalag corpus (‘old speakers’ hereinafter referred to as: OSp) on the basis of the same criteria like Gósy and Gyarmathy (2008) did before on Hegedűs-archive. The results could help to answer the question what kind of modifications could be observed in the case of the present speakers (hereinafter referred to as: PSp)

Our hypotheses were the followings: (i) there are more disfluencies rooted in uncertainty and error-type disfluencies in spontaneous speech of PSp than in that of OSp. (ii) The most frequent type of disfluencies is filler in the speech of OSp, in the case of PSp the most frequent ones are filled pauses.

Twelve adult male speakers participated in the study. Half of the participants (6-6 persons) was selected from BEA (Hungarian Spoken Language Database) database (Gósy 2012; Neuberger et al. 2014) and the other half was from ‘Szalag’ corpus. Annotation was conducted using Praat (Boersma–Weenink 2009) software. Statistical analysis was carried out using SPSS program.

Our hypotheses were partly proved by the data. We detected more disfluencies in the spontaneous speech of PSp than in that of OSp. Fillers were the most common disfluencies in OSp but lengthening and filled pauses likewise in PSp (however, difference was observed in the proportions). Based on our data we can claim that PSp encounter difficulties in speech planning due to the demand of fast disclosure of

information, and they seem to use various strategies to solve them, which will be discussed in the talk.

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Naglasci u inojezičnom hrvatskom

U kontekstu suvremenih pogleda na (ne)važnost poučavanja naglasnog sustava u radu s neizvornim govornicima, posebno neizvornim govornicima hrvatskoga jezika, rad će pokazati koliko su neizvorni govornici upoznati s hrvatskim naglasnim sustavom te koliko su njime ovladali u čitanom i govorenom tekstu.

Dat će se kratak pregled obrade naglasnog sustava u udžbenicima za poučavanje inih jezika s posebnim osvrtom na udžbenike inojezičnog hrvatskog.

Dosadašnje iskustvo u radu s neizvornim govornicima pokazalo je da neizvorni govornici koji studiraju hrvatski jezik u inozemstvu vrlo dobro poznaju hrvatski naglasni sustav, u samoprocjeni svojih naglasaka su vrlo strogi – najčešće misle da njihov naglasni sustav nije dobar. Neizvorni govornici koji ne studiraju hrvatski jezik već ga uče zbog različitih potreba uglavnom nemaju teorijsko znanje o hrvatskim naglascima, a također su strogi u samoprocjeni.

Rad će prikazati rezultate istraživanja provedenog na skupini neizvornih govornika različitih razina poznavanja hrvatskog jezika (od početne do naprednih razina prema ZEROJ-u). Cilj istraživanja bio je pokazati prihvatljivost naglasaka inojezičnih govornika u odnosu prema normi. Ispitanici različitih razina čitali su po deset izoliranih riječi čije im je značenje poznato. Potom su iste riječi trebali upotrijebiti u kraćem razgovoru. Dvije su skupine procjenitelja – stručni i nestručni ocijenili njihove naglaske. Na kraju je analiziran odnos samoprocjene i ocjena.

Statistički obrađeni rezultati pokazuju da studenti imaju bolje metajezično znanje, ali između njihova odstupanja i odstupanja nestudentske populacije u mjestu naglasaka i kvaliteti nema značajnijih razlika. Obje su skupine u samoprocjeni vrlo stroge.

Accents in Croatian as L2

In the context of modern views on the (un) importance of teaching accents with non-native speakers, especially non-native speakers of the Croatian language, the paper

will show non-native speaker's knowledge of Croatian accents and how they realize Croatian accents in read and the spoken text.

It will be described accentual system in textbooks for teaching languages, especially Croatian as L2.

Previous experience in working with non-native speakers showed that non-native speakers who are studying Croatian language abroad have a good knowledge about Croatian accents, in a self-assessment of their accents they are very strict - most often they think that their accents are not good. Non-native speakers who do not study the Croatian language abroad, but they learn it because of different needs generally do not have theoretical knowledge of Croatian accents, and are also strict in self-assessment.

The paper will present the results of a research in a group of non-native speakers of different levels of knowledge of the Croatian language (from the beginning to advanced levels according to CEFR). The aim of this study was to demonstrate the acceptability of accents of non-native speakers in relation to the standard accents. Speaker of different levels of Croatian language were reading the ten isolated words. The meaning of that words was known to them. Then the same word they had to use in a brief interview. Two groups of assessors - professional and unprofessional assesse their accents. Finally, it is analyzed the relationship of self-assessment and rating.

Statistically, results show that students have better knowledge about Croatian accents then those speakers who just learn Croatian on the course, but there was no significant difference between their realizations. Both groups in the self-evaluation were very strict.

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Temporal characteristics of children's and adolescents' speech: the effect of speech task

Temporal characteristics of speech (speech and articulation rate, pauses) are affected by several factors like speech task and speaker's age. The main question of this presentation is how speech task influences the mentioned parameters in children's and adolescents' speech.

80 subjects' recordings from GABI, the Hungarian Child Language and Speech Database and Information Repository were selected for the research: twenty 6-year-old,

twenty 9-year-old children, and twenty 13-year-old and twenty 17-year-old adolescents. In all groups there were 10 males and 10 females. All of them were native Hungarian speakers with normal hearing, and didn't have any speech or language disorder.

Recordings were made with each subject in three situations which represented different speech tasks and required various cognitive skills with various levels of difficulty: 1. spontaneous narrative (subjects spoke about their own lives); 2. narrative recall (the task was to recall a short story); 3. storytelling (the subjects had to relate a story on the basis of a series of six pictures). Speech rate, articulation rate, frequency and duration of pauses were measured in every recording.

Preliminary results show that speakers' age has significant effect on every speech parameter, but there is significant difference between the speech tasks only in case of the 13-year-old and the 17-year-old groups. The results show which speech task is easier to produce for the children in the late stages of speech development and for the adolescents.

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Prikaz rezultata preliminarne validacije druge verzije upitnika samoprocjene Profil Ishoda Rehabilitacije Slušanja (PIRS)

Cilj ovog rada je prikaz rezultata preliminarne validacije druge verzije upitnika samoprocjene nazvanog Profil Ishoda Rehabilitacije Slušanja (PIRS), originalno kreiranog za posrednu kvantifikaciju funkcionalnih teškoća slušanja u sklopu projekta podrške rehabilitaciji odraslih sa stečenim oštećenjem sluha pod nazivom „Ostanite uključeni!“, provođenog od strane Saveza gluhih i nagluhih grada Zagreba kroz 2011./2012. godinu. Validacija PIRS-a obuhvatila je sve njegove pojedinačne podskale, koje ispituju funkcionalne teškoće slušanja s obzirom na: zvučna obilježja okoline, njihov utjecaj na svakodnevne aktivnosti, obilježja sugovornika, komunikacijske navike i reakcije sugovornika te slušanje sa slušnim pomagalom, kao i doživljaj koristi dodijeljenog pomagala, odnosno korisnikovo zadovoljstvo slušnim pomagalom. U istraživanju je sudjelovalo 47 odraslih sudionika (37 korisnika slušnog pomagala i 10

čućih osoba), čiji su odgovori na PIRS-u analizirani s ciljem ispitivanja pouzdanosti i valjanosti njegovih podskala. Analiza prikupljenih podataka samoprocjene obuhvatila je deskriptivnu razinu, računanje Cronbachovog koeficijenta pouzdanosti i međuklasnog korelacijskog koeficijenta, analizu konstruktne, diskriminacijske i konkurentne valjanosti provođenjem faktorske analize, Mann-Whitney U testa te računanjem Spearmanovog koeficijenta korelacije. Rezultati navedene analize ukazuju na potencijal podskala upitnika PIRS da budu korištene kao subjektivne mjere ishoda rehabilitacije slušanja.

Preliminary results of the validation of the self-assessment questionnaire 'Profile of Aural Rehabilitation Outcome'

The goal of this paper is to present the preliminary validation results of the second version of the self-assessment questionnaire known as 'Profile of Aural Rehabilitation Outcome' (PIRS), initially designed to indirectly quantify functional listening and hearing problems of adults with acquired hearing loss included in the project offering support to aural rehabilitation activities, known as 'Stay tuned!', which was conducted by the Zagreb Association of the Deaf and Hard of Hearing Individuals in 2011 and 2012. The PIRS individual subscales, assessing functional listening difficulties regarding acoustical characteristics of the environment, their influence on everyday activities, characteristics of the communication partner(s), communication habits and reactions of the communication partner(s), listening with the hearing aid(s) as well as the perceived benefit and satisfaction with the hearing aid(s) were used for the validation of PIRS. Data from 47 adults participants (37 hearing aid users and 10 hearing individuals) were analyzed to determine reliability and validity of PIRS subscales. The analysis of self-assessment data included descriptive analysis, calculation of Cronbach's coefficient of reliability and Intraclass correlation coefficient, and the implementation of factor analysis, Mann-Whitney U test and Spearman's correlation coefficient in order to examine construct, discriminatory and concurrent validity. The results of this analysis indicate the potential for sub-scales of the PIRS questionnaire to be used as a subjective outcome measures of hearing rehabilitation.

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Samoprocjena glasa zborskih, klapskih i solo pjevača

Cilj ovog istraživanja bio je usporediti rezultate samoprocjene glasa triju grupa pjevača: zborskih, klapskih i solo pjevača, radi stjecanja uvida u mogući utjecaj vrste pjevanja na percepciju kvalitete glasa i s njom povezanih teškoća. Za potrebe istraživanja adaptiran je upitnik Indeks vokalnih teškoća za pjevače (Singing Voice Handicap Indeks - sVHI, Cohen i sur., 2007), koji je ispunilo 288 pjevača – 164 žena i 124 muškaraca.

Analiza rezultata otkrila je statistički značajnu razliku između tri promatrane skupine pjevača, i to na 16 od 36 čestica upitnika sVHI. Najlošije su svoje glasove procijenili zborski pjevači, zatim klapski, dok su solo pjevači prijavili najmanje vokalnih teškoća, što ukazuje na utjecaj vrste pjevanja na percepciju kvalitete glasa i s njom povezanih teškoća. Statistički značajna razlika između muških i ženskih pjevača dobivena je na samo 3 od 36 čestica upitnika, ukazujući na ograničen utjecaj spola na samoprocjenu kvalitete glasa, odnosno vokalnih teškoća.

Voice self-assessment between choir singers, klapa singers and solo singers

The aim of this research was to compare the results of the voice self-assessment between the three groups of singers: choir singers, klapa singers and solo singers, in order to gain insight into the potential impact of different types of singing on the perception of voice quality and associated vocal problems. The Singing Voice Handicap Indeks – sVHI (Cohen et al., 2007) questionnaire was adapted for the study, which was completed by 288 singers - 164 women and 124 men.

The data analysis revealed a statistically significant difference between the three groups of singers in 16 of the 36 items of the sVHI. The least favorable in their voice self-assessment were choir singers, then klapa singers, while the solo singers reported the least vocal difficulties, which indicates the influence of the type of singing on the perception of voice quality and associated vocal problems. A statistically significant difference between male and female singers was obtained on only 3 of 36 particles of the questionnaire, indicating the limited impact of gender on self-assessment of voice quality and vocal difficulties.

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Relacije kulturnog identiteta i samopoštovanja, zadovoljstva životom te psihičkog zdravlja gluhih i nagluhih osoba

Rezultati dosadašnjih malobrojnih istraživanja, iako u određenoj mjeri nekonzistentni, upućuju na povezanost kulturnog identiteta gluhih i nagluhih osoba s njihovim samopoštovanjem i zadovoljstvom životom. Cilj ovog istraživanja bio je ispitati povezanost samopoštovanja, zadovoljstva životom i psihičkog zdravlja gluhih i nagluhih osoba sa sastavnicama kulturnog identiteta (kulturne identifikacije, kulturnih sklonosti, sudjelovanja u kulturi, samoprocjene kulturnih znanja i jezične kompetencije u znakovnom i hrvatskom jeziku) te vrstom kulturnog identiteta (čujući, marginalni, gluhi i dvokulturni). U istraživanju su sudjelovale 443 osobe oštećena sluha, u dobi od 18 do 87 godina, iz 17 hrvatskih gradova. Ispitivanje je provedeno primjenom Akulturacijske skale DAS (Maxwell-McCaw i Zea, 2011), Rosenbergove Skale samopoštovanja (Rosenberg, 1965), Dienerove Skale zadovoljstva životom (Diener i sur., 1985) te četiri podskale upitnika o zdravlju SF-36 (Ware i Sherbourne, 1992), koje mjere opće psihičko zdravlje. U obradi podataka korišteni su regresijska analiza i Kruskal-Wallisov test. Identifikacija sa zajednicom odnosno kulturom Gluhih pokazala se značajnim prediktorom samopoštovanja, zadovoljstva životom i psihičkog zdravlja gluhih i nagluhih osoba. Značajnim prediktorima samopoštovanja pokazale su se također varijable samoprocjene jezične kompetencije u znakovnom i govornom jeziku, varijable znanja o čujućoj kulturi i kulturi Gluhih (posljednja je negativno povezana sa samopoštovanjem) te sklonosti jednoj odnosno drugoj kulturi (obje negativno povezane sa samopoštovanjem). Značajnim prediktorom zadovoljstva životom, uz identifikaciju s kulturom Gluhih, pokazala se i varijabla znanja o kulturi Gluhih. S psihičkim zdravljem, uz identifikaciju s kulturom Gluhih, povezanom se pokazala varijabla znanja o kulturi čujućih. Značajne razlike među gluhim i nagluhim osobama s različitim vrstama

identiteta utvrđene su samo u odnosu na zadovoljstvo životom, pri čemu su najviše rezultate, kao i u prethodnim istraživanjima, postigle osobe s dvokulturnim identitetom, a najnižu osobe s marginalnim identitetom. I na varijablama samopoštovanja i psihičkog zdravlja osobe s marginalnim identitetom postigle su najniže rezultate, ali ne značajno niže od preostalih skupina sudionika.

The relationship between cultural identity and self-esteem, satisfaction with life and psychological health in deaf and hard of hearing persons

Although to a certain extent inconsistent, the results of previous research suggest the relationship between cultural identity of the deaf and hard of hearing persons and their self-esteem and satisfaction with life. The aim of this research was to examine the relationship between self-esteem, satisfaction with life and psychological health and the components of cultural identity (cultural identification, enjoyment in cultural activities, cultural preferences, cultural knowledge and language competence), as well as the type of the cultural identity of deaf and hard of hearing persons (hearing, marginal, deaf and bicultural). The research sample consisted of 443 deaf and hard of hearing persons, aged between 18 and 87 years, from 17 Croatian cities. The research was conducted using the DAS - Deaf Acculturation Scale (Maxwell-McCaw i Zea, 2011), Rosenberg Self-Esteem Scale, Diener's Satisfaction With Life Scale, as well as 4 subscales of the SF-36 (The Short Form (36) Health Survey) measuring the psychological well-being. The data were analysed using the regression analysis and Kruskal-Wallis H test. Identification with the Deaf culture proved to be a significant predictor of the self-esteem, life satisfaction and psychological health in deaf and hard of hearing persons. Language competences in both sign- and majority language proved to be significant predictors of self-esteem as well, next to the cultural knowledge related to both hearing and Deaf culture (the last being negatively related to self-esteem), as well as the cultural preferences for the Deaf and for the hearing culture (both negatively related to self-esteem). Next to the identification with the Deaf culture, the satisfaction with life proved to be significantly predicted by cultural knowledge on the Deaf culture, and psychological health by cultural knowledge on the hearing culture. Significant differences between respondents with different types of cultural identity were found only regarding their satisfaction with life: biculturally acculturated persons expressed the highest- and marginally acculturated persons the lowest level of life satisfaction. Marginally acculturated persons achieved also the lowest results on self-esteem and psychological health measures, but these differences didn't prove to be significant.

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Suprasegmentals as syntactic markers in German Sign Language and the universal scope order of clausal categories

Suprasegmental structures produced by the shoulders, the head and the face, also known as non-manual markings (NMMs), have been claimed to fulfill similar functions in sign languages as intonation in spoken languages (e.g., Wilbur, 1999). As already pointed out by William Stokoe (1960:63), the leading pioneer of sign language research, NMMs are the “key to syntactical structure”.

By adopting a cartographic approach to syntax (Cinque, 1999, supplemented by Hole, 2015), this talk investigates a bodily mapping of the scope of clausal categories in German Sign Language: It is claimed that operators with high scope are produced with the eye-brows, intermediate operators with the mouth and the shoulders, and those with narrow scope by manual means. Discussing categories of speech acts, evaluation, scalarity, epistemic modality, volition and deontic, as well as other kinds of modality, we show (i) that the supposedly universal scope order of clausal categories is not only found in spoken, but also in signed languages; (ii) that it is expressed in a similar way as in spoken languages, namely by layering (via intonational means) and by right-to-left and left-to-right concatenation; and (iii) that there is a highly regular vertical mapping onto the signer’s body which may be found in all signed languages of the world.

Descending from wide scope to narrow scope categories, the following picture emerges: High scoping clausal categories like speech acts, evaluation as good or bad, as well as epistemic modality are expressed with the eye-brows via layering. The lower (but still high) category of scalar evaluation as little or much is also expressed via intonational means, but this time with the cheeks or the shoulders. Only when descending further down the hierarchy, the strategy of scope-taking switches to manual expressions, namely when it comes to volition. Volitional operators, such as the verbal signs TO-WANT or TO-PLAN, systematically appear to the left of the VP (see example 1 from Happ & Vorköper, 2014:362). Even lower categories, such as deontic modality, also have to be expressed manually but can appear either to the left or to the right of the VP. Only when it comes to root modality or simple event description, a left-to-right concatenation strategy is disallowed (see example 2, also from Happ & Vorköper, 2014:359). The

clauses in (3) and (4) illustrate speech act marking, in (3) epistemic modality is also marked via NMMs.

- (1) SWEN WISH SIGN LANGUAGE LEARN
'Swen wants to learn sign language.'
- (2) a. MIRACULIX PERFORM-MAGIC CAN
'Miraculix can perform magic.'
b. *MIRACULIX CAN PERFORM-MAGIC
'Miraculix can perform magic.'
- (3) TODAY PETER OFF
'Peter is off today.'
- _____ brow raise
(4) TODAY PETER OFF
'Is Peter off today?'
- _____ furrowed brows/head nods
(5) (PROBABLY) TODAY PETER OFF
'It could be that Peter is off today.'

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Contextual effects in the perception and comprehension of English sentence types by native Inuktitut speakers

What happens when native speakers of a language with limited use of intonation acquire an intonational language? To address this question, we analyzed the perception of English sentence types (statements (Ss), inverted interrogatives (AQs) and non-inverted interrogatives (DQs)) by native speakers of Inuktitut. In Inuktitut, where intonation is restricted to phrasing, boundary tones are mapped to finality vs. continuity in relation to turn-taking (Fortescue, 1984; Shokeir, 2009). While a rising contour may also be used in questions, the distinction between statements and questions is morphologically marked (e.g., *ilisuusi* ‘teacher’ vs. *ilisuusiuvit* ‘are you the teacher’; see Spalding, 1969). In English, although AQs are syntactically marked, the difference between Ss and DQs is purely prosodic. Thus, we made two predictions: (1) in tasks without context, where pitch is the only cue, participants will confuse Ss with DQs; (2) instead, when context prompts a question, participants will have difficulty distinguishing between DQs and AQs.

13 advanced L1 Inuktitut-L2 English speakers and 15 English controls performed three forced-choice identification experiments. In Experiments 1 (low-pass filtered stimuli, no context: NC) and 2 (unaltered stimuli, little context: LC), participants listened to 30 utterances and identified the sentence type (statement, question, or exclamation). In Experiment 3 (context: C), participants heard a scenario followed by three utterances (S, AQ, DQ) and selected the best fit. Measurements included the proportion of correct responses and the median reaction times (RTs). Results of a mixed effects model revealed that Language (English>Inuktitut; $\beta=0.98$; $SE=0.31$; $t=3.09$; $p=0.002$), Task type (LC>NC>C; $\beta=0.61$; $SE=0.14$; $t=4.28$; $p=0.000$) and Stimulus Type (IQ>S>NIQ; $\beta=0.50$; $SE=0.15$; $t=3.22$; $p=0.01$) significantly predicted the number of correct responses. Moreover, Inuktitut speakers’ RTs were significantly longer than the control group’s ($\beta=0.99$; $SE=0.28$; $t=3.49$; $p=0.000$), especially in the C task. Controls outperformed the experimental group in all tasks. Confusion matrices revealed that the groups differed in error types. In the NC and LC tasks, Inuktitut

speakers confused Ss and DQs at a similar rate. In the C task, though, they were twice as likely to choose an AQ when a DQ was required, suggesting that they had not acquired the pragmatic distinction between the two, and that they relied mostly on syntax to make the distinction. These results were expected, considering patterns of cross-linguistic influence, and are consistent with findings suggesting that L1 transfer affects auditory (NC task), as well as non-auditory perception (e.g., Ortega Llebaria & Colantoni, 2013).

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Ultrazvučno istraživanje: hrvatski vokali u beznačenjskim i značenjskim riječima

U radu se ultrazvukom istražuju razlike u lingvalnim karakteristikama hrvatskih vokala između značenjskih i beznačenjskih riječi. Ultrazvuk je zdravstveno siguran, neinvazivan i omogućava prikupljanje velike količine podataka i direktno vizualno promatranje lingvalne artikulacije. U većini ultrazvučnih istraživanja materijal za ultrazvučnu analizu snimljen je većinom na beznačenjskim riječima i rečenicama jer se standardizacijom postupka kontrolira što više faktora. Nakon istraživanja hrvatskih vokala u beznačenjskim riječima kojima se pokušalo kontrolirati što više varijabli, nastavak istraživanja je usporedba dobivenih rezultata sa što prirodnijim, spontanom govorom. U ovome su istraživanju uspoređeni vokali u značenjskim riječima u odnosu na vokale u beznačenjskim da bi se mogao dobiti okvir varijabilnosti hrvatskih vokala za

rehabilitaciju atipičnoga govora ili računalnu sintezu govora. Za istraživanje je korišten hrvatski ultrazvučni korpus (HULK) snimljen simultano s akustičkim signalom na šestero ispitanika (tri muška i tri ženska). Ispitanici su ponavljali produžene vokale te rečenice s beznačenjskim (KVK, V = a, e, i, o, u) i značenjskim jednosložnim riječima pet puta. I u beznačenjskim i u značenjskim riječima prvi konsonant u riječi bio je jedan od bilabijalnih okluziva (/p/ ili /b/). Podaci su anotirani ručno u programu Ultra-CATS, a zatim obrađeni Excelom. U istraživanju se precizno odredio smještaj vokala u vokalskom trapezu i njihov oblik i položaj jezika. Rad odgovara na pitanja: kakve su artikulacijske karakteristike hrvatskih vokala u značenjskim i beznačenjskim riječima, koliko variraju pojedini vokali unutar jednoga ispitanika, a koliko između različitih ispitanika. Normalizirani podaci i mjere iz ovoga rada mogli bi se upotrijebiti u dijagnostici i rehabilitaciji atipičnoga govora ultrazvučnom metodom, a možda i primijeniti na postojeće opise vokalskoga sustava u teorijskoj fonetici.

Ultrasound study: comparison between Croatian vowels in nonsense and meaningful words

This paper studies the differences between lingual characteristics of Croatian vowels in nonsense and meaningful words, through the means of ultrasound. The ultrasound is scientifically safe, non-invasive, and it enables the collection of large quantities of data, as well as a direct visual observation of lingual articulation. In most ultrasound studies, the material for ultrasound analysis is mostly recorded in nonsense words and sentences because procedure standardization facilitates the control of as many factors as possible. After studying Croatian vowels in nonsense words, where as many as possible variables were attempted to be controlled, further research was to compare the results with natural, spontaneous speech. This study compared vowels in meaningful words with vowels in nonsense words in order to obtain the variability framework of Croatian vowels for atypical speech rehabilitation or computer speech synthesis. For the purposes of this study, Croatian ultrasound corpus (HULK) was used and it was recorded simultaneously with the acoustic signal on six participants (three male and three female participants). The participants repeated longer vowels and sentences with nonsense (CVC, V=a, e, i, o, u) and meaningful one-syllable words five times. In both nonsense and meaningful words, the first consonant of the word was one of the bilabial stops (/p/ or /b/). Data were manually annotated in the Ultra-CATS programme and then processed in Excel. The study determined precisely the position of vowels in vowel trapezium, as well as their shape and tongue position. The paper gives answers to these questions: what are articulatory characteristics of Croatian vowels in meaningful and nonsense words, how much certain vowels vary in one participant and how much

between different participants. Normalized data and measures from this paper could be used in diagnostics and rehabilitation of atypical speech by means of ultrasound, and these might even be applied to the existing descriptions of the vowel system in theoretical phonetics.

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Vokalni zamor glasovnih profesionalaca u turizmu

U izlaganju će se prikazati rezultati istraživanja vokalnoga zamora glasovnih profesionalaca u turizmu (turističkih vodiča, pratitelja i muzejskih vodiča). Vokalni je zamor funkcionalna slabost glasa, a Kovačić (2012) pojašnjava da je riječ o samopercepciji povećanog laringalnog naprezanja i promjenama kvalitete glasa. Različiti znanstvenici (Lehto i sur., 2006; Piccolotto Ferreira i sur., 2010.) govore o različitim uzrocima vokalnoga zamora kao što su pojačano korištenje glasa, fonacija neubičajenom visinom glasa, općenito povišena napetost laringalnih struktura te uporaba glasa u uvjetima narušenoga zdravlja govornih organa. Altman i suradnici (2005) kao najčešće uzroke pojave vokalnoga zamora i pojačavanje njegovih simptoma navode pušenje, izloženost onečišćenom zraku, habitualnu zloupotrebu glasa te psihički stres i anksioznost. Do sada su istraživanja bila usmjerena na nastavnike, glumce i pjevače te spikere i novinare, a povećan rast gospodarske grane turizma u Republici Hrvatskoj izazvao je i veće zahtjeve za govorno opterećenje glasovnih profesionalaca u turizmu. Budući da glasovni profesionalci u turizmu svakodnevno imaju povećane napore kroz višesatno govorenje prisiljeni su prilagođavati se različitim tehničkim uvjetima (govor u autobusu, na javnim, bučnim površinama, bez osiguranoga razglasa, s različitim brojem slušatelja...), pokušalo se istražiti kakve su njihove govorne navike te kakva je njihova procjena glasa. Istraživanje je provedeno na 45 ispitanika u dva dijela. Prvi dio je upitnik o samoprocjeni vokalnoga zamora, a drugi dio je analiza kvalitete glasa prije (nakon odmora) i neposredno poslije vokalnoga zamora. U glavnom dijelu istraživanja ispitala se subjektivna procjena simptoma vokalnoga zamora te svjesnost glasovnih profesionalaca u turizmu o njezi glasa i govornoj higijeni. U drugome dijelu se kroz pilot-istraživanje provjerilo kakve su akustičke karakteristike glasa i kvaliteta glasa ove skupine glasovnih profesionalaca prije i poslije dužega govora. Govor se akustički analizirao računanjem dugotrajnog prosječnog spektra LTAS (područje frekvencija 0-5

kHz) na temelju kojeg su izmjereni prosječni govorni F_0 i jakost najjačeg spektralnoga vrha $L0$. Kvalitetu glasa glasovnih profesionalaca u turizmu procjenjivalo je troje treniranih fonetičara. Procjenjivale su se promuklost, hrapavost, šumnost, slabost i napetost glasa na skali *GRBAS*. Rezultati pokazuju koji su najčešći subjektivni simptomi glasovnoga zamora te da glasovni profesionalci u turizmu nemaju sustavnu, a čak ni temeljnu edukaciju i pomoć u njezi glasa, ali ni svijest o potrebi za njegom glasa.

Vocal fatigue of professional voice users in tourism

This presentation shows the results of research into vocal fatigue of professional voice users in tourism (tourist guides, escorts and gallery guides). Vocal fatigue is a functional voice asthenia and Kovačić (2012) explains this as the self-perception of increased larynx tension and changes in voice quality. Various researchers (Letho et al., 2006; Piccolotto Ferreira et al., 2010;...) discuss different causes of vocal fatigue such as strenuous voice use, phonation due to unusual high pitched voice, high tension of larynx structures in general and voice use in conditions of impaired speech organs. Altman et al. (2005) list smoking, exposure to polluted air, habitual voice abuse and psychological stress and anxiety as the most frequent causes of vocal fatigue and its symptoms. So far, research was focused on teachers, actors and singers, newscasters and reporters, but increased growth of tourism in the Republic of Croatia has resulted in higher challenged for vocal loading of professional voice users in tourism. As professional voice users in tourism experience higher efforts when speaking for long periods on a daily basis, they are forced to adapt to different technical conditions (speaking in buses, on noisy public surfaces, without a loudspeaker system, with different number of listeners,...), so a research into their vocal habits was undertaken, and their vocal assessment was performed. The research included 45 participants, and was undertaken in two parts. The first part included a questionnaire with vocal fatigue self-assessment, while the second part involved the analysis of voice quality before (after rest) and immediately after vocal fatigue. The main part of the research examined subjective assessment of vocal fatigue and the awareness of professional voice users in tourism on voice care and vocal hygiene. In the second part, a pilot-research was undertaken in order to test acoustic characteristics of voice and voice quality of this group of professional voice users before and after speaking for long periods. The speech was acoustically analysed through calculation of long-term average LATS spectre (0-5kHz frequency range) which served as basis for the measurement of the average vocal F_0 and the intensity of the strongest spectral peak $L0$ were. Three trained phoneticians examined the voice quality of professional voice users in tourism. Hoarseness, roughness, breathiness, asthenia and strain in voice were assessed under the *GRBAS* scale. The results have shown the most

common subjective symptoms of vocal fatigue, and they have also shown that professional voice users in tourism neither have systematic or even basic training and support in voice care, nor awareness about the need for voice care.

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Razlika između fonetičara i nefonetičara prilikom procjene ljudskih karakteristika na temelju snimke govora

Kao što je to pokazalo istraživanje Kišiček, Varošaneć-Škarić (2014), regionalnost ima znatan utjecaj na procjenu pojedinih karakteristika osobe, pa tako i na inteligentnost. U ovom se radu istraživalo kolika je razlika između fonetičara i nefonetičara u subjektivnoj procjeni ugodnosti glasa, inteligentnosti, regionalnosti i obrazovanosti osobe na temelju zvučnog zapisa govornika. Očekivalo se da studenti diplomskog studija fonetike zbog profesionalnog bavljenja glasom inteligenciju neće procjenjivati na temelju dijalekta te će se njihovi rezultati razlikovati od ispitanika koji se profesionalno ne bave proučavanjem ljudskog glasa. Korpus se sastojao od sveukupno devet zvučnih snimki od kojih su tri pripadale govornicima porijeklom iz istočne Hrvatske, tri iz sjeverne Hrvatske i tri iz središnje Dalmacije. Svi govornici čitali su isti tekst. 36 procjenitelja od kojih je 18 fonetičara, a 18 nefonetičara je na ljestvici od 1 do 7 osobe procjenjivalo na temelju snimke u trajanju od oko 40 sekundi. Od 18 nefonetičara polovicu čine studenti, a polovicu osobe sa završenom srednjom stručnom spremom. Kako bi se uklonio utjecaj regionalnih obilježja u govoru, ispitanici su prvo poslušali snimke koje su pomoću programa za obradu zvuka Praat obrnute te su u prvom dijelu istraživanja ocjenjivali ugodnost glasa (Škarić, 1998). Nakon toga bi im se puštale normalne snimke u kojima bi ocjenjivali regionalnost, inteligentnost, obrazovanost i opet ugodnost glasa te se na temelju toga pokušalo utvrditi koliko je na procjenu ugodnosti glasa utjecao dijalekt kojim osoba govori. Rezultati su pokazali da procjenitelji inteligentnost, obrazovanost, ugodnost glasa i regionalnost smatraju međusobno ovisnima. Fonetičari najinteligentnijima, najobrazovanijima, najugodnijeg glasa i najmanje regionalnima ocjenjuju pripadnike istočne Hrvatske. U drugoj krajnosti nalaze se stanovnici sjeverne Hrvatske koji su procijenjeni najviše regionalnima što za sobom povlači najnižu procjenu inteligentnosti, najmanju obrazovanost te i najneugodniji glas. Fonetičari sve glasove u drugoj snimci u kojoj se čuje dijalekt govornika procjenjuju

manje ugodnima od onih u obrnutim snimkama gdje je čujna samo boja glasa. Rezultati studenata nefonetičara u svim komponentama istraživanja odgovaraju onima fonetičara, osim što druge snimke procjenjuju ugodnijima od obrnutih. Treća kategorija procjenitelja, osobe koje imaju završenu srednju stručnu spremu, samo pripadnike istočne Hrvatske smatraju ugodnijima kad su čujna dijalektalna obilježja. Time se potvrdila hipoteza da će kod fonetičara razlika u procjeni prve i druge snimke biti manja nego kod nefonetičara.

The difference between phoneticians and non-phoneticians in the evaluation of the speech characteristics based on a voice recording

As the research done by Kišiček and Varošaneć-Škarić (2014) has shown, regional characteristics of a person's voice have a great effect on the evaluation of that person's psychological characteristics. In this research we tried to find out how much phoneticians and non-phoneticians differ when it comes to evaluating the regionality, intelligence, education level and the pleasantness of the speaker's voice. It was expected that the students of phonetics wouldn't evaluate the intelligence based on someone's regional voice characteristics and that's why their results would differ from the results of non-phoneticians. The reason for that is the fact that the voice is the primary focus of their studies and they are more aware that regional voice characteristics have no influence on the intelligence of a person. There were 9 sound recordings and 3 of them were taken by speakers from Eastern Croatia, 3 from Northern Croatia and 3 from Middle Dalmatia. All speakers read the same text. 36 evaluators (18 phoneticians and 18 non-phoneticians) evaluated audio recordings with an average duration of 40 seconds on a scale from 1 to 7. 9 non-phoneticians were students and 9 were high school graduates. To exclude the influence of the regional characteristics on the voice, the evaluators first listened and evaluated sound recordings that were reversed in Praat, a software for phonetic researches. In the first part of the research, evaluators only evaluated the pleasantness of the voice (Škarić, 1998). After that they listened to the original recordings and evaluated the regionality, intelligence, education level and the pleasantness of the speaker's voice. That way we could see how big is the influence of the regional characteristics on the evaluation of the pleasantness of the voice. As the results showed, the evaluators find regionality, intelligence, education level and the pleasantness of the speaker's voice mutually dependent. Students of phonetics evaluate the speakers from Eastern Croatia as most intelligent, most educated, with the most pleasant voices and least regional. On the other extreme there are speakers from

Northern Croatia who were evaluated as most regional which entails that they are evaluated as least intelligent, least educated and with voices that are least pleasant. Students of phonetics evaluate the voices in the second recording, where they could hear the dialect of the speaker, as less pleasant than in the reverse recordings where they could only hear the timbre. Non – phoneticians showed very similar results to phonetics students. The only difference is that they evaluated the second recording as more pleasant. The high school graduates evaluated the Eastern Croatia speakers as more pleasant in the second recording where they could hear the dialect. The hypothesis of this research has been confirmed – the difference in the evaluation of the first and the second sound recording will be bigger if the evaluators are non - phoneticians, that is, the difference will be smaller if the evaluators are phonetic students. These results confirmed the hypothesis that phonetics students are going to make less difference in the evaluation of the first and second recording than non – phoneticians.

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Tongue and jaw movements in high-pitched sung vowels in Hungarian

Background. Previous research (for several languages, including Hungarian) provided evidence that soprano singers tend to tune the F1 of vowels to the raised high f0 if the f0 would otherwise exceed the F1 of the spoken realizations in singing (this

strategy is often referred to as $F1 : f_0$ tuning for short). However, the underlying articulatory strategies singers tend to use to achieve this acoustic goal are yet unclear. In the present study we aimed to contribute to this question by the (descriptive) articulatory analysis of tongue and jaw movements in sung Hungarian vowels.

Method. To study the articulatory strategies accompanying f_0 -raising extensively, we analysed the nine phonetically different vowel qualities of the Hungarian language in three professional soprano singers in a wide pitch range in singing (from the f_0 of 175 Hz to 988 Hz, covering the whole pitch-range of the soprano) by the use of electromagnetic articulography (EMA).

Results. In our three subjects we observed a generalizable tendency of systematically lowering the tongue and jaw position as the fundamental frequency approached the region of the $F1$ of the vowels. The results showed that (i) while below 988 Hz the singers achieved $F1 : f_0$ tuning by the unique combination of tongue and jaw movements specific to the intended vowel qualities, (ii) at 988 Hz the tuning was clearly achieved by increased jaw opening and resulted in a uniform tongue and jaw position across all vowels. Interestingly, in two singers we also observed the lowering of the tongue dorsum even below the critical f_0 s in high and mid vowels. In addition to the general tendency of increasing the tongue and jaw opening, high variability of the tongue position was observable among the singers resulting in different degrees of articulatory differentiation of vowels as the f_0 was increased.

Conclusions. Our results suggest that singers may differentiate vowels to a different degree in articulation as a function of pitch (supposedly depending on the differences of their morphological differences, as e.g., palate shape and vocal tract size), but the assumed formant tuning strategy may be attributed to a generalizable tendency among sopranos involving the lowering of the tongue at lower f_0 s, and the increase of jaw opening at higher f_0 (at approximately 988 Hz, i.e., the musical note b5).

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Nekoliko zapažanja o prozodiji govora pouzdanih i nepouzdanih govornika talijanskoga idioma u zapadnoj Slavoniji

U rubnim dijelovima zapadne Slavonije nekoliko je naselja koja su nastala krajem XIX. stoljeća zahvaljujući doseljenu italofonih skupina podrijetlom iz sjevernoga Veneta i zapadnih dijelova Furlanije. Njihovi potomci, koji nisu sastavni dio autohtone talijanske manjine gušće smještene u pojedinim dijelovima priobalnoga pojasa RH, danas žive uglavnom u nekoliko gradova i njihovoj okolici, točnije u Kutini, u Lipiku, u Pakracu i, poglavito, u obližnjem selu Ploština te u Daruvaru.

Istraživanje na terenu (Deželjin 2015a, 2015b, 2015c, 2015d), kojim su dosada obuhvaćena područja Lipika i Pakraca i vrlo površno Kutine, a čiji je cilj opisati talijanski idiom koji se ondje govori, pokazalo je da je broj govornika toga idioma, u odnosu na preko 848 pripadnika talijanske manjine u tom području, znatno skromniji te da taj idiom ulazi u skupinu visoko ugroženih jezika odnosno govora. Osim toga, snimljeni materijal (intervjui i jezične biografije) nedvosmisleno upućuje na potrebu razdjeljivanja postojećih govornika u barem dvije skupine, u onu pouzdanih govornika, od kojih uglavnom svi žive u Ploštini, te u onu nepouzdanih govornika (ili polugovornika), koje karakterizira ograničena jezična kompetencija u idiomu koji se proučava i koji je (bio) njihov organski govor.

Ovaj je prilog prikaz jednoga slučaja, a cilj mu je pokazati da je razlika između pouzdanih i nepouzdanih govornika potpuno razvidna i na temelju osnovnih prozodijskih značajki govora dviju ispitanica, jedne pouzdane, a druge nepouzdane. Takvima su bile proglašene na temelju ocjene dvoje slušača koji ne poznaju talijanski jezik, a koji su procjenjivali ton, ritam i intonaciju njihovih iskaza.

Observations on prosodic characteristics of the Italian speaking credible and non-credible subjects in western Slavonia

Towards the end of the 19th century, when several consistent groups of the Italian speaking immigrants had arrived from two Italian regions, namely from northern Veneto and western Friuli, a few new settlements grew up on the outskirts of Western Slavonia. The descendants of those settlers, who do not make part of the autochthonous

Italian minority living mainly in some centres along the Croatian sea coast, nowadays live mostly in several towns of that area, namely in Kutina, Lipik, Pakrac and in particular in a nearby village of Ploština, and in Daruvar. The field research (Deželjin 2015a, 2015b, 2015c, 2015d), conducted so far in Lipik, Pakrac, Ploština and only marginally in Kutina, which aims at a full and thorough description of the Italian dialectal variety spoken in those enclaves, has shown that the number of its speakers, in regard to some 850 people of the Italian minority in Croatia according to the last census, is significantly much lower and that this unique Italian variety should be treated as highly endangered language. Apart from that, recorded interviews and linguistic biographies point out that it is necessary to divide my subjects into at least two distinct groups: in credible speakers, whose majority lives in the village of Ploština, and in those non-credible (or semi-speakers), whose linguistic competence in the studied idiom, which used to be their mother tongue, is notably deficient.

This paper is a case study and its aim is to point out that difference between two types of speakers is easily perceptible also in some prosodic characteristics of their speech, as it was confirmed by two impartial listeners who do not understand the Italian language and who were supposed to evaluate tone, rhythm and intonation of their utterances.

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Problemi u percepciji i proizvodnji mađarskih vokala kod odraslih izvornih govornika hrvatskoga jezika

Rad se bavi vezom percepcije i proizvodnje glasnika kao temelja kvalitetnog usvajanja glasnika stranog jezika. Da bi govornik nekog jezika uspješno savladao izgovor pojedinih glasova stranog jezika koji se razlikuju od sličnih glasova u njegovom/njezinom materinskom jeziku (ili slični glasovi uopće ne postoje), govornik mora percipirati specifičnosti tih glasova, a sljedeći je korak usvajanje pravilnog izgovora kroz niz ciljanih vježbi (Baptista, 2006; Guberina, 2010). Ciljevi su rada bili 1) ustanoviti percipiraju li studenti mađarskog kao stranog jezika, izvorni govornici hrvatskoga, razlike u dužini vokala u mađarskome i 2) vidjeti odstupanje u duljini, F1 i F2 vokala koje izgovaraju studenti u odnosu na podatke dobivene za izvorne govornike (Gosy, 2004). Polazne su hipoteze bile 1) da studenti ne percipiraju duljinu vokala sa 100%-tnom točnošću te 2) da se i u izgovoru odmiču od vrijednosti za izvorne govornike. U prvom testu studenti su slušali listu riječi koja se sastojala od niza parova nepotpunih homofona puštenih izmiješanim redoslijedom. Riječi u paru razlikovale su se samo po dužini vokala, a studenti su morali odlučiti je li u pitanju dugi ili kratki vokal. Listu je izgovorila izvorna govornica mađarskoga. U drugom testu uspoređivale su se vrijednosti trajanja te F1 i F2 vokala kod izvornih ispitanika (Gosy, 2004) i vrijednosti istih parametara dobivenih na snimkama studenata koji su izgovorili istu listu riječi. Dobiveni rezultati gledani su kroz utjecaj materinskog jezika na izgovor stranog (Bakran, 1996). Pokazuju potrebu za sustavnim uvježbavanjem percepcije i izgovora u učenju i/ili usvajanju stranog jezika, a iskorišteni su kao smjernice za daljnje poučavanje.

Problems in perception and production of Hungarian vowels in adult native speakers of Croatian

Paper deals with the relationship of perception and production of speech sounds since this relationship is considered the basis of acquisition of foreign language speech

sound inventory. If a learner of foreign language is to acquire successfully pronunciation of speech sounds in foreign language that differ from the similar sounds in his or her native language (or similar sounds do not exist at all), a learner must perceive specific characteristics of the sound. Next step in acquisition is practice through specifically aimed exercises (Baptista, 2006; Guberina, 2010). The aims of the paper were 1) to estimate whether students of Hungarian (whose native language is Croatian) perceive differences in vowel length in Hungarian and 2) to compare the deviation in length and F1 and F2 of Hungarian vowels pronounced by students with the values obtained for the native speakers (Gósy, 2004). The hypotheses were 1) that the students do not perceive vowel length with complete correctness and 2) that the values obtained from their speech differ from those of native speakers. In the first test students listened to the list of pairs of partial homophones played randomly, their aim being to decide whether the vowel in the word was long or short. The words were pronounced by a native speaker of Hungarian. In the second test length as well as values of F1 and F2 of native speakers (Gósy, 2004) were compared to the values obtained in vowels pronounced by the students reading the same word list. The obtained results were discussed on the basis of influence of the native language on the pronunciation of the foreign language (Bakran, 1996). They show the necessity of systematic perception and production training in foreign language learning and acquisition and are used as guidelines for further teaching.

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The influence of the speech rate in the Spanish vowel system: a phonetic analysis of the vocalic timbre variations

During the 20th century many researchers were interested in the variations on vowel sounds under the influence of some conditions of speech production, such as the accent, the context, the speaking style or the speech rate. They have proved that changes in the vocalic timbre under the influence of some conditions of speech production makes sounds move towards the central space of the vocal plane, occupied by the *schwa*.

This paper researches the influence of the speech rate in the Castilian vowel system. We begin with the assumption that if we modify the speech rate we will find a significant change in the first two formants of the vowels, which are essential for the perception of vocalic timbre and, therefore, for their differentiation. To verify this hypothesis, ten female informants read out loud three times a text changing the speech rate, and we analyzed the variations of vocalic timbre using PRAAT.

We consider that modifying the speech rate, phonetic variations will take place on the same speaker, which will be related to the model of the *Hyper* and *Hypo*-articulation proposed by Lindblom (1990) and they will affect the vocalic timbre. Thus, we want to verify if the Spanish vowel system presents or not vowel reduction, and to what extent these sounds follow the tendency towards the centralization that we find in previous works.

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Naglašavanje riječi iz španjolskoga jezika u hrvatskim rječnicima i naglasnim priručnicima

Strane se riječi preuzimaju iz drugoga jezika (jezika davatelja) i prilagođavaju hrvatskome jeziku (jeziku primatelju), u kojemu se mogu nalaziti iz stilističkih razloga ili zato što još nije pronađena odgovarajuća hrvatska istovrijednica (Jozić 2013: 67). Uslijed prilagodbe na svim jezičnim razinama, preuzeta riječ neko vrijeme ostaje u nestabilnom lingvističkom statusu, tj. u obliku kompromisne replike ili tuđice. Za

razliku od tuđice, koja glasnički, prozodijski ni pravopisno nije prilagođena jeziku primatelju, prilagođenica je posve integrirana u jezik primatelj pa ju govornici više ne osjećaju kao tuđu. U ovome ćemo se radu baviti naglasnom analizom posuđenica (N=92) koje su iz španjolskoga jezika ušle u hrvatski, od kojih jedne imaju status tuđica, a druge prilagođenica. Korpus je prikupljen iz Hrvatskoga jezičnog portala, Hrvatskoga enciklopedijskoga rječnika, Rječnika hrvatskoga jezika Leksikografskog zavoda Miroslav Krleža i Školske knjige urednika J. Šonje, Klaićevoga Rječnika stranih riječi te Anićevo Rječnika hrvatskoga jezika. Postavljeno je nekoliko istraživačkih pitanja: prvo, koji su postupci korišteni pri naglašavanju posuđenica u različitim hrvatskim rječnicima, drugo, možemo li govoriti o dosljednosti naglasne prilagodbe španjolskih riječi u pojedinome izvoru, iz kojega proizlazi i posljednje istraživačko pitanje: je li hrvatski jezik dosljedan u naglašavanju posuđenica iz španjolskoga jezika. Analizom je utvrđeno da su pri naglašavanju posuđenica korištene tri metode: dedukcija klasične kodificirane norme, naglasni obrasci verificirane uporabe te zadržavanje riječi u nestabilnom lingvističkom statusu. S obzirom na upotrebu raznovrsnih metoda prilagodbe i više ili manje spretnih naglasnih rješenja, unutar pojedinoga izvora i u cijelome korpusu, nije ustanovljen dosljedan naglasni obrazac stranih riječi preuzetih iz španjolskoga jezika u hrvatski.

Accentuation of Croatian words derived from Spanish: dictionary and accentuation manual review

Foreign words are derived from foreign language and being adjusted to Croatian, in which they occur because of stylistic reasons or because there is no corresponding Croatian substitute found (Jozić 2013: 67). Due to adjustment on every single language levels, derived word is staying in unstable linguistic state for a while. In other words, it stays in the form of compromise replica or a loanword. Unlike the loanword which is not adjusted to Croatian in

phonemic, prosodic or grammatical sense, adjusted word is wholly integrated in language and therefore native speakers don't find it foreign. In this work we will be analyzing prosodic component of loanwords (N=92) which have been derived from Spanish language in Croatian, and from which one group of words have loanword status and the other group status of foreign words. The corpus consists of Croatian language portal (orig. HJP), Croatian encyclopedic dictionary, Dictionary of Croatian language (ed. Šonje), Foreign word dictionary (ed. Klaić) and Dictionary of Croatian language (ed. Anić). Three research theses have been settled: first, which procedures have been used in loanword accentuation in different Croatian dictionaries and manuals, second, is there a consistency in prosodic adjustment in a particular source. At the end we are trying to see if Croatian language is consistent in accentuation of loanwords derived

from Spanish. It has been found that three methods have been used in the process of loanword accentuation: deduction of classic standard norm, prosodic patterns of verified use and keeping loanwords in unstable linguistic state. According to different adjustment methods and more or less efficient solutions, we can conclude that there is no consistency in adjustment of Spanish foreign words in Croatian, either in the particular source or in the whole corpus.

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What is the function of silent pauses?

Comparison of spontaneous speech in L1 and L2

In spontaneous speech silent pauses occur in various functions and realizations (e.g. respiratory, discursive or disfluency pauses). Pauses are important in speech production and speech perception as well. It is known from previous research that silent pauses caused by speech planning difficulties differ from pauses occurring in syntactic boundaries (Boomer 1965; Lounsbury 1965; Szende 1976). Silent pause can be defined as disfluency pause if it solves speech planning difficulties, gives opportunity to self-repair or supports lexical access (Gósy 2007). A recent study confirmed differences among various types of silent pauses in terms of occurrences and duration (Gyarmathy in press).

The aim of the present study is to investigate occurrence and temporal characteristics of various types of silent pauses in L1 (Hungarian) and L2 (English) spontaneous speech. Participants were selected from three groups based on language proficiency level (Elementary, Intermediate, Advanced). 4 subjects participated in every group. Annotation was conducted using Praat (Boersma–Weenink 2009) software. Statistical analysis was carried out using SPSS.

We have the following research questions:

1. What is the relationship between speech rate and the occurrence and duration of different pauses?

2. Does the part of speech affect the duration of the pauses?
3. What proportion do the pauses between phrases occur before and after the conjunction? Does the position of pauses affect the duration of the pauses?
4. How do the disfluencies affect the duration of pauses (which are not editing phases)?
5. What is the relationship between the various types of pauses and filled pauses?

We hypothesize that the pause strategies proved to be different according to language proficiency level and the function of silent pause has a main effect on their occurrences and their duration as well. Findings of this study may contribute to foreign language learning and teaching.

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Utjecaj stupnja oštećenja senzorne integracije na razvoj govornih povratnih sprega u djece s poteškoćama senzorne integracije i senzornog procesiranja

Senzorna integracija i centralno senzoričko procesiranje neurobiološke su aktivnosti koje se odvijaju u našim tijelima. Više od 80 % centralnog živčanog sustava uključeno je u procesiranje i organizaciju senzoričkih informacija tako da možemo reći da je mozak zapravo u prvom redu „sredstvo obrade senzoričkih informacija“.

Doktorica znanosti A.J. Ayers, djelovala je kao radni terapeut, bila je prvi znanstvenik koji je u pedesetim i šezdesetim godinama prošloga stoljeća počeo proučavati problem disfunkcija senzornih procesa te je upravo ona uvela termin senzorne integracije.

Po stupnju težine odnosno disfunkcije senzorne integracije možemo istaknuti sljedeće razvojne poteškoće:

1. Teške disfunkcije senzorne integracije:

- autizam, pervazivni razvojni poremećaj, teže govorno-jezične poteškoće, cerebralna paraliza, fetalni alkoholni spektar poremećaja, sindrom fragilnog x, teže mentalne retardacije.

2. Srednje teške disfunkcije senzorne integracije:

- osobe koja su doživjele tešku psihičku ili fizičku traumu u ranom djetinjstvu;
- osobe s oštećenjima sluha;
- osobe koja su posvojene nakon dužeg boravka u institucijama.

2. Lakše disfunkcije senzorne integracije:

- osobe s disleksijom;
- osobe s disgrafijom;
- osobe s diskalkulijom.

Mnogi simptomi poteškoća senzorne integracije mogu biti slični brojnim drugim razvojnim poteškoćama. Prvi znak koji većina okoline osoba pogođenih s disfunkcijom senzorne integracije primjećuje je potpuni nerazvitak govora, gubitak i nerazumjevanje

govora ili loš i nerazumljiv govor. Govor je poseban oblik odašiljanja i primanja *multisenzoričkih* poruka koje stvaraju vanjsku i unutrašnju dijalošku formu - komunikacijski lanac. Govorne povratne sprege omogućuju nam prenošenja svih razina spoznaje; od primarnih tjelesnih pa do najviših kognitivnih. Osobe s poteškoćama senzorne integracije i s poteškoćama senzoričkog procesiranja imaju oštećene sve razine govornih povratnih sprege. Možemo reći da takve osobe pate od Wernickove afazije odnosno disfazije. U dosadašnjem istraživačkom radu (Hotujac-Dreven, 2013. Somatski opisi samoglasnika hrvatskog jezika) utvrđivali smo stanje senzoričkog sustava pomoću dva osnovna parametra hipertoničnosti ili hipotoničnosti senzoričkog sustava u cijelosti kao i detaljno stanje svakog pojedinog osjetila. Takvim osobama je moguće odrediti potrebnu terapiju senzoričke integracije koja izravno utječe na proces sazrijevanja govornih povratnih sprege, a time i na sam razvoj govora.

Effect of the degree of sensory integration dysfunction on the development of speech feedback in children with sensory integration and sensory processing dysfunction

Sensory integration and central sensory processing are neurobiological activities naturally occurring in the body. More than 80% of our central nervous system is involved in the processing and organization of sensory information, so much so that we may say that the brain is first and foremost the “sensory information processing organ”. Dr. A. J. Ayers was an occupational therapist and the first scientist who, in the 1950's and 1960's, investigated the problem of sensory process dysfunction. It was Ayers who introduced the term “sensory integration”.

We may categorize the persons with sensory integration dysfunction according to the dysfunction severity into the following groups:

1. Severe sensory integration dysfunction:

- autism, pervasive developmental disorder, pronounced speech and language impairment, cerebral paralysis, alcohol-related disorders, fragile X syndrome severe mental retardation.

2. Moderate sensory integration dysfunction:

- persons who experienced severe psychological or physical trauma in early childhood;
- persons with hearing impairment;
- persons adopted after having spent longer time in institutions.

3. Mild sensory integration dysfunction:

- persons with dyslexia;

- persons with dysgraphia;
- persons with dyscalculia.

One of the first sign of sensory integration dysfunction that alarms families or people who are in constant contact is the lack of speech development, loss and lack of understanding of speech, or poor and unintelligible speech. Speech is defined as a special form of emitting and receiving *multisensory* messages that create an external and internal dialogical form – the communication chain. Speech feedback enables us to transfer all levels of awareness, ranging from basic bodily level to the highest cognitive level. In persons with sensory integration and sensory processing dysfunctions, all levels of speech feedback are impaired. These persons suffer from Wernicke aphasia or dysphasia. In our previous research Somatic description of vowels in Croatian language (Hotujac-Dreven, 2013), we used two basic parameters of hypertonia and hypotonia of the sensory system. On the basis of a detailed diagnostic evaluation of the sensory system, these persons may be recommended the sensory integration therapy with direct effect on the speech feedback maturation process and, thereby, on the speech development.

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Uloga i struktura stanki u slovenskome medijskome govoru

Medijski govor, barem na nacionalnoj TV i radio postaji, jedan je od nositelja govornoga standarda u Sloveniji. Zahvaljujući svojoj širokoj rasprostranjenosti i utjecaju na govorne navike gledatelja i slušatelja, tj. govornika toga jezika, istraživanje govora u medijima lako je opravdati. U analizi stanki, fonetski, barem u slovenskoj lingvistici, slabo istraženju karakteristici, koristit će se dva metodološka pristupa.

U ovom su istraživanju stanke shvaćene kao neophodna zvučna i/li sadržajna smetnja tečnomu govoru, i jedan od važnijih signala i organizatora govora, ne nužno uvjetovan tišinom. Osim tišinom, stanke može biti ispunjena riječima, zvukovima i drugim (ne)verbalnim elementima. Ova je analiza dio većeg istraživanja u kojemu su pauze bile analizirane u govoru uvježbanih govornika (televizijskih voditelja) i (vjerojatno) manje uvježbanih govornika (političara), u odabranim emisijama na TV Slovenija, s ciljem uspostavljanja njihove uloge u govoru i njihove strukture (Huber 2013). Metodološki, analiza se temelji na istraživanjima koja su, između ostalih, napravili Sabol i Zimmermann 1979, Cruttenden 1986, Garman 1990, Škarić 1991, Zellner 1994, Horga 1996, Horga i Mukić 2000, Viola i Madureira 2008 i Bilá i Džambová 2011.

Korpus sadrži deset emisija političkoga sadržaja na TV Slovenija, drugim riječima: autentičan i razumno spontan govor u medijima – ukupnog trajanja 122 minute i 35 sekundi, koji je uključivao 15 govornika, od čega šest političara i devet televizijskih voditelja. Govor je korišten kako bi se potvrdile hipoteze: 1) da su fiziološke stanke najčešće, najviše zbog disanja; 2) da govornici rade kognitivne ili komunikacijske stanke kako bi pronašli iskaz koji će najbolje odgovarati, ili kako bi isplanirali sintaktičku strukturu onoga što žele reći; i 3) da „ispunjene“ pauze uglavnom sadrže ponavljanja i produžetke jezičnih jedinica.

Rezultati su pokazali da u analiziranom korpusu: 1. većina stanki ima komunikacijsku ulogu (66,8 %), nakon čega slijede fiziološke stanke (19,4 %) pa kombinacija fiziološke i komunikacijske (14,8 %); 2. da se najviše komunikacijskih stanki ostvaruje dok govornik traži najprikladniju formulaciju ili planira sintaktičku strukturu iskaza (43,9 %) i jer segmentira tijekom govora (41,6 %); i 3. da su i u slučajevima ispunjenih (7,1 %) i mješovitih stanki, tj. stanki s tišinom (14,3 %) češće strukture koja uključuju duljenje glasova, dok je struktura u kojima se dijelovi ponavljaju daleko manje (0,7 % oz. 0,6 %).

The role and structure of pauses in Slovene media speech

Media speech, at least on national radio and television, is one of the bearers of standard speech in Slovenia. Thanks to its relatively wide distribution and influence on the speech habits of ordinary viewers and listeners or speech users, research into media speech is easy to justify. Two methodological approaches will be used to analyse the pause, a phonetic feature that is relatively poorly researched in Slovene linguistics.

In this research, pauses are understood as indispensable sound and/or semantic interruptions to the flow of speech and are among the most important markers and organisers of speech, which are not necessarily conditional on silence. Thus a pause is

not necessarily empty or marks only silence in the speech flow, but rather it can be filled with words, sounds and other (non-)verbalised elements. The presented analysis is part of a wider piece of research, where pauses were analysed in the speech of trained speakers (TV hosts) and (probably) less trained speakers (politicians) in selected programmes on TV Slovenia, with the aim of establishing their role in speech and their structure (Huber 2013). Methodologically, the analysis is based on research carried out by, among others, Sabol and Zimmermann 1979, Cruttenden 1986, Garman 1990, Škarić 1991, Zellner 1994, Horga 1996, Horga and Mukić 2000, Viola and Madureira 2008, and Bilá and Džambová 2011.

A corpus was created from 10 programmes with political content on TV Slovenia – in other words, authentic and reasonably spontaneous media speech – to a total duration of 122 minutes and 35 seconds, involving 15 speakers, including 6 politicians and 9 TV hosts. It was used to verify the following hypotheses: 1) that physiological pauses predominate, largely because of breaths; 2) that speakers make cognitive or communicative pauses in order to find the most appropriate formulation or to plan the syntactic structure of what they are going to say; and 3) that “filled” pauses contain mainly repetition or extension of language units.

The results show that in the analysed corpus: 1. most pauses have a communicative role (66.8 %), followed by physiological pauses (19.4 %) and combined physiological-communicative pauses (14.8 %); 2. that most communicative pauses occur due to speakers looking for the most appropriate formulation or planning the syntactic structure of what they are going to say (43.9 %) and because of segmenting the flow of speech (41.6 %); and 3. that in the case of both filled (7.1 %) and mixed or silent-filled pauses (14.3 %) the main structures involve lengthened sounds, whilst structures involving repetition are far fewer (0.7 % oz. 0.6 %).

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Prosodic and structural realization of focus in Urdu/Hindi

The default word order in Urdu/Hindi is SOV but the major constituents can scramble. This influences the information structure of a sentence. The sentence initial constituents are topicalised or focused contrastively. The immediately preverbal

constituents receive wide focus and the sentence final position is used for background information, announcements, heavy NP shift etc. (Butt and King 1996).

Patil et al. (2008) is one of the recent attempts to explore the interaction between focus and word order. They found that Hindi speakers did not use pitch or duration to mark focus. Therefore they posit that focus in Hindi is realized by post focal deaccentuation instead of raising the pitch or increasing the duration of the focused constituent. But Jabeen et al. (2015) and Butt et al. (2016) have shown that Urdu/Hindi speakers indeed use pitch scaling to mark contrastive focus in declaratives and employ pitch to reflect the word order variation in *wh*-questions. To further explore focus marking in Urdu/Hindi, this research replicated Patil et al.'s dataset and analysis techniques to investigate the prosody of wide, subject, and object focus at sentence initial and preverbal positions in SOV and OSV sentences.

Our results prove to be similar to those of Patil et al. and show that the pitch contour and constituent duration in the sentence initial focus do not differ from those of preverbal focus.

Contra Patil et al., we explain this lack of variability in terms of the information structure. The subject focus in SOV and object focus in OSV were not marked prosodically as the relevant constituents were placed at the position reserved for contrastive topics. But the contexts that Patil et al. used did not set up the right situations for the use of contrastive topichood. In both SOV and OSV sentences, contrary to their assumptions, it was actually the preverbal constituent that was focused and was also prosodically marked.

This claim is further bolstered by Féry, Panday, and Kentner (2016) who show that in semi-spontaneous speech, Hindi speakers preferred to use OSV word order to convey subject focus. This research offers to reinterpret the results of previous investigations of focus in Urdu/Hindi. It also posits that focus realization in Hindi/Urdu should be studied with reference to word order and the structural positions reserved for different types of focus.

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Složenost govorenja u početnoj e-nastavi inoga jezika

U području ovladavanja inim jezikom govorenje se smatra jednom od četiri glavne jezične djelatnosti, no često se ubrzo razdvaja na govor i razgovor (CEFRL 2001, Zeroj 2005). No govorna se proizvodnja u ovladavanju jezikom sastoji od najrazličitijih vrsta govorenja, što je važno osvijestiti i zbog samoga poučavanja, i zbog procjenjivanja. Početnici u ovladavanju jezikom znatno rjeđe proizvode samostalne tekstove (govor) nego što to čine zajedno s poučavateljem (razgovor). U ovome će se radu sustavno predložiti vrste jezične proizvodnje. One se sastoje od čitanja na glas tekstova različitoga izvora (vlastiti ili zadani), doslovnoga ili preoblikovanoga ponavljanja riječi (izdvojenih ili u rečenici), oblikovanja rečenica potaknutih različitim jezičnim i nejezičnim unosom, prevodenjem sa stanih jezika i tek u konačnici samostalnom proizvodnjom. Raspravljat će se o vrstama i složenosti jezičnih zadataka, povezanosti govorenja sa slušanjem te učiteljevu unosu i ulozi u učenikovo govornoj proizvodnji. Građa su transkripti s pojedinačne nastave na početnomu e-tečaju hrvatskoga jezika odabranomu zbog toga što je pojedinačna nastava u živo jedina ispitanikova prilika za govorenje.

Complexity of speaking in beginners L2 e-course

In the field of SLA (Second Language Acquisition) speaking is one of the four distinct language activities (CEFR 2001). However, it is the only one that is split into two almost in the CEFR (pf. 35) into spoken interaction and spoken production. It should be noted that speaking in L2 classes consists of many more sub-activities, particularly with beginners, and it is important to acknowledge them in L2 teaching and assessment in order to understand the complexity of spoken production. Beginners are very rarely involved in plain language production, interaction and the teacher's speech prevail over it.

This paper will offer an attempt at systematization of sub-activities present in typical act of speaking. Those include: reading aloud texts from different sources (one's own or given), verbatim or combined repetitions of words (alone or within sentences), sentence production initiated by verbal or non-verbal input, translation or interpretation of another language, and finally independent production. Different tasks will also be discussed, in addition to teacher's role in student's language production. The data are transcripts from beginners individual classes in e-course of Croatian as L2. It is very useful date to research due to the fact that interaction with the teacher in online coulrs e it the only chance some learners have for speaking a foreign language at all.

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Normiranje instrumenata za vrednovanje karakteristika glasa u kliničkoj praksi

Kvaliteta glasa osim o fiziološkom i morfološkom stanju fonatornih struktura u velikoj mjeri ovisi i o kontekstualnim i psihosocijalnim čimbenicima. Upravo ta činjenica čini prepreku pri objektivizaciji procjene teškoća koje pacijentima predstavlja promuklost kao i ispitivanje njegova uzroka.

Već dugi niz godina pri otkrivanju razloga promuklosti koriste se metode kojima se ispituju i objektiviziraju - dijagnosticiraju - subjektivne govorne poteškoće pacijenata u obavljanju profesionalnih i svakodnevnih zadataka i njihov utjecaj na emocionalno zdravlje. U dijagnosticiranju teškoća koje uzrokuje promuklost služimo se postupcima i uređajima namijenjenim objektivnoj akustičkoj analizi glasa (AA). Postavlja se pitanje koje je sve karakteristike AA moguće efikasno koristiti i jednoznačno interpretirati i jesu li primjenjivani postupci dostatni u kliničkoj praksi. Potreba za arhiviranjem digitalnih

auditivnih zapisa u fonetskoj dijagnostici ekvivalentna je potrebi za RIS ili PACS sustavima u radiologiji. Slušanje snimljenog glasa neophodno je prilikom postavljanja dijagnoze i ključno prilikom postavljanja terapijskih smjernica i evaluacije stanja pacijenta poslije završenog konzervativnog ili kirurškog liječenja. Na pouzdanost metoda koje se koriste u vrednovanju karakteristika tako složenog sustava koji dovodi do stvaranja ljudskog glasa namijenjenog ne samo prijenosu značenja, namjera i niza drugih funkcija govora, znatno mogu utjecati i kompenzatorni mehanizmi koje pacijenti vrlo brzo razvijaju kada se javi promuklost.

Valjanost i pouzdanost akustičkih mjera koje koristimo u kliničkoj praksi za objektivno procjenjivanje kvalitete glasa (npr jitter, shimmer i omjer šuma i harmoničkog tona - NHR) neophodni su, ali ne i dostatni za precizno određivanje stupnja oštećenja. U slučajevima u kojima je određivanje fundamentalne frekvencije (F0) teško ili nemoguće procijeniti, postupak u kojem se provocira produžena fonacija samoglasnika prestaje biti temeljem procjene vokalne funkcije.

Tek je 2001. godine donesen prijedlog kliničkih smjernica (Dejonckere, 2001) prema kojemu bi se trebalo normirati metodologija za funkcionalno procjenjivanje i istraživanje patološkog glasa, ali i omogućiti usporedbu s opisanim rezultatima različitih postupaka poslije i tijekom glasovnih terapija ili fonokirurških metoda.

Preporuka je da se kod fonetskog ispitivanja "obične" promuklosti svakako dokumentira (a) opažanje ispitivača, (b) videostroboskopsko monitoriranje, (c) akustički parametri, (d) aerodinamika i (e) samoprocjena ispitanika. Očekuje se da se ti nalazi integriraju s nalazima specijalista fonijatra.

U primjeni je niz metoda subjektivne samoprocjene pacijenata (Jacobson, 1997), (Bonetti, 2013) kao i procjene profesionalnog procjenitelja (Hirano, 1981). Stoga u kliničkoj praksi zapažamo razlike u stavovima prema poteškoćama koje pacijent ima s glasom te se i procjene razlikuju ovisno o dobi i spolu, težini bolesti, kao i profesionalnim zahtjevima koji se postavljaju pred pacijenta (Rosen, 2004).

Nadalje, objektivizacija stupnja promuklosti ovisi i o samom načinu uzimanja reprezentativnosti uzorka glasa iz kojih izvodimo "objektivne" zaključke o promijenjenoj glasovnoj strukturi reprezentiranoj tek jednom brojevnim vrijednošću (Wuyts, 2000)!

Cilj izlaganja je prikazati instrumente primijenjene u dobroj praksi kliničkog fonetičara, a zadovoljavaju specifične uvjete u radu s pacijentima te ukazati na potrebu postupnog razvoja kontroliranog rječnika definicija i termina, po mogućnosti ontologije s normiranim zapisom čitljivim u strojnoj obradi te razumljivu specijalistima u području glasa i govora.

Standardization of instruments for assessment of voice characteristics in clinical practice

The voice quality largely depends on contextual and psychosocial factors in addition to physiological and morphological characteristics of structures involved in phonation. This fact is an impediment to the objective assessment of difficulties caused by hoarseness and its causes.

There are methods for investigating the causes of hoarseness, making objective assessment of subjective speech difficulties, and reaching the diagnosis in patients who experience speech difficulties in their professional and everyday activities and the effects that these speech difficulties have on patient's emotional well-being. In diagnostic evaluation of difficulties caused by hoarseness, we use methods and instruments intended for objective acoustic analysis of the voice (AA). The question is what characteristics of AA may be effectively used and unambiguously interpreted and whether the methods used are sufficient in clinical practice. The need for archiving digital acoustic records for phonetic diagnosis is equivalent to the need for RIS and PACS systems in radiology. Listening to the voice record is part of the diagnostic process and essential for determining the treatment and condition of the patient after a completed conservative or surgical treatment. The reliability of the methods used in the evaluation of such a complex system as that involved in human voice production may significantly be influenced by compensatory mechanisms developed by the patients struggling with hoarseness.

The validity and reliability of acoustic measures used in clinical practice for objective assessment of voice quality (e.g. jitter, shimmer, and noise-to-harmonic ratio [NHR]) are essential, but not sufficient for a precise determination of the impairment degree. In cases where it is difficult or impossible to determine the fundamental frequency (F0), the method by which a prolonged vowel phonation is provoked ceases to be useful in vocal function assessment.

Only in 2001 were clinical guidelines (Dejonckere, 2001) proposed to standardize the methodology for functional assessment and investigation of pathological voice and to allow for the comparison of results obtained by different methods after and during voice therapy or phonosurgical treatment.

In phonetic assessment of "common" hoarseness, the recommendation is to document (a) investigator's observation, (b) video-stroboscopic monitoring, (c) acoustic parameters, (d) aerodynamics, and (e) patient self-assessment. These findings are expected to be integrated with the findings of phoniatrics specialist.

There are many methods used for subjective self-assessment by the patients (Jacobson, 1997), (Bonetti, 2013) and for assessment by professionals (Hirano, 1981). In clinical practice, therefore, we observe differences in the attitudes toward voice difficulties experienced by patients and differences in assessment depending on the patient's age, sex, disease severity, and professional requirements (Rosen, 2004).

Furthermore, the objective determination of hoarseness degree depends on the method used for taking a representative voice sample, which then provides the basis for making an “objective” conclusion on the altered voice structure represented by a single numeric value (Wuyts, 2000).

Our aim to present the instruments used in good clinical phonetics practice and the specific requirements that these instruments should meet, and to emphasize the need for controlled development of definitions and terminology (preferably, ontology with standardized machine-readable records) that would be readily understandable to voice and speech specialists.

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Retorička vrijednost figurativnih analogija u javnom diskursu

Figurativne ili kako ih Govier (1987: 58) naziva a priori analogije su „argumenti u kojima se ističe sličnost između subjekata koji pripadaju potpuno različitim sferama“. Iako neki autori poput Freelya i Steinberga (2010) figurativne analogije odbacuju kao logički nedostatne, postoje i autori koji ih smatraju relevantnima unatoč nedostatku argumentativne snage (Perelman & Olbrechts-Tyteca, 1958; Mengel 1995; Woods 2004). Walton (2008: 305) ističe kako su analogije iznimno snažna sredstva uvjeravanja jer uspoređuju nešto što je publici otprije poznato s nečim novim i nepoznatim. Upravo stoga, figurativne se analogije kao argumenti često pojavljuju u javnome diskursu i to u različitim sferama javnoga djelovanja: od pravnog i političkog do znanstvenog i religijskog. U ovome se radu analiziralo i evaluiralo 20 primjera figurativnih analogija iz javnih rasprava o različitim temama te se na temelju tzv. kritičkih pitanja utvrđivala njihova argumentativna legitimnost i snaga. U radu su se međusobno uspoređivala i primjenjivala „kritička pitanja“ i kriteriji za analizu figurativne analogije različitih autora. Walton (2008) primjerice predlaže kritička pitanja (1. je li moguće u određenoj temi uspoređivati dvije različite sfere; 2. jesu li sfere koje se uspoređuju slične u relevantnim aspektima; 3. postoji li mogućnost tzv. protuanalogije) Keinpointer (2012: 111) predlaže pet pragmatičkih parametara: „bliskost“ i „udaljenost“ figurativne analogije, dokazljivost argumenata, za i protiv argumenti, njihova „didaktička“ vrijednost i „ozbiljnost“. Neki od primjera su pokazali da ne zadovoljavaju niti jedan od navedenih parametara. Primjerice, tvrdnja iz rasprave o kvaliteti života „Nemoj mijenjati staroga sebe, stvori novoga sebe“, pogrešno se argumentira analogijom s popravkom automobila: „Ako popravljáš staro, dobivaš stari auto sa starim problemima samo sa sjajnim novim branikom. Koji vjerojatno uopće niti ne odgovara jer je od novijeg modela“. S druge strane, najveći broj primjera pada na kriteriju „udaljenosti“, odnosno prevelike razlike između sfera koje se uspoređuju. Na primjer, u raspravi o smanjenju televizijske pretplate, televizijska produkcija se uspoređuje s prekoceanskim letom

aviona. Zaključno, treba istaknuti važnost kritičke kontrole i razlikovanje logički utemeljenih figurativnih analogija i onih koje samo površno, i na prvu „zvuče dobro“.

Rhetorical value of figurative analogy in public discourse

Figurative analogies or “a priori analogies” Govier (1987: 58) are “arguments where similarities between entities belonging to entirely different spheres of reality are invoked”. Although some authors like Freely and Steinberg (2010), dismiss such analogies as rationally insufficient, there are authors who consider them to be relevant in spite of their argumentative weakness (Perelman & Olbrechts-Tyteca, 1958; Mengel 1995; Woods 2004). Walton (2008: 305). Walton (2008: 305) states that analogies are extremely effective means of persuasion because they compare something that the audience is familiar with to something new and unknown. That is the reason why figurative analogies are often used in public discourse, i.e. in different spheres of public life like politics, law, science and religion.

This work brings the analysis and evaluation of 20 examples of figurative analogy from public debates on different subjects. Each example was examined with “critical questions” for arguments from figurative analogy, which provides their argumentative legitimacy and value.

The work also puts so called “critical questions” next to other authors’ criteria for the analysis for the evaluation of arguments from figurative analogy. For example, Walton (2008) suggests critical questions (1: Is it right to compare two different domains within a theme; 2: Are the compared domains similar in relevant aspects; 3: Is there a place for a counteranalogy).

Keinpointer (2012: 111) brings five pragmatic parameters: “closeness” and “distance” of figurative analogy, burden of proof assigned to arguments, pro and contra arguments, “didactic” value and “seriousness” of figurative analogy.

Some examples have failed to fulfil requirements of all the parameters mentioned above. For example, the claim from the debate on life quality “Don’t change your old self, create your new self”, is being wrongly argued using car repairing analogy: “If you repair an old car, you get the old car with old problems and only a shiny bumper that most probably won’t fit because it is taken from a new model.” On the other side, most of examples fail on the criteria of “distance”, i.e. the large difference between the domains being compared. For example, in the debate on television subscription, television production is being compared to an airplane flying over the ocean.

Finally, the aim of the work is to point out the importance of critical thinking and differentiation between rationally sufficient figurative analogies and those that just “sound good”.

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Word durations in teenagers' and adults' spontaneous speech

Temporal characteristics of vowels and phrases are reported in various languages by many researches. However, analysis of duration of words has captured much less attention. The duration of words depends on several factors, such as phonological length, morphological structure, context, speakers' speech production, components of the lexical probability, etc. In addition, according to the Menzerath's law, the number of segments in the words is reduced by the increase of the syllables the words consist of. The goal of the present study is (i) to show how this interrelation would be reflected in Hungarian spontaneous speech, and (ii) to define the words' measured duration in terms of their morphological structure and the speakers' age. The main questions of the research: (1) how does the Menzerath's law affect the duration of stems and suffixes; (2) how does the duration of stems and suffixes change depending on the age of the speakers.

Two hypotheses were formulated. (1) The Menzerath's law would affect the temporal patterns of the words with various morphological structures in spontaneous speech; and (2) the age of the speakers would influence the durations of stems and suffixes.

For the measurements, annotated spontaneous speech samples of a group of teenage speakers (from the TiniBEA corpus; 5 boys, 5 girls) and a group of adult speakers (from BEA corpus; 10 women, 10 men) were used for the study (a total of 20 minute narratives in each group). We analysed the duration of the suffixes, stems and the whole words using the Praat program (version 5.3). Stem and suffix, number of segments and syllables of the words as well as speech rate were independent factors in the analysis. Statistical analysis was conducted using SPSS 17.0 software.

The results (i) show differences between the temporal patterns of stems and suffixes irrespective of the morphological structures of the words, (ii) provide new information about the durations of words occurring in spontaneous speech. Significant differences were found in the durational data between the two examined age groups. Temporal patterns seem to support the emergence of Menzerath's law which can be interpreted as an existing internal temporal organizer of spontaneous speech.

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Elektropalatografska analiza vokala: preliminarni rezultati

Utvrđivanje artikulacijskih, akustičkih i perceptivnih korelata vokala pokazalo se problematičnijim od utvrđivanja takvih korelata kod konsonanata (Howard i Haselwood, 2012). Artikulacijska analiza vokala zahtjevnija je zbog složenosti utvrđivanja položaja i oblika jezika pri izgovoru. Niti jedna instrumentalna fiziološka tehnika ne nudi cjelovit uvid u artikulaciju vokala, a elektropalatografija (EPG) se na prvi pogled čini prilično neadekvatnom (Howard i Haselwood, 2012). EPG je instrumentalna fiziološka tehnika kojom se bilježe jezično-nepčani kontakti tijekom govora. Budući da je dodir jezika i nepca tijekom artikulacije vokala prilično malen, a ponekad gotovo nepostojeći (Hardcastle i Gibbon, 1997), elektropalatografija često nije prvi izbor za analizu vokala. Ipak, neka su istraživanja pokazala da se neki zatvoreni vokali i diftonzi mogu prilično učinkovito analizirati elektropalatografijom (Byrd, 1995; Gibbon i sur. 2010) te da elektropalatografija može pomoći u dijagnozi i terapiji atipičnoga izgovora vokala (Howard, 2007). Otvoreni vokali i dalje predstavljaju izazov za elektropalatografsku analizu. Cilj je ovog rada istražiti mogućnosti elektropalatografske analize zatvorenih, otvorenih, prednjih i stražnjih vokala te provjeriti može li se na temelju takvih podataka izraditi prihvatljiv vokalski trokut. Stoga se u ovom istraživanju elektropalatografijom analiziraju tri rubna vokala (i, a, u) u hrvatskom i talijanskom govoru. U radu se koriste podaci iz dva korpusa: EUR-ACCOR (Marchal i Hardcastle, 1993) i CROELCO (Liker, 2009; Liker i sur. 2012). U ovom istraživanju iskorišteni su podaci za četiri ženske ispitanice: dvije hrvatske i dvije talijanske. Govorni korpus sastojao se od beznačenjskih riječi simetrične konstrukcije VCV (V: i, a, u; K: p, t, k). Analiziran je prvi vokal u riječi. Svaki ispitanik svaku je riječ izgovorio šest puta. U svakoj je riječi analizirano 10 elektropalatografskih parametara: težište, ukupni jezično-nepčani dodir, jezično-nepčani dodir u svakom od osam redova elektroda. Time je za analizu pripremljeno ukupno 2160 podatkovnih jedinica. Rezultati su pokazali da se analizom modificiranog težišta i ukupnog jezično-nepčanog kontakta mogu učinkovito analizirati vokali, kako prema otvorenosti/zatvorenosti, tako i prema prednjosti/stražnjosti. U analizi su uspoređeni hrvatski i talijanski vokalski prostor, a rezultati su pokazali da je talijanski vokalski prostor veći, a artikulacija vokala varijabilnija. Budući da talijanski jezik ima više vokala od hrvatskog, taj je rezultat suprotan predviđanjima Teorije gustoće

susjedstva (Mok, 2012), a bliže predviđanjima Teorije adaptivne raspršenosti (Recasens i Espinosa, 2005). Rezultati rada raspravljaju se u svjetlu navedenih teorija, ali i u svjetlu ograničenja istraživanja.

Electropalatographic analysis of vowels: preliminary results

Articulatory, acoustic and perceptual correlates of vowel productions are more problematic to determine than those of consonants (Howard & Haselwood, 2012). Articulatory analysis of vowels is considered demanding mainly because of difficulties with determining tongue shapes and positions during speech. No one instrumental physiological technique provides a complete insight into vowel articulation and electropalatography (EPG) seems to be a technique with relatively little to offer in this respect (Howard & Haselwood, 2012). EPG is instrumental physiological technique for recording and analysis of tongue-to-palate contact patterns during speech. Since tongue-to-palate contact is relatively low or even non-existent during vowel productions (Hardcastle & Gibbon, 1997), EPG is not the first choice when it comes to analysing vowels. However, some research data suggest that high vowels and some diphthongs can be analysed via EPG quite successfully (Byrd, 1995; Gibbon et al. 2010) and that EPG is useful in diagnosing and treating atypical vowel productions (Howard, 2007). Nevertheless, it seems that low vowels still present a challenge for EPG analysis. The aim of this investigation is to explore the possibilities of using EPG to analyse high and low, open and close vowels as well as to investigate whether vowel triangle can be created on the basis of such data. Therefore, in this investigation we use EPG to analyse three of the corner vowels (i, a, u) in Croatian and Italian. Data from two corpuses were used: EUR-ACCOR (Marchal & Hardcastle, 1993) and CROELCO (Liker, 2009; Liker et al 2012). The present investigation utilised speech material from four female speakers: two Croatian and two Italian. Speech material consisted of meaningless symmetrical VCV sequences (V: i, a, u; K: p, t, k). First vowel in each sequence was analysed. Ten EPG indices were analysed: centre of gravity (CoG), total contact and total contacts in each of the eight EPG electrode rows. In total 2160 data items were prepared for the analysis. The results show that the modified CoG and the total contact measure can be used to analyse high and low vowels as well as front and back vowels relatively successfully. Croatian and Italian vowel spaces were visualised and the analysis showed that Italian vowel space is larger and more variable than Croatian vowel space. Since the Italian language has more vowels than Croatian, this result is in contrast with Neighbourhood density theory (Mok, 2012), and more in line with Adaptive dispersion theory (Recasens & Espinosa, 2005). The results are discussed in light of the mentioned theories and limitations of the present study.

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Grafički prikaz formanata

Rad analizira mogućnosti grafičkog prikaza formanata, te prikaza ovisnosti formanata. Prikazat će standardni načini prikazivanja formanata, te predložiti prikazi s više informacije. Podaci korišteni u analizi skupljeni su na uzorku studenata informacijskih znanosti. Snimljeni su izolirani vokali, očitane vrijednosti prvih pet formanata, statistički analizirani podaci, te rezultati prikazani 1D, 2D te projekcijama 3D prostora formanata. Cilj rada je pokazati da se grafički može prikazati i više informacija o formantima, ali da se često prikaz ograničava na neki oblik vokalskog trapeza samo zbog povijesnih razloga i jednostavnije vizualne usporedbe s ranijim istraživanjima.

Graphical representation of formants

The paper investigates the possibilities of the graphical representation of formants, and display of formant interdependence. The paper shows standard ways of graphical representation of formants, and suggests representations with more information. Data used in the analysis were collected on a sample of students of Information sciences. Isolated vowels were recorded, first five formants were read from spectrograms. Gathered data was statistically analysed and the results shown in 1D, 2D and 3D projections of formant space. The aim is to show that the graphic representation of formants can display more information, but that graphical representation is usually limited to a vowel trapezoid due to historical reasons and easier visual comparisons with previous surveys.

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Glasovni simbolizam u pjesništvu Anke Žagar

Ovaj rad predstavlja istraživanje fonostilističkog ustroja pjesništva Anke Žagar. Ono je prepoznato kao pjesništvo označiteljskog iskustva u kojem se pjesnički jezik i

diskurzivnost obilato tematiziraju. Od fonostilema istražene su asonance, aliteracije, fonološki infantilizacijski instrumentarij (rima i poetska etimologija), fonosemantičke figure (hiperbola i ironija), fonosemantički diskurzi i ritam. Glasovni simbolizam kao stilski postupak nije naročito obrađen i njemu se u ovom radu posvećuje posebna pažnja zbog otkrivanja njegova značaja za razvoj fonosemantičke paradigme ovog pjesništva i pjesništva *per se*. Elaborira se Genetteovim tezama iz znamenite studije *Mimologije: Put u Kratiliu*, a dokazuje na Žagaričinoj pjesmi *Još kamen jedan za Mostar*.

Voice symbolism in the poetry of Anka Žagar

This paper presents investigations of phonostylistic structure of poetry of Anke Žagar. This poetry is based on the poetry of language experience because poetic language and discursivity are most common in it. Between phonostylems asonances, aliterations, phonological infantilistic instruments (rhyme and poetic etymology), phonosemantic figures (hyperbole and irony), phonostylistic discourses and rhythm are investigated. The voice symbolism is not well investigated and we pay attention on it in this paper because of its power for development of phonosemantic paradigm of this poetry and poetry *per se*. It is elaborated with Genette's thesis from his famous study *Mimologies: journey to Cratilia* and illustrated on the Žagar's poem *One stone more for Mostar*.

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Vrijeme pojačanja u hrvatskim frikativima i afrikatama

Frikativi i afrikate ubrajaju se među izgovorno najsloženije glasove te je njihovo usvajanje tijekom razvoja govora relativno kasno. Stoga je razlikovanje frikativa i afrikata relevantno područje ne samo za teorijsku fonetiku, već i za razvoj govora te za sintezu govora. Dosadašnja istraživanja opisala su nekoliko (psiho)akustičkih korelata te razlike, a najrobusniji među njima su dužina frikcije i vrijeme pojačanja (engl. rise time) (Dorman, i sur. 1980; Mitani i sur. 2006). U hrvatskom je govoru dužina frikcije u frikativima i afrikatama relativno dobro istražena (Bakran, 1996), dok je vrijeme

pojačanja potpuno neistraženo u frikciji hrvatskih afrikata i frikativa. Vrijeme pojačanja je vrijeme od početka frikcije do trenutka najjače amplitude frikcije, odnosno maksimuma amplitudne ovojnice (Kent i Read, 2002; Kluender i Walsh, 1992; Mitani i sur., 2006).

Cilj je ovog istraživanja analizirati vrijeme pojačanja u hrvatskim bezvučnim afrikatama i lingvalnim frikativima te koartikulacijske utjecaje okolnih vokala na vrijeme pojačanja. Na temelju istraživanja provedenih u drugim jezicima, pretpostavlja se da će se hrvatske afrikate i frikativi uspješno razlikovati prema vremenu pojačanja te da će afrikate biti koartikulacijski otpornije od frikativa.

U istraživanju se koristi govorni korpus u kojemu je uključeno 37 ispitanika (M: 5, Ž: 32). Starost ispitanika u rasponu je između 18 i 22 godine. Ispitanici su studenti prve dvije godine fonetike, a porijeklom su iz različitih dijelova Hrvatske. U ovom je istraživanju korišten dio korpusa u kojemu se ciljane riječi nalaze na istaknutom mjestu u rečenici. Ciljane riječi su dvosložne hrvatske riječi u kojima se bezvučne afrikate (c, č, ć) i lingvalni frikativi (s, š) pojavljuju u drugom slogu u simetričnom okruženju tri rubna hrvatska vokala (i, a, u). Ukupno 15 riječi svaki je ispitanik izgovorio dva puta, što je rezultiralo s 1110 pojavnica pripremljenih za akustičku analizu. Akustička je analiza provedena programom Praat (Boersma i Weenink, 2014), a zvučni je signal segmentiran prema dobro utvrđenim akustičkim kriterijima (npr. Jesus i Shadle, 2002; Mitani i sur., 2006).

Rezultati su pokazali da se afrikate i frikativi statistički značajno ($p < 0,001$) razlikuju prema vremenu pojačanja te da na razinu razlike utječe vokalska okolina. Rezultati su također pokazali da je relativna intenzitetska razlika između minimalnog i maksimalnog intenziteta u frikcijama afrikata i frikativa slična.

Rezultati rada raspravljaju se u svjetlu moguće primjene rezultata u područjima razvoja govora te sinteze govora.

Rise time in Croatian fricatives and affricates

Fricatives and affricates are among the most difficult sounds to produce and they are acquired relatively late during speech development. Therefore, the differentiation between fricatives and affricates is interesting not just for theoretical phonetics, but also for speech development and speech synthesis. Past studies showed several (psycho)-acoustic correlates of that difference, most importantly frication duration and rise time (Dorman, et al 1980; Mitani et al 2006). Frication duration in Croatian is investigated to some extent (Bakran, 1996), while rise time is not investigated at all. Rise time refers to the time between the onset of frication and the time point where frication reaches its

maximum amplitude, i.e. where amplitude envelope is at its maximum (Kent & Read, 2002; Kluender & Walsh, 1992; Mitani et al 2006).

The aim of this investigation is to analyse rise time in Croatian voiceless affricates and lingual fricatives as well as coarticulatory effects of surrounding vowels on rise time in fricatives and affricates. Based on previous research in other languages, it is hypothesised that Croatian fricatives and affricates will be successfully differentiated according to their rise time values. It is also hypothesised that fricatives will show increased coarticulatory flexibility when compared to affricates.

Speech corpus comprising 37 speakers is used (M: 5; F: 32), ranging in age between 18 and 22 years. Speakers are students of phonetics and they are originally from different parts of Croatia. Part of the corpus which includes carrier sentences with target words in stressed position is used. All target words are two-syllable Croatian words in which voiceless affricates (c, č, ć) and lingual fricatives (s, š) are placed in the second syllable and symmetrically surrounded by three Croatian corner vowels (I, a, u). The total of 15 words in carrier sentences were read twice by each speaker, which resulted in 1110 items prepared for acoustic analysis. Acoustic analysis was performed using Praat software (Boersma & Weenink, 2014) and the acoustic signal was segmented according to well established criteria (e.g. Jesus & Shadle, 2002; Mitani et al 2006).

The results showed that Croatian affricates and fricatives can be successfully and significantly ($p < 0.001$) differentiated according to their rise time values. It was also shown that the level of this difference is influenced by vowel context and that the relative amplitude difference between the minimum and maximum amplitude in affricates' and fricatives' frications is relatively similar.

The results are discussed in light of possible applications in speech development and speech synthesis.

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Kvalitativno-kvantitativni opis ekspiratornog akcenta u srpskom jeziku

Poznato je da se prema tipologiji akcenatskih sustava jezici mogu podijeliti na udarne/dinamičke, tonske i ograničeno-tonske. Srpski prozodijski sustav čija je osnovna karakteristika da tonska kontura, koja je realizirana na naglašenoj riječi nosi leksičku informaciju, spada u treću kategoriju (izuzetak predstavlja prizrensko-timočka dijalekatska oblast, koja pripada prvom akcenatskom tipu).

Predmet ovog istraživanja je da se na osnovi akustičke analize utvrde kvalitativno-kvantitativne karakteristike ekspiratornog akcenta u prizrensko-timočkoj dijalekatskoj oblasti. Napominjemo da u srpskom jeziku do sada nije napravljen nijedan akustički opis ekspiratornog akcenta, te da je jedine karakteristike ove prozodeme (na osnovu slušne percepcije) načinio Toma (1998).

Istraživanje je napravljeno na korpusu u produkciji 30 ispitanika koji pripadaju različitim regionalnim zonama prizrensko-timočkog dijalekta (prizrensko-južnomoravska, timočko-lužnička i svrljiško-zaplanjska). Snimljeni korpus sadržavao je 80 dvosložnih riječi u kojima su zastupljene sve četiri vrste akcenta, a u svakoj od kategorija nalazilo se nekoliko riječi s fonološki dugim postakcenatskim vokalima. Budući da mjesto akcenta u riječi i broj slogova mogu utjecati na intonacijski oblik naglašenog sloga, korpus je biran tako da zadovolji nekoliko kriterija: da odabrane riječi imaju približno jednaku strukturu slogova i pogodno konsonantsko okruženje. Odabrane riječi nalazile su se u medijalnoj poziciji kraćih izjavnih rečenica koje nisu sadržale afektivni leksik i analizirane su u uskom fokusu. Akustički parametri trajanja, tona i intenziteta naglašenog i nenaglašenog vokala obrađeni su u programu za obradu govora PRAAT (verzija 6.0.14, Boersma & Weenick 2016). Svi podaci obrađeni su kvantitativnim putem uz pomoć programa za statističku obradu podataka SPSS (verzija 20.00). Statistička analiza obuhvaćala je deskriptivnu statistiku te je izračunata

prosječna, maksimalna i minimalna vrijednost svakog akustički proučavanog parametra, kao i standardna devijacija. Nakon toga, podaci su obrađeni pomoću T-TEST-a i ANOVA-e.

Usporedbom perceptivne i akustičke analize analiziranog korpusa uočeno je da dinamički akcenatski sistem nije jedinstven i stabilan. Istraživanje predstavlja još jedan korak u proučavanju akustičke prirode ekspiratornog akcenta. Imajući u vidu da ranija istraživanja ovakvoga tipa nisu rađena, dobiveni rezultati bit će korisni svima koji se bavi proučavanjem fonetskog sustava.

Qualitative and quantitative description of expiratory accent in Serbian

According to the typology of accent systems languages can be divided into stress-accent, tone and pitch-accent languages. The Serbian prosodic system, whose main property is that its tonal contour, which is realized on the stressed word, carries lexical information, belongs to the third group (with the exception of the Prizren-Timok dialect, which belongs to the first group).

The aim of this research is to determine the qualitative and quantitative properties of expiratory accent of the Prizren-Timok dialect based on the acoustic analysis. It should be noted that the acoustic description of expiratory accent has not been produced in the Serbian language, and that the characteristics of this prosodeme were only described by Toma (1998).

The corpus used in the research involved speech production by 30 participants belonging to different regional zones of the Prizren-Timok dialect (Prizren-Juzna Morava, Timok-Luznik and Svrlijg-Zaplanje). The recorded corpus contained 80 disyllabic words with all 4 types of accents, and each category included a few words with phonologically long post-accentual vowels. Taking into account that the accent's place in a word and the number of syllables can affect the intonation shape of the stressed syllable, the corpus was selected with the aim of meeting several criteria: the selected words should have approximately the same syllable structure and suitable consonant environment. The selected words were in a medial position of short declarative sentences which did not contain any affective lexicon and were observed in a narrow focus. The acoustic parameters of duration, tone and intensity of stressed and unstressed vowels were analyzed in Praat, which is a speech processing program (version 6.0.14, Boersma & Weenick 2016). The data were then quantitatively analyzed by using SPSS (version 20.00), a software package used for statistical analysis. The statistical analysis involved descriptive statistics which included calculating the average, minimum and maximum

values of each relevant acoustic parameter, as well as the standard deviation. After that, the data were analyzed using T-test and ANOVA.

Comparing the perceptual and the acoustic analysis of the corpus indicated that the dynamic accent system is not uniform and stable. The present study represents a significant step in the investigation of the expiratory accent acoustic properties, taking into account that similar studies of this type have not been carried out: the obtained results will be beneficial to anyone investigating the phonetic system.

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Intonacijski obrasci u njemačkom kao stranom jeziku

Ovaj rad bavi se usporedbom intonacijskih obrazaca u hrvatskom kao materinjem i njemačkom kao stranom jeziku s intonacijskim obrascima u njemačkom kao materinjem jeziku. Polazište opisa rečenične intonacije u hrvatskom jeziku predstavljaju opis hrvatskih intonacijskih jedinica i jezgrenih tonova (Škarić, 2007) te autosegmentalni metrički fonološki opis intonacije srpsko-hrvatskog jezika na koji je primijenjen transkripcijski sustav ToBI (Godjevac, 2005). Opis njemačkih intonacijskih obrazaca temelji se na radu Grice, Baumann i Benzmüller (2005). Izvorni govornici njemačkog jezika rečenični naglasak ostvaruju udarnim, a izvorni govornici hrvatskoga udarnim ili visinskim sustavom, što ovisi o podrijetlu govornika.

Cilj je rada otkriti postoje li razlike u intonacijskim obrascima upitnih i izjavnih rečenica u hrvatskom i njemačkom jeziku, te koje intonacijske obrasce koriste govornici hrvatskoga jezika u njemačkom koji uče kao strani jezik. Istraživanjem tražimo i odgovor na pitanje utječe li leksički ton specifičan za pojedine hrvatske govore na postleksičko oblikovanje te prenosi li se utjecaj hrvatskih leksičkih tonova u intonaciju njemačkoga kao stranog jezika.

Korpus za analizu čine snimke 20 studenata čiji je materinski jezik hrvatski, a studiraju njemački jezik na Filozofskom fakultetu u Zagrebu, te 10 studenata Sveučilišta u Münchenu čiji je materinski jezik njemački. Testni materijal čine izjavne i upitne rečenice koje su hrvatski ispitanici čitali na hrvatskom i njemačkom jeziku, a njemački govornici na njemačkome. Specifičnost intonacije provjerava se empirijski, metodom slušne procjene te akustičkom analizom fundamentalne frekvencije.

Rezultati pokazuju da su intonacijski obrasci hrvatskog kao materinjeg i njemačkog kao materinjeg jezika vrlo slični (u istom tipu rečenica), dok isti govornici u njemačkom kao stranom jeziku, osobito u upitnim rečenicama s upitnom riječi, ne ostvaruju intonacijske obrasce svojstvene izvornim govornicima, već naglašavaju posljednje riječi u intonacijskim frazama, i to uzlaznim kretanjem tona. Rezultati istraživanja bit će primjenjivi u pedagoške svrhe, ponajviše za poboljšanje poučavanja fonetike njemačkoga kao stranog jezika.

Intonation patterns in German as L2

This paper concerns the comparison of intonation patterns in Croatian as L1 and German language as L2 with intonation patterns in German when spoken as L1. The description of sentence and phrase prosody of Croatian is based on descriptions of intonation patterns and nuclear tones by Škarić (2007) and Autosegmental-metrically based phonological description of Serbo-Croatian with applied ToBI transcribing and annotating system by Godjevac (2005). Prosodic patterns of German were described by Grice, Baumann & Benz Müller (2005). Native speakers of German are reported to accentuate phrase accent by using stress-accent system, whereas native speakers of Croatian use both stress- and pitch-accent system, depending on the origin of speakers.

The aim of the paper is to determine whether or not there is any difference regarding intonation patterns of declaratives and questions between German and Croatian. Moreover, it was researched which intonation patterns are used by Croatian native speakers in German as their second language (L2). This research also deals with the question, whether the lexical tone pattern, considered specific in some Croatian dialects, has any influence on post-lexical organisation of utterances and whether that influence of Croatian lexical tones has any reflections on the prosody of German as L2.

20 students of German language at Zagreb University with Croatian as their L1 and 10 students at Munich University (L1 German) were recorded while reading questions and declaratives. Croatian participants read both Croatian and German phrases, German participants read only in their L1. Intonation uniqueness was examined empirically, using hearing and acoustic analysis of fundamental frequency (f_0).

Results reveal noticeable similarity in intonation patterns of Croatian and German (when spoken as L1 in the same type of sentences), while the same speakers in German as L2, especially in questions with question-words tend to stress last words of an intonation phrase by using rising tone contours, rather than producing intonation patterns typical for German in that context. The results of this research will therefore be applicable in educational purposes, especially in teaching phonetics in German as second language.

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Uzlazno-silazno-uzlazni naglasak u razgovorima na njemačkom jeziku

Uzlazno-silazno-uzlazni naglasak je zbog svoje upadljive složenosti zasigurno najosebujniji visinski naglasak u njemačkom jeziku. Njegova upadljivost oslikava vrlo visok stupanj informacijske bitnosti istaknute riječi ili jaku potrebu skretanja sugovornikove pozornosti na izričaj koji joj slijedi.

Dosad nije bio predmet istraživanja prozodije njemačkog jezika dijelom zbog stilističke neutralnosti izričaja koji bi za potrebe istraživanja bili umjetno stvarani izvan konteksta, a dijelom i zbog nedostatnog broja različitih vrsta razgovora unutar korištenog korpusa u slučaju da je analizirana prozodija autentičnih razgovora.

Cilj ovog istraživanja je odrediti eventualne funkcije uzlazno-silazno-uzlaznog naglasak unutar razgovora na njemačkom jeziku pri sukonstituiranju govornih činova, strukturiranju razgovora te izražavanju modalnosti iskaza.

Korpus čini 100 isječaka iz razgovora vođenih u sklopu radijske kontakt-emisije „Im Gespräch“ Deutschlandradio koji sadrže po jedan uzlazno-silazno-uzlazni naglasak unutar svog verbalnog konteksta. Uzlazno-silazno-uzlazni naglasci su pronalazeni pri preslušavanju radijskih emisija, nakon čega bi se instrumentalnom analizom osnovne frekvencije govornog signala dodatno potvrđivao uzlazno-silazno-uzlazni smjer promjene njezine vrijednosti.

S ciljem postizanja intersubjektivnosti glede analitičkih kategorija glavni oslonac pri njihovoj validaciji u sklopu kvalitativne analize je njihovo tumačenje od strane samih sudionika u razgovoru.

Analiza pokazuje da se uzlazno-silazno-uzlazni naglasak pojavljuje unutar izričaja koji funkcioniraju kao dio samoinicijativnih pobližih pojašnjenja, bezrezervnih uvjeravanja, a sporadično i ironičnih iskaza, poziva te potvrđivanja.

Rising-falling-rising pitch accent in German language conversations

Rising-falling-rising pitch accent is surely the most unique pitch accent in German language due to its prominent complexity. Its prominence reflects very high degree of informational relevance of focused word or strong need to distract interlocutor's attention on utterance that follows focused word.

Up to now, rising-falling-rising pitch accent was not the subject of research of prosody in German language, partially due to the stylistic neutrality of utterances that would be artificially generated for research purposes outside the context and partially because of insufficient number of different types of conversations within used corpus in case of analysis of prosody in authentic conversations.

The purpose of this research is to determine eventual functions of rising-falling-rising pitch accents within German language conversation in co-constituting speech acts, structuring conversations and expressing modality of utterance.

Corpus constitutes of 100 excerpts from conversations led in Radio Phone-In „Im Gespräch“ on „Deutschlandradio“ that consist of single rising-falling-rising pitch accent within its verbal context. Rising-falling-rising pitch accents were found while listening radio shows, after which, by instrumental analysis of fundamental frequency of speech signal, rising-falling-rising direction of change of fundamental frequency was additionally confirmed.

With the aim of achieving intersubjectivity regarding analytical categories, the main pillar in its validation within qualitative analysis is its interpretation by the conversation participants themselves.

Analysis portrays that rising–falling–rising pitch accent appears within utterances that function as part of a self initiative more detailed explanations, energetic persuasions, and sporadically also ironic statements, callings and confirmations.

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Irregular phonation in filled pauses

Introduction. According to the literature, irregular phonation is significantly more frequent in the female than in the male speech in Hungarian (Markó 2013). Nevertheless, the speaker-dependency of frequency of irregularity is also well known (see e.g. Redi & Shattuck-Hufnagel 2001). According to Shriberg (2001), irregular phonation frequently occurs at the end of filled pauses, especially if the filled pause is long (however exact data are not presented). Horne (2009) defined the pragmatic function of glottalized filled pauses as a predictor of the continuation of speaking.

Hypotheses. In filled pauses women glottalize more as compared to men (H1). We expected strong variability among the speakers (H2). It was supposed that glottalized filled pauses are longer than those without irregular phonation (H3). Finally we hypothesized that glottalized filled pauses occur mostly utterance internally (H4).

Subjects, material, method. For the research, life interviews of 10 female and 10 male (non-smoker) speakers of BEA Hungarian speech database (Gósy 2012) were selected. The age of the subjects ranged between 20 and 66 years (mean of 39.3 years). 289 filled pauses in total of 103 minutes of speech were analysed after z normalization. The possible effect on irregularity was investigated in terms of the sex of the speaker, the inter-speaker variation, the duration of the filled pauses, and the filled pause's position in the clause. The position (initial, internal, final, and entire) of irregular phonation within the filled pause was also examined. These effects were analysed with General Linear Mixed Model.

Results. The 75.4% (251) of the filled pauses was (entirely or in part) glottalized. The following effects were proven to be significant: (i) the duration of the filled pause, (ii) the position of the irregularity within the filled pause and (iii) the speaker.

Conclusions. Against the hypotheses, neither the gender effect (H1), nor the effect of the position within the utterance (H4) were shown. Intra-speaker variability (H2) and the duration of the filled pause (H3), however, have eminent role in occurrence of glottalization in filled pauses.

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O jednome poučavanju naglasaka

Mjerenje naglasnih kompetencija (znanja o naglascima, percepcije i produkcije) u obrazovnome je procesu (i srednjoškolskom i visokoškolskom) ponajviše okrenuto ispitivanju znanja, a percepciji i produkciji, zbog složenosti ispitivanja, mnogo manje (Pletikos Olof, Vlašić Duić, Martinović, 2016), iako su percepcija i produkcija hrvatskih naglasaka ishodi koji su istaknuti u programima studija na kojim se poučavaju naglasci. Poučavati i testirati tako da studenti čiji organski idiom ima visinski, četveronaglasni sustav ne budu u prednosti pred studentima s usvojenim udarnim naglasnim sustavom (izuzimajući dijelom produkciju naglasaka) težak je zadatak, koji je motivirao i ovo istraživanje. Na temelju dosadašnjih rezultata istraživanja metoda mjerenja naglasnih kompetencija (Pletikos Olof, Vlašić Duić, Martinović, 2016), prema kojima su u metajezničnim vještinama percepcije i produkcije naglasaka na rijetkim, nepoznatim, pseudoriječima ili neispravno naglašenim riječima studenti s udarnim i studenti s visinskim sustavom podjednako uspješni, izrađeni su radni materijali i testovi. Radni materijali podijeljeni su u 15 cjelina (za obradu u 30 školskih sati), a zadatci su složeni stupnjevito: od jednostavnoga prema složenome, od riječi prema tekstu, od samostalnoga ostvaraja do kontrastiranja. U radu će se prikazati rezultati rada na takvome materijalu te rezultati testiranja i komparacije ulaznih i izlaznih kompetencija (posebice vještine percepcije i produkcije) studenata na kolegiju *Naglasni sustav hrvatskoga standardnog jezika*. Studenti I. god. preddiplomskoga studija kroatistike u Puli (N = 30) u ljetnome semestru 2015./2016. testirani su i snimani prije poučavanja i nakon odslušanoga kolegija, na istome tipu zadataka, te se vrednovao individualni napredak. Usporedbom ulaznih i izlaznih kompetencija pokazalo se da se takvi radni materijali i testovi mogu u poučavanju i testiranju izjednačiti govornike/studente različitih startnih idioma te da mogu biti pouzdani za mjerenje napretka u učenju hrvatskoga (standardnog) naglasnog sustava.

On a way of teaching accents

Evaluation of accentual competencies (the knowledge, perception and production of accents) in the educational process (in both the secondary and higher education) is chiefly focussed on the examination of knowledge, much less of perception and production, due to the complexity of such examination (Pletikos Olof, Vlašić Duić, Martinović, 2016), although the perception and production of Croatian accents are the intended learning outcomes listed in the programs of study courses which include the teaching of accents. Teaching and testing in a manner which will not give students whose organic idiom has a four-unit pitch accent an advantage over students with an acquired stress-accent system (excluding partially the production of accents) is a difficult task, which motivated this research in the first place. On the basis of *the results of earlier research* in the methods of assessing accentual competencies (Pletikos Olof, Vlašić Duić, Martinović, 2016), according to which students with a stress accent and those with a pitch accent are nearly equally successful in metalinguistic skills of perception and production of accents in rare, unknown, pseudo- or wrongly accentuated words, working materials and tests have been developed. The working materials are divided in 15 units (to be covered in thirty 45-minute classes) and the tests are organised in levels: from simple to complex, from word to text, from isolated realisation to contrast. This paper will illustrate the results of work on this type of material along with the results of testing and comparison of input and output competencies (especially perception and production skills) of students in the subject *Accentual system of the Croatian language*. The first-year students of the undergraduate course of Croatian language and literature in Pula (N=30) in the summer semester of the year 2015/2016 were tested and recorded both before and after teaching, using the same type of test, and the individual success was assessed. The comparison of the input and output competencies has shown that this type of working material and tests can make speakers/students of various original idioms equal in teaching and serve as a reliable means of assessing their progress in learning the (Standard) Croatian accentual system.

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Intonacija u hrvatskome jeziku na primjeru upitnih rečenica s upitnom riječi

U opis hrvatskoga jezika intonaciju prvi put uključuje Petar Guberina navodeći je kao jednu od "vrednota govornoga jezika" (ponajprije potkraj 30-ih, a zatim osobito 50-ih godina 20. st.). Na fonološku vrijednost intonacije upozorio je Muljačić 1972. dokazujući metodologijom minimalnoga para da ona ima ulogu suprasegmentnoga sredstva koje razlikuje značenja rečenica (točnije, iskaza) te je stoga ona jezični znak. Tome argumentu Ivas (1996.) dodaje još jedan – konvencionalnost uporabe intonacije – što je svojstvo tipično za jezični znak. Iako je dakle opis intonacije dio jezičnoga opisa, on se u hrvatskim gramatikama pojavljuje tek od 1979. (Barić i sur.), ali gotovo svugdje samo kao šturo i općenito navođenje triju osnovnih intonacijskih obrazaca (izjavni, upitni i usklični). Čak i nakon Škarićeva obuhvatnog opisa fonetike hrvatskoga standardnog jezika, koji je objavljen kao dio "Nacrta za gramatiku" HAZU (1991.), a u kojem autor opisuje šest intonacijskih jezgri, gramatike oskudijevaju opisom intonacije – detaljnije će o njoj progovoriti u svojoj gramatici tek Silić i Pranjković (2007., 2008.). U središtu je pozornosti ovoga rada analiza intonacije upitnih rečenica u hrvatskome jeziku. Posebno se pritom istražuje intonacija u pitanjima koja sadrže upitnu riječ jer se u dosadašnjim opisima pronalaze različita tumačenja kretanja tona u takvu tipu pitanja. Istraživanje se provodi metodom intervjua, na uzorku koji čine govornici iz različitih dijelova Hrvatske (i imaju različite polazne idiome). Istraživanjem će se nastojati utvrditi koji su intonacijski obrasci u navedenome tipu pitanja tipični za hrvatske govornike i tako pridonijeti detaljnijemu jezičnom opisu suvremenoga hrvatskoga standardnog jezika.

Intonation patterns in Croatian

Petar Guberina included intonation in the description of the Croatian language depicting it as a 'feature of spoken language' (in the 30's and, particularly, the 50's of

the 20th century). In 1972, Muljačić drew attention to the phonological character of intonation. Specifically, he proved, using the minimal-pair methodology, that phonological intonation as a suprasegmental feature differentiates the meaning of sentences (i.e. statements), which makes it a linguistic sign. In addition, Ivas (1996) highlighted the conventionality of the use of intonation, which is also characteristic of a linguistic sign. Although the description of intonation is part of language description, it appeared in Croatian grammars only in 1979 (Barić et al.), however, only in the form of the three intonation patterns (declarative, interrogative and exclamatory). Even after Škarić's comprehensive description of phonetics of the standard Croatian language, which was published as part of the "Draft of the Croatian Academy of Sciences and Arts Grammar" (1991), and in which the author described six intonation nuclei, grammars still lack the description of intonation. Silić and Pranjković (2007, 2008) were the first who dealt with phonological intonation more thoroughly. The present paper analyses the intonation of interrogative sentences in the Croatian language. Particular focus is given to the questions comprising an interrogative word, as previous research showed certain inconsistencies in these particular questions. The data were collected by means of a questionnaire among speakers from different parts of Croatia, who speak different vernaculars. This study aims to investigate which intonation patterns are typical of the above-mentioned question type and thus contribute to a more comprehensive description of the contemporary standard Croatian language.

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Ritam u govoru hrvatsko-talijanskih dvojezičnih govornika

Nema mnogo istraživanja o ritmu u govoru ranih dvojezičnih govornika, kako općenito, tako i u dvojezičnih govornika u Istri. U ovome će se radu analizirati ritam u standardnome talijanskome govoru kod istarskih dvojezičnih govornika (hrvatski i talijanski) pomoću ritmičko-akustičkih mjera (npr. Schmid i Dellwo 2012, 2013). Prema Schmidu i Dellwou (2012): a) ritam u govoru dvojezičnih govornika ima iste osobine ritma u govoru jednojezičnih govornika; b) ritmičke se osobine govora razlikuju od jednojezičnih govornika jednoga i drugoga jezika te pokazuju zasebne osobine. Istraživanjem se želi utvrditi je li ritam dvojezičnih govornika u Istri po osobinama bliži talijanskome ili hrvatskome jeziku ili se u potpunosti razlikuje od oba jezika. Analizirani

korpus čine zvučni zapisi čitanja pripovijetke "The boy who cried wolf" od strane pet jednojezičnih studenata sa Sveučilišta u Padovi (Italija), pet dvojezičnih studenata sa Sveučilišta Jurja Dobrile u Puli i pet jednojezičnih studenata s istoga Sveučilišta. Zvučni su zapisi ručno segmentirani u CV intervale pomoću programa za akustičnu analizu podataka *Praat*, a zatim će se pomoću programa *Correlatore* izračunati metrike ritma koje su uveli (Ramus i sur. 1999) i Dellwo (2006). Na temelju rezultata dobivenih u prethodnome istraživanju (Matticchio 2016) gdje su izračunati metrika %V (Ramus i sur. 1999) i druge mjere poput tempa govora i tempa artikulacije, očekujemo kako će istraživanje potvrditi da se ritam dvojezičnih govornika uklapa u gore navedenu Schmidovu i Dellwovu (2012) drugu skupinu, odnosno da će metrike potvrditi da govor dvojezičnih studenata iz Istre ima vlastite ritmičke osobine.

Speech rhythm in Italo-Croatian bilinguals

Little is known about speech rhythm in early bilinguals both in general as well as on the Italian spoken by Istrian bilinguals specifically. This paper investigates the speech rhythm of the standard Italian spoken by Istrian bilinguals (Italian and Croatian) using acoustic rhythmic measures (cf. Schmid and Dellwo 2012, 2013).

As shown by Schmid and Dellwo (2012): a) the rhythmic properties in the speech of bilingual speakers correspond to those found in monolingual speech production for both languages respectively; b) the rhythmic properties in the speech of bilinguals does differ from the rhythmic properties found in the speech of monolinguals for both languages respectively. Building up on their studies the present research delivers an answer to the following question: which features does the Italian spoken by Istrian bilinguals show in terms of rhythm metrics i.e. is it closer to Italian or Croatian? The corpus consists of recordings of the narrative "The boy who cried wolf" read by five monolingual Italian students from the University of Padova (Italy), five bilingual students (Croatian and Italian) and five monolingual Croatian students from the "Juraj Dobrila" University of Pula (Croatia). The recordings were labelled manually in CV intervals using *Praat* and then the rhythm metrics suggested by Ramus et al. (1999) and Dellwo (2006) will be calculated with *Correlatore*. Due to the results obtained in a previous study (Matticchio 2016) on read speech produced by Istrian bilinguals calculating Ramus' et al. %V (1999) and other rhythmic indices like speech rate and articulation rate, we expect the experiment at hand to confirm that Istrian bilinguals' speech fits into Schmid and Dellwo's (2012) second group, i.e. that the metrics will confirm that Istrian bilinguals speech doesn't have the same rhythmic characteristics whether they speak Italian or Croatian.

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Convergence in the production of lexical (accented) stress cues of Welsh and Welsh English

A by-product of individual bilingualism is cross-language interaction. There is plenty of evidence for interaction in the phonetic domain, such that bilinguals' phonetic systems tend to differ from monolinguals in either language (Flege & Hillenbrand, 1984; Mack, 1989). In bilingual communities, this interaction may ultimately lead to

the emergence of contact varieties (Bullock & Gerfen, 2004). One such contact situation exists in Wales where monolingual and bilingual speakers live within the same community. The purpose of the research presented here is to determine to what extent Welsh and Welsh English accents have converged, and whether any variation can be explained by long-term language contact and/or individual bilingualism.

We collected lexical stress data in accented words (henceforth called *accented*) from three groups of 10 male adolescents from Carmarthenshire attending the same secondary school, where subjects are taught in either English or Welsh (Welsh-English bilinguals from Welsh-speaking homes; Welsh-English bilinguals from English-speaking homes who had acquired Welsh solely via immersion education; English monolinguals), and a group of 10 male monolingual speakers of Southern Standard British English (SSBE). Both sets of bilinguals followed the Welsh-medium pathway, the English monolinguals the English-medium pathway.

We chose lexical stress for our investigation as Welsh is reported to have unusual stress cues. In English, stressed accented vowels can be distinguished from unstressed ones by a combination of longer duration, higher amplitude, full phonetic quality, and higher (or clearly moving) fundamental frequency (F0) (Slujiter & van Heuven, 1996). By contrast, Welsh is reported to have a similar duration of stressed and unstressed vowels, but a lengthened post-stress consonant, and either no F0 change or an F0 change in the *unstressed* vowel. The role of amplitude is as yet unclear (Williams, 1985).

Participants were recorded in individual sessions producing Welsh and/or English words in accented position embedded in the carrier phrase “Say [*target word*] again” (English); or “Dyweda [*target word*] eto” (Welsh). Target words were pairs with the same or similar initial syllables in both English and Welsh (e.g. ‘gossip’/’gɒsɪp/ and ‘gosod’ /’gɒsɒd/ ‘set’). The participants’ productions were analysed for their normalised durations (as % of total word duration), f0 change (in ST), and mean amplitude change (dB).

Results confirm the cross-language differences: Welsh has longer stressed (SV) and unstressed vowels (USV), longer post-stress consonants (PSC), a smaller F0 difference (F0 Δ), and smaller mean intensity difference (dB Δ) compared to SSBE. Intra-linguistic comparison of English tokens showed that SSBE has shorter SV, and PSC, but larger F0 Δ and dB Δ than other groups, between which there is no difference. This suggests that there was no influence of either linguistic experience (bilingual, monolingual) or home language (English, Welsh). The intra-linguistic comparison of Welsh tokens also showed no influence of home language. This strongly suggests that the varieties of Welsh and Welsh English used in this community function as markers of regional identity in the same way for all individuals.

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Percepcija mjesta naglasaka kod djece s umjetnom pužnicom

Cilj ovog istraživanja bio je utvrditi u kojem trenutku, nakon implantacije, djeca s umjetnom pužnicom mogu slušno prepoznati naglaske hrvatskoga jezika s obzirom na njihovo mjesto u riječi. Istraživanje je uključivalo prepoznavanje mjesta naglasaka u značenjskim i bezznačenjskim riječima. Ispitanicima, djeci s umjetnom pužnicom različite kronološke i slušne dobi, a koja su uključena u program individualne rehabilitacije u Centru za umjetnu pužnicu Poliklinike SUVAG, slučajnim su redoslijedom reproducirane prethodno verificirane snimke riječi. Budući da se radilo o ispitanicima niske kronološke dobi, a vodeći se principima provođenja audiometrijskih istraživanja (govorne audiometrije), snimljeni su njihovi odgovori na stimulus, tj. reprodukcija prethodno odslušanih riječi. Oni su dani na slušno prepoznavanje iskusnim slušačima koji su trebali, neovisno o tome kako su ispitanici izgovorili pojedinu značenjsku ili bezznačenjsku riječ, odrediti mjesto naglasaka. Uspoređivanjem dobivenih podataka i verificiranih snimki riječi koje su služile kao stimulus, dobiveni su rezultati koji pokazuju kad ispitanici (djeca s umjetnom pužnicom) počinju slušno prepoznavati mjesto naglasaka u riječima.

Auditory perception of stress placement in the word in children with cochlear implant

The aim of this research is to determine time, after the implantation, in which children with cochlear implant are able to recognise Croatian standard accents depending on their placement in the word. The perception has been examined on meaningful and non-meaningful words. The tested children with cochlear implant, that are included in the program of individual rehabilitation in Centre for Cochlear Implant, Polyclinic of SUVAG, were presented with the verified random order of recorded words. Since the children were of low chronological age, according to the principles of audiometric testing (speech audiometry), their responses (word reproduction) to the stimuli were recorded. Recordings were given to the experienced listeners who were asked to determine stress placement no matter how children pronounced words. The results obtained by comparing those data with the verified recording of words used as stimuli, show the time in which children with cochlear implant are starting to recognise stress placement in words.

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Nemanualne oznake u hrvatskom znakovnom jeziku – gramatička i prozodijska uloga

O znakovnim jezicima postoje brojne zablude. Jedna od njih jest da su znakovni jezici "jezici na rukama", odnosno da su leksemi, kao i morfološki i sintaktički kompleksne strukture, artikulirani u potpunosti rukama. Ovim će se izlaganjem pokazati kako navedena tvrdnja ne odgovara istini. Ruke zasigurno igraju važnu ulogu u artikulaciji znakovanih iskaza, ali drugi artikulatori – gornji dio tijela, glava i dijelova lica – jednako su važni. Svi jezično značajni elementi, a koji nisu izraženi rukama, nazivaju se nemanualnim oznakama (Pfau & Quer, 2010).

Jezično značajne nemanualne oznake moraju se razlikovati od čisto afektivnih nemanualnih signala, kao što su izrazi lica ili pokreti glave kod izražavanja gađenja, nevjerice ili iznenađenja, a koje koriste i znakovatelji baš kao što ih koriste govornici kojeg jezika. Razlikovanje dviju vrsta oznaka nije uvijek jednostavno, ali postoje određeni razlikovni kriteriji. Opseg i trenutak pojave jezičnih nemanualnih oznaka ograničeno je na manualne znakove koje prate, što nije slučaj s afektivnim oznakama (Pfau & Quer, 2010).

U radu će prvo biti riječi o različitim gramatičkim funkcijama nemanualnih oznaka, grupiranih prema njihovoj ulozi u različitim jezičnim razinama; fonološka, morfološka, sintaktička i pragmatička. Zatim će se govoriti o prozodijskoj funkciji nemanualnih oznaka. Primjeri u radu jasno će pokazati kako značajna gramatička i prozodijska uloga nemanualnih oznaka nije pretjerivanje. Štoviše, ona proturječi još jednoj zabludi, a to je da su nemanualne oznake, same po sebi, prirodne u gramatikama znakovnih jezika (Sandler, 2012).

Cilj rada nije opisati repertoar nemanualnih oznaka u hrvatskom znakovnom jeziku (HZJ), već na primjerima istaknuti sličnosti i razlike među znakovnim jezicima, s naglaskom na HZJ. Podatci dolaze iz korpusa HZJ-a, prikupljenog u Laboratoriju za istraživanje znakovnog jezika i kulture Gluhih, Edukacijsko-rehabilitacijskog fakulteta Sveučilišta u Zagrebu, od 2004. godine do danas.

Nonmanuals in Croatian Sign Language – grammatical and prosodic roles

There are many misconceptions about sign languages. One of these has that sign languages are “languages on the hands,” that is, that sign language lexemes as well as morphologically and syntactically complex structures are articulated entirely by the hands.

In this paper, we will show that this statement is not true. Hands play an important role in the articulation of signed utterances, but other articulators – the upper body, the head and the face – are just as important. All linguistically significant elements that are not expressed by the hands are referred to as “nonmanual markers” or just “nonmanuals” (Pfau & Quer, 2010).

Linguistically significant nonmanuals have to be distinguished from purely affective nonmanual markers such as facial expressions or head movements expressing disgust, disbelief or surprise, which are used by signers just as they are used by speakers. Differentiating between the two types of markers is not always straightforward, but there are certain distinguishing criteria. The scope and the timing of linguistic nonmanual is constrained relative to the manual sign(s) they accompany in a way that affective markers are not (Pfau & Quer, 2010).

As the first, we will address various grammatical functions of nonmanual markers. Nonmanuals are grouped together according to their role at different linguistic levels; phonological, morphological, syntactic and pragmatic. Then we will look at prosodic functions of nonmanuals.

The examples discussed in this paper will make clear that role of nonmanual markers, as an essential part of sign languages at the level of grammar and prosody, is certainly no exaggeration. This state of affairs contradicts the common assumption that nonmanuals constitute a natural class in the grammar (Sandler, 2012).

The aim of this paper is not to describe the repertoire of nonmanuals found in Croatian Sign Language (HZJ). Rather, we present similarities and differences between sign languages, with a focus on HZJ.

The data come from the HZJ Corpus, collected at the Laboratory for Sign Language and Deaf Culture Research, at Faculty of Education and Rehabilitation Sciences, University of Zagreb, since 2004. until today.

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Kuban Kabardian articulation rate: comparing different speech production tasks

Most studies on speech rate are generally concerned with Indo-European languages (with a few exceptions such as Arabic in Vaane [1982] and Japanese in Osser, Peng [1964]). There are several works, which compare different types of speech productions (e. g. Barik [1977]), but a lot of studies deal with media recordings or results of the reading tasks. Previous studies have all these characteristics, because of lack of big audio corpora of spontaneous speech.

In my talk, I will present data collected during the fieldwork in Khodz (Koshekhabsky District, Republic of Adygea, Russia). The participants (nine native speakers of Kuban dialect of Kabardian) were asked to solve several speech production tasks:

- tell a story based on the picture to other participant
- read a prosaic text
- read a verse

Articulation rate was calculated as the number of syllables per second. Several measurements were made: average articulation rate of the different speakers during all tasks and average speech rate depending on the utterance length. Spontaneous material

considered, the average rate equaled 4.07 syllables per second with confident interval equaled 0.45 and standard deviation equaled 0.7. As in other studies ([Fonagy, Magdics 1960], [Verhoeven et al. 2004], [Stepanova 2011]) there is a positive correlation between speech rate and the utterance length: the average rate in one-syllable utterances is 2.06 syll/s, while in twenty-syllable ones it is 5.42 syll/s. However, the speech rate does not rise as rapidly, as reported in other studies. In addition to these results I will present results of comparison rate differences between different speech production tasks.

All audio data were annotated using ELAN (v. 4.9.4); measurements were made using Praat (v. 5.3.16); all statistical inferences and visualization were made in R (v. 3.3.1).

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Discrimination of consonant length contrast in 7-8-year-old Hungarian children

One of the basic questions in speech perception research is how listeners identify continuous speech signal as discrete phonemes. The acoustic invariance theory suggests

that invariant features establish a link between acoustics and perception during the identification of phonetic segments (Stevens–Blumstein 1981; Lisker 1985). A specific speech sound is characterized by wide variability in timing of articulation (Rosen 1992), providing various difficulties for children when discriminate long vs. short consonants (in a language that has distinctive long consonants). In Hungarian children, the most difficult perceptual task at the phonological-phonetic level has proved to be the stop consonant length contrast discrimination, even at the age of 7 years (Gósy 1989). Previous research confirmed that the most important acoustic cue that distinguishes geminate from singleton stop consonants was the closure duration (Ham 2001; Amano–Hirata 2011).

The aim of the present study is to examine how children discriminate phonological categories of quantity (i.e., singleton vs. geminate) along a continuous scale of their phonetic realisations. A binary discrimination test of stops with systematically manipulated closure duration was carried out using Praat software. Thirty-two native children (7- and 8 year-olds; 1st and 2nd grades of primary school) took part in the experiment. It is hypothesized that children at the age of 7 and 8 would be able to discriminate singletons and geminates based on closure duration, but there might be some age-specific differences.

Results confirmed that closure duration was the main perceptual cue to stop consonant quantity distinction in Hungarian children, as well. However, a significant main effect of ‘age’ was found. The stimuli scale of closure duration between 100–200 ms provided a good medium to observe how children’s responses shifted from ‘singleton’ to ‘geminate’. Findings may be implemented in many issues, such as development of speech perception and second language learning.

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Govorna stilistika Branka Vuletića

U ovome preglednome izlaganju pokušat će se istaknuti najvažniji doprinosi Branka Vuletića hrvatskoj stilistici, osobito području fonostilistike. Još od prvih radova u *Umjetnosti riječi* potkraj 1960-ih godina pa sve do sintetske *Govorne stilistike* iz 2006. problematika odnosa zvuka i sadržaja u književnim, osobito poetskim tekstovima, ostala je jednim od trajnih Vuletićevih interesa. U dilemi između naturalističke i konvencionalističke teze načelno je bio na strani konvencionalista (grč. *théseî*), ali je svojim analizama hrvatske i strane poezije neprestance donosio potvrjepe naturalistima (grč. *phýsei*). Izlaz iz dvojbe pronađen je u konceptu *prostora pjesme* i s njime povezanoga *pjesničkoga znaka*. Među važnijim fonostilističkim doprinosima ističe se prije svega primjena koncepta vrednota govorenoga jezika Petra Guberine na opuse kanonskih hrvatskih pjesnika (Cesarić, Kranjčević, Krleža, Kaštelan, Matoš), a zatim i primjena određenih statističkih metoda, osobito u usporedbi učestalosti glasova u glasovno neutralnome kontekstu i u prostoru pjesme. Vuletićev doprinos hrvatskoj znanosti o književnosti jest i mali rječnik stilističkih i versifikacijskih termina u knjizi *Fonetika pjesme* (2005.), a među dvama terminima kojima je dao izraziti autorski pečat ističu se *pjesnički homofoni* i *zrcalna struktura*. Neprestano se nadovezujući na velike hrvatske i inozemne prethodnike te se nadahnjujući njihovim idejama Branko Vuletić istovremeno je stvorio ne samo bogat nego i iznimno izvoran opus.

Speech stylistics of Branko Vuletić

Through this review talk I am attempting to emphasize the most important contributions of Branko Vuletić to Croatian stylistics, especially the field of phonostylistics. The problem of sound-content relationship in literary, especially poetic texts, remained one of Vuletić's continuing interests, starting with the first papers published in the late 1960s in *Umjetnost riječi* (*The Art of Words*) all the way to the book *Govorna stilistika* (*Speech Stylistics*) from 2006. In the dilemma between naturalist and conventionalist view he was nominally on the side of conventionalists (Greek: *théseî*), but he was constantly supporting the naturalists (Greek: *phýsei*) through his analyses of Croatian and foreign poetry. The dilemma was solved through the concept of *space of poem* and the related concept of *poetic sign*. The application of Petar Guberina's concept

of spoken language qualities on opuses of the canonic Croatian poets (Cesarić, Kranjčević, Krleža, Kaštelan, Matoš) stands out among the most important phonostylistic contributions along with the application of certain statistical methods, especially when comparing speech sounds frequency in the neutral context and in the space of poem. Another Vuletić's contribution to Croatian literary science is a small glossary of stylistic and versification terms in the book *Fonetika pjesme (Phonetics of a poem)*, 2005). Two terms, *poetic homophones* and *mirror structure*, stand out among others as unique representations of the author's thinking. Building on the ideas of Croatian and international predecessors Branko Vuletić managed to create not just a rich but also an original opus.

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Musicality and auditory acuity

The perception of speech is a major field of interest in phonetic research. In most psychoacoustic perception experiments subjects are controlled with respect to age, gender, education and more. One feature which is mostly not recorded is musical education. Especially in perception tasks, however, musicality should be controlled, since musical education is linked to trained listening skills, which might be an advantage for the perception of speech.

Particularly for experiments treating perception of pitch, intonation and prosody musicality seems to be influential (Pape, 2009). Kishon-Rabin, Amir, Vexler et al. (2001) show that musicians identify smaller changes in frequency than non-musicians. Another interesting aspect concerning some musicians is the ability to perceive absolute pitch. Masataka (2011) tested absolute pitch possessors (AP) and relative pitch possessors (all musicians without AP) on speech relevant auditory acuity and showed

that absolute pitch possessors were faster in identifying isolated syllables than relative pitch possessors.

The present study investigates a possible impact of musical education and absolute pitch possession on auditory acuity. We expect musicians to perform better in auditory acuity tasks than non-musicians, due to their trained listening. Furthermore, absolute pitch possessors are expected to show an even higher performance, especially in vowel discrimination tasks, as a consequence of their ability to identify subtle changes in frequency.

40 subjects from 20y to 35y (20 musicians studying a classical instrument and 15 non musicians) are tested on their auditory acuity abilities. The participants are native speakers of German and without any hearing or speaking restrictions.

For measurements of auditory acuity two continua, a sibilant and a vowel continuum, have been implemented. The sibilant continuum was the same as in Brunner, Ghosh, Hoole et al. (2011). The ends of the continuum are synthetic productions of the words “Asse” (/asə/, ash) and “Asche” (/aʃə/, ashes). It was created by shifting the spectral peaks stepwise, resulting in 1513 tokens. For the investigation of vowels, the continuum from Gluth and Hoole (2015) was adapted and slightly revised. The ends of this continuum were productions of the words “Beagle” (/bi:gl/, beagle) and “Bügel” (/by:gl/, bracket), which were morphed (using the methods in Kawahara, Morise, Takahashi et al., 2008) to another set of 1513 tokens. For each continuum, two tests will be conducted: first, a labeling test, in which the subject’s phonemic boundary between the two words (Asse-Asche or Beagle-Bügel) is identified, and second, a computer-based 4-interval 2-alternative forced choice adaptive staircase discrimination task. The implementation by Gluth & Hoole (2015) was used. For those musicians who classify themselves as absolute pitch possessors a third test was designed to ensure their absolute pitch possessing abilities by presenting randomized pure tones between a1 and a3 with white noise after each tone.

First results show differences between the groups. Detailed results will be presented at the conference.

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Zvučnost Kosmačeve proze (*Tantadruj*)

Važna osobina proze slovenskog pisatelja Cirila Kosmača (1910-1980) je muzikaličnost njegovog jezika, koja se odražava kako u izboru riječi i ritmično-sintaktičkom obliku rečenica tako i u opisima govornih realizacija izravnog govora (npr. je nagajivo vprašala »je vragolasto upitala«, je završčal »je vrisnuo«). Članak se prvenstveno usredotočuje na govorni potencijal Kosmačeve novele *Tantadruj*, dok ujedno ukazuje i na 'negovornu' zvučnost, koju kod čitatelja izaziva sadržaj, a i oblik teksta (npr. pjesmica koja se ponavlja ili pojedini stihovi). Metodološka osnova su istraživanja Branka Vuletića o »fonetici književnosti«, koja sam nadopunila vlastitim saznanjima o govornoj interpretaciji. Cilj analize Kosmačeve novele *Tantadruj* je s jedne strane pokazati s kojim jezičkim sredstvima Kosmač komponuje zvučnost svog pisanja, a s druge strane i naglasiti da govorni interpreter mora neophodno prepoznati tu zvučnost. Evidentiranje govornih znakova u jezičkoj strukturi napisanog teksta predstavlja naime tek početak interpretativnog govornog procesa, unutar kojeg govornik po pisateljevim jezičkim sugestijama postepeno i pomoću prozodičkih sredstava stvara govornu sliku teksta. Semantička polivalentnost literarnog djela omogućuje različite čitateljske recepcije i različite govorne realizacije. Govornointerpretativna opcionalnost

je tim veća, koliko je bogatiji govorni potencijal napisanog teksta. Ova novela pokazuje velik govorni potencijal, što je, pored zanimljivosti sadržaja, najvjerojatnije također jedan od razloga zbog kojih je novela dobila adaptaciju za radio i TV film.

Sonority in Kosmač's prose (*Tantadruj*)

An important characteristic of the prose of Slovenian writer Ciril Kosmač (1910–1980) is the musicality of his language, shown in the choice of words and the rhythmic and syntactic design of the statements as well as in the descriptions of speech realisations of direct speech (e.g., je nagajivo vprašala “she asked playfully”, je zavreščal “he shrieked”). In the paper I focus mainly on the speech potential of Kosmač's novella *Tantadruj* and at the same time I warn about the “unspoken” sonority that the contents awaken in the reader and also the shape of the text (e.g., a repeating insert song or individual verses). The methodological starting point is the research of Branko Vuletić about “phonetics of literature”, to which I have added my own findings about speech interpretation. The purpose of the analysis of Kosmač's novella *Tantadruj* is, on the one hand, to show which linguistic elements Kosmač uses to compose the sonority of his writing, and on the other, to point out the necessity of recognising that sonority for speech interpretation. Keeping a record of the spoken signs in the linguistic structure of the written text represents the beginning of the interpretive speech process, in which the speaker gradually uses prosodic features to shape the speech image of the text according to the writer's linguistic suggestions. The semantic polyvalence of the literary work enables different reading receptions as well as different speech realisations. The richer the speech potential of the written text, the larger the speech interpretive selectivity. The treatment of the novella displays a great speech potential, which, along with the interesting content, is most likely one of the reasons why the novella has been adapted for radio and television.

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Istraživanje prilagođavanja metodičkih pristupa u nastavi hrvatskog jezika učenicima s disleksijom

Kvaliteta i učinkovitost nastavnog procesa ponajviše ovisi o nastavniku, njegovim osobinama i kompetencijama, o tome kakav oblik nastave provodi, kojim metodičkim

sustavima, nastavnim metodama i nastavnim izvorima, sredstvima i materijalima se koristi, te o tome na koji način provodi vrednovanje. Disleksija je jedna od najzastupljenijih teškoća, dijagnosticira se tek u nižim razredima osnovne škole, a u višim razredima osnovne škole važna je prilagodba nastavnog procesa učenicima s dijagnosticiranom disleksijom. Provedeno je istraživanje kako bi se dobio uvid u sadašnje stanje u nastavi hrvatskog jezika. Cilj istraživanja je bio ispitati prilagođavaju li se metodički pristupi u nastavi hrvatskog jezika u višim razredima osnovnih škola u radu s učenicima s disleksijom. Za prikupljanje podataka koristio se anketni upitnik, a uzorak je činilo 45 učenika s disleksijom koji pohađaju više razrede osnovne škole iz 12 škola na području grada Zagreba i Osijeka. S obzirom na stečeno praktično iskustvo istraživača, sudjelovanje istraživača na simpoziju „*Infinitus – knowledge sharing in dyslexia teaching*“ Hrvatske udruge za disleksiju 2015. godine i rezultate istraživanja iz 2012. godine u Osijeku pod nazivom „*Ocjenjivanje djece s teškoćama u čitanju i pisanju: Vrednujemo li znanja ili sposobnosti?*“ postavljena je početna hipoteza da se nastava hrvatskog jezika ne prilagođava u potpunosti potrebama i mogućnostima (interesima, znanjima i sposobnostima) učenika s disleksijom, a na temelju nje šest specifičnih podhipoteza. Prva podhipoteza je bila da učenici s disleksijom imaju pretežno negativne stavove o nastavi hrvatskog jezika i ona je djelomično potvrđena, druga da učenici s disleksijom naglašavaju pozitivne osobine nastavnika hrvatskog jezika i ona je potvrđena, treća da učenici s disleksijom imaju pretežno negativne stavove o načinu poučavanja na nastavi hrvatskog jezika i ona nije potvrđena, četvrta da učenici s disleksijom pretežno nisu zadovoljni načinom na koji sudjeluju na nastavi hrvatskog jezika i ona je djelomično potvrđena, peta da nastavnici hrvatskog jezika pretežno ne koriste raznovrsne nastavne izvore, materijale i sredstva u nastavi hrvatskog jezika i ona je potvrđena, te šesta da učenici s disleksijom imaju pretežno negativne stavove o vrednovanju na nastavi hrvatskog jezika i ona je potvrđena. Prema tome se može zaključiti da je početna hipoteza potvrđena. Rezultati ovog istraživanja trebaju potaknuti sve sudionike nastavnog procesa na poduzimanje mjera kako bi nastava bila što kvalitetnija i učinkovitija, a to se može postići jedino na način da bude prilagođena potrebama i mogućnostima (interesima, znanjima i sposobnostima) učenika.

The research of the adjustment of the methodological principles in teaching the Croatian language to students with dyslexia

The quality and effectiveness of the educational process depend mostly on the teacher, his character and competences. It also depends on the nature of performing his

class, what methodological system is using, teaching methods and sources and also how he carries out the evaluation. Dyslexia is one of the most common difficulty diagnosed not until primary school. The most important is that the educational process should be adopted to students with dyslexia. There has been a research to get an insight in the current state of teaching Croatian language. The goal was to inquire if the methodological approaches pander to students with dyslexia. 45 students from 12 schools from Zagreb and Osijek area have been questioned in order to collect data about teaching Croatian. A hypothesis has been settled according to experience and participation of the researches. An initial hypothesis has been settled based on the data from the Croatian Association of dyslexia 2015, results from the research in Osijek in 2012. under the the name of „The evaluation of children with difficulties in reading and writing: Do we value the knowledge and skills?“ The hypothesis is that teaching Croatian language does not adjust in complete to the needs, interests and abilities of students with dyslexia. Beside that, there are 6 sub-hypothesis: The First (partially confirmed) is that students with dyslexia mostly have negative attitudes towards the way Croatian language is thought. The Second (confirmed) is that students with dyslexia emphasise positive characteristics of the teachers. The Third (not confirmed) is that the students with dyslexia are mostly negative towards teaching Croatian in general. The Fourth (partially confirmed) is that students with dyslexia aren't satisfied with their participation in class. The Fifth (confirmed) is that teachers of Croatian language don't use diverse teaching resources, materials and other media in teaching. The Sixth (confirmed) is that students with dyslexia aren't satisfied with the evaluation during classes. Results of this research should inspire all the participants of the educational process to provide this class to be as more qualitative and efficient as it can be. The only way to achieve that is that teaching Croatian to students with dyslexia is adjusted to their needs, interests, abilities and knowledges.

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Intonacija upitnih rečenica (utvrđujućih pitanja) kod govornika češke manjine u Hrvatskoj

Rad predstavlja rezultate istraživanja govornih karakteristika pripadnika češke manjine u Hrvatskoj iz okolice Daruvara i Končanice, koje je provedeno 2015. i 2016.

godine. Češki govornici u Hrvatskoj žive već nekoliko generacija, te su svi bilingvalni, od djetinjstva govore češki i hrvatski jezik, što vodi do pojave brojnih interferencija između ta dva jezika. Ove interferencije su djelomično opisane na drugim nivoima jezika, te u okviru fonetike pojedini elementi segmentalnog nivoa, ali do sada nisu opisivani suprasegmentalni elementi, prozodijski. Materijal je snimljen u obiteljima učenika četvrtih i petih razreda čeških osnovnih škola u Daruvaru i Končanici prema unaprijed određenim kriterijumima, koji omogućuju analize na različitim nivoima jezika, te obuhvaća tri generacije govornika.

Na materijalu analizirana je melodija upitnih rečenica, konkretno utvrđujućih pitanja (pitanja bez upitnih riječi) na češkom jeziku, gdje su otkrivene karakteristike koje prema prijašnjim istraživanjima poznatih čeških fonetičara J. Chlumskog, B. Hále, M. Romportla, Fr. Daneša i Z. Palkove nisu tipične za češki jezik. Postavlja se pitanje je li je posrijedi utjecaj melodije hrvatskog jezika ili je u češkoj manjini u Hrvatskoj došlo do samostalnog razvoja melodije rečenice, diferenciranog od razvoja melodije rečenice na području Republike Češke.

Istraživanje je nastalo kao svojevrsna paralela s fonetskim istraživanjima u Republici Češkoj, usmjerenim na segmentalne i suprasegmentalne pojave u češkim govorima na području Republike Češke, ali u češkoj manjini u Hrvatskoj to je istraživanje prvo takve vrste.

Na sakupljenom materijalu analiziran je tijek F0 u Praatu s kontrolom slušnom metodom u jednicama polutonova.

Intonation in questions (closed questions) with the speakers of the Czech minority in Croatia

The paper presents research results of voice characteristics of the Czech minority members in Croatia from the area of Daruvar and Končanica, which was conducted in 2015 and 2016. The Czech speakers have been living in Croatia for several generations and all of them are Czech and Croatian bilinguals, which leads to the emergence of a number of interferences between the two languages. These interferences are partially described on other levels of language and in the context of phonetics elements of segmental level, but prosodic elements have not been described so far. The material was recorded in the families of students of fourth and fifth grade of Czech primary schools in Daruvar and Končanica according to predetermined criteria, which enable an analysis of the different levels of language, and it includes three generations of speakers.

In the captured material, melody of questionable sentences were analyzed, specifically closed questions (questions without question words) in the Czech language, where we discovered features that, according to previous studies of famous Czech

phoneticians J. Chlumský, B. Hála, M. Romport, Fr. Daneš and Z. Palková, are not typical in Czech language. The question is whether it is an interference of Croatian language.

The survey was created as a parallel with a phonetic research in the Czech Republic, aimed at segmental and suprasegmental phenomena in the Czech speeches in the area of the Czech Republic, but in the Czech minority this is the first study of this kind.

The collected material was analyzed by flow F0 in Praat controlled by the auditory method, most likely in the units of semitones.

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Važnost različitih metodoloških pristupa fonetsko-fonološkog opisa suvremenog jezika (na primjeru slovenskog jezika)

Suvremena jezična tehnološka pomagala (posebno fonetski programi za analizu govora kao što au Cool Edit, Praat i drugi) značajno su se razvili u posljednja dva desetljeća, a postali su i lako dostupni. Uz njihovu pomoć možemo analizirati više podataka, a uz suvremene uređaje za snimanje, relativno je lako pribaviti veće količine materijala nego što je to bilo u prošlosti. Ipak, vrlo je važno odabrati zvučnike i pripremiti određeni materijal za fonetsku i fonološku analizu. To obuhvaća pripremu riječi, rečenica i tekstova. Također, moramo osigurati da se materijal može pratiti, a da govornici ostanu anonimni, što omogućuje kasniji uvid u određeni materijal. Fonetičar mora uzeti u obzir i različit govorni korpus koji bi trebalo biti moguće pratiti te koji bi trebao biti fonetski i fonološki prikladan. Osim pomoću instrumentalnih mjerenja,

fonetske i fonološke podatke možemo dobiti uz pomoć slušne analize (razni percepcijski testovi, ankete), što je jako važno kada se radi o području ortoepije. Slušna analiza i fonetsko iskustvo su sastavni dio priprema materijala za snimanje, a kasnije i instrumentalnih mjerenja. Posebno, pri obilježavanju određenih elemenata kao što su samoglasnici za automatsko mjerenje (omjer između automatskog i ručnog mjerenja).

Rad prikazuje i vrednuje: suvremenu instrumentalnu analizu (programe, posebno Praat i Cool Edit, kao i Audacity, Tivadar, 2003.); fonološku percepciju testova za analizu samoglasnika (minimalne parove za ispitivanje kvalitete i trajanja samoglasnika, Tivadar 2004) te naglasak (uključujući i tonski naglasak, Šuštaršič-Tivadar 2006), posebno prilagođen za slovenski jezik; morfološka istraživanja (testiranje dvije, a najviše tri potencijalne varijante, Tivadar 2015), što je bilo od ključne važnosti kada se precizno određivao naglasak u trenutnom Rječniku standardnog slovenskog jezika, a bit će važno i za buduća izdanja rječnika. Funkcija standardnog jezika u javnosti je važna pri razmatranju ove analize i posebna pozornost posvećena je geografski raznolikom slovenskom prostoru.

The importance of various methodological approaches to phonetic-phonological description of a contemporary language (the example used was the Slovenian language)

Contemporary linguistic technological assets (especially phonetic programmes for speech analysis like Cool Edit, Praat etc.) developed significantly in the last two decades and became readily available. With their help we can analyse more data and with contemporary recording devices it is relatively easy to obtain larger amounts of material than it was in the past. Still, it is very important to choose speakers and to prepare specific material for phonetic and phonological analysis. This encompasses readied words, sentences and texts. We must also ensure that the material can be traced and speakers anonymized, which enables later inspection of specific material. A phonetician must take into consideration different spoken corpus, which should be traceable and phonetically and phonologically suitable. Besides using instrumental measurements, we can also obtain phonetic and phonological data with the help of auditory analysis (various perception tests, surveys), which are very important when dealing with questions regarding orthoepy. Auditory analysis and phonetic experience are an integral part of preparing materials for recording and later also with instrumental measurements. Particularly, when marking specific elements, such as vowels for automatic measurement (ratio between automatic and measurements made by hand).

The article will present and evaluate: contemporary instrumental analysis (programmes, especially Praat and Cool Edit, also Audacity, Tivadar 2003); phonological perception tests for analysing vowels (minimal pairs for testing quality and duration of vowels, Tivadar 2004) and accent (also tone accent, Šuštaršič-Tivadar 2006), specially adapted for Slovenian language; morphological surveys (testing two, maximum three potential variants, Tivadar 2015), which were crucial when pinpointing accent in the current Dictionary of Standard Slovenian and will be important also for future editions of the dictionary. The function of the standard language in public is important when considering these analysis and special attention is given to the geographically diverse Slovenian space.

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Elementi sustava prozodije rečenice koji stvaraju interferenciju u govoru govornicima hrvatskoga odnosno slovenskoga jezika kojima je slovenski odnosno hrvatski materinski jezik

U dosadašnjoj praksi podučavanja slovenskog i hrvatskog jezika bilo za potrebe studija ili za potrebe podučavanja govornih neprofesionalaca kao što su stalni sudski tumači za slovenski i hrvatski jezik nekako se ortoepiji ne posvećuje dovoljno pažnje.

Prof. dr. sc. Vesna Požgaj Hadži u svojem radu Učenje izgovora i korekcija fonetskih pogrešaka (2005) ističe kako za to stanje u praksi načelno postoje tri glavna razloga:

1. Pri podučavanju se koristi „linija manjeg otpora“ za učenike i nastavnike;
2. Komunikacija je omogućena usprkos lošem izgovoru;
3. Nastavnici nisu ovladali izgovorom jezika koji podučavaju.

Nadalje također ističe da je prisutan i problem nedostatka adekvatnih didaktičkih izvora, neatraktivnost predloženih nastavnih cjelina (dijalozi u udžbenicima, (ne)uključenost interkulturalnih sadržaja – patriotski pristup i idealizacija, prisutni su tipični stereotipi o jezicima koji se podučavaju.

Iznimno veliki problem predstavlja i (ne)zastupljenost fonetske razine u udžbenicima (Požgaj Hadži, 2002) od predstavljanja samog glasovnog do prozodijskog sustava, koliko i kako su zastupljene fonetske vježbe te kako i koliko se one provode. S obzirom na bliskost obaju jezika također se postavlja pitanje samog metodičkog pristupa podučavanju područja kao što je ortoepija. U dosadašnjem radu (Tivadar, Hotujac-Dreven, 2005) upravo smo tražili optimalan način kako podučavati ovo jezično područje s krajnjim ciljem da pojedinac stekne fonetsku kompetenciju za oba jezika (u prvom redu s ciljem postizanja kvalitetnog prevođenja i tumačenja; (Tivadar, Hotujac-Dreven, 2013).

Cilj ovog istraživanja je odrediti akustičke parametre vezane uz prozodiju rečenice, kako bi se uz pomoć njih mogao stvoriti sustav vježbi korekcije izgovora pomoću kojih bi se uklonile interferencije materinje slovenskog jezika u prozodiji rečenica kod

studenata koji uče hrvatski jezik kao drugi odnosno strani jezik. Vježbe bi bile koncipirane po VTS-sustavu, pri korekciji bi se koristio aparat SUVAG 1, koji zbog svojeg sustava nisko propusnih filtera najbolje prenosi ritam i intonaciju. Upravo to su segmenti, koji su najvažniji u korekciji prozodije rečenice.

Uzorak ispitanika sastojao se od ukupno četiri govornika, koji su podijeljeni u dva hrvatsko-slovenska para tzv. HR-SLO 1 i HR-SLO 2. Eksperimentalni korpus sastojao se od 76 izjavnih, 20 upitnih i 20 uskličnih rečenica na hrvatskom i slovenskom jeziku. Govorni materijal se u toku eksperimenta snimao na računalo pomoću programa Cool Edit Pro 1 i preko studijskog mikrofona, akustična analiza je napravljena uz pomoć programa Praat.

Elements of sentence-level prosody that produce interference for native speakers of Slovenian who speak Croatian and native speakers of Croatian who speak Slovenian

According to our experience in Slovenian and Croatian language teaching, either for the needs of university studies or for the needs of professionals such as court interpreters, orthoepy receives little attention.

In her work „Učenje izgovora i korekcija fonetskih pogrešaka [Teaching Pronunciation and Correcting Phonetic Errors]“ (2005), Professor Vesna Požgaj Hadži indicates three reasons why orthoepy continues to be neglected:

1. In teaching, “the path of least resistance” is used by both students and teachers;
2. Communication is possible despite the poor pronunciation;
3. Teachers do not have a native or near-native command of pronunciation of the language they teach.

Furthermore, there is also the lack of adequate didactic sources, unattractiveness of proposed teaching units (dialogues in textbooks, (non-)inclusion of intercultural content – patriotic approach and idealization), and the presence of typical stereotypes about the languages taught.

A conspicuously big problem is (the lack of) representation of phonetic aspects in language textbooks (Požgaj Hadži, 2002), including the phonological and prosodic systems and phonetic exercises, especially the method and extent in which these exercises are performed. With respect to the relatedness between Slovenian and Croatian languages, there is also the question of the methodological approach to teaching orthoepy. In our previous work (Tivadar, Hotujac-Dreven, 2005), we tried to find an optimal method of teaching orthoepy, which would help students to become

phonetically competent in both languages (with the primary aim of producing a high-quality translation and interpretation (Tivadar, Hotujac-Dreven, 2013)).

The aim of this study was to determine acoustic parameters related to sentence prosody, which could be used to create a system of exercises for correction of pronunciation and removal of interference from the mother tongue in native Slovenian-speaking students who learn Croatian language as a second or foreign language. The concept of exercises followed the VTS system. The SUVAG 1 device was used for pronunciation correction; because of the low-pass filters, this device transfers the rhythm and intonation extremely well, and these are the most important segments in correction of sentence prosody.

The study sample consisted of a total of 4 speakers who were paired to form two native Croatian-Slovenian speaking pairs, HR-SLO 1 and HR-SLO 2. The experimental corpus consisted of 76 declarative sentences, 20 interrogative sentences, and 20 exclamatory sentences in both Croatian and Slovenian. During the experiment, their speech was recorded on a computer by using Cool Edit Pro 1 program and a studio microphone. The acoustic analysis was performed by using Praat program.

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Pseudoargumentacija u suvremenome političkom diskursu: argument *ad hominem* kao dio političke komunikacije

Suvremeni politički diskurs u novijim znanstvenim i stručnim analizama sve češće postaje poligon za istraživanje manipulacijskih retoričkih elemenata kojima se političari služe ne bi li javnost pridobili za ostvarenje svojih ciljeva. U tipična manipulacijska retorička sredstva spada tzv. pseudoargumentacija, među kojom dominantno mjesto zauzima argument *ad hominem*. Riječ je o tipu argumentacije koja se temelji na tzv. *probationes artificiales*, umjetnim dokazima, u kojima u prvi plan dolazi govornikova vještina zamjene dokaza: suparnikove teze „pobijamo“ njegovim blačenjem. U radu ćemo analizirati navedeni pseudoargumentacijski postupak političara u predizbornoj kampanji za prijevremene parlamentarne izbore u rujnu 2016. Analizom će biti obuhvaćeni sadržaji javnih nastupa predstavnika političkih stranaka objavljenih u tiskanim medijima – Jutarnjem listu, Večernjem listu, Slobodnoj Dalmaciji i Novom listu – u razdoblju od 1. srpnja 2016. do 9. rujna 2016. Cilj je istraživanja utvrditi u kojoj se mjeri suvremeni političari služe „lažnom“ argumentacijom, a samim time i udaljavaju od temelja argumentacijskoga postupka – sadržaja – ali i od etičnosti. U radu će također biti prezentirano istraživanje provedeno među studentima komunikologije na Hrvatskim studijima i Hrvatskom katoličkom sveučilištu te studentima novinarstva i političkih znanosti na Fakultetu političkih znanosti u Zagrebu u kojem će biti iznesena stajališta budućih novinara i komunikacijskih stručnjaka o *ad hominem* argumentaciji, ali i o drugim specifičnostima suvremenoga političkog diskursa.

Pseudo argumentation in the modern political discourse: *ad hominem* argument as a constituent of political communication

Modern political discourse in more recent scientific and professional analyses is growingly becoming a playground for the investigation of rhetorical elements used for manipulation by the politicians to win the favour of the public for their own purposes. One of the typical rhetoric means of manipulation is the so-called pseudo argumentation, the dominant part of which is *ad hominem* argument. This type of argumentation is based on the so-called *probationes artificiales*, artificial evidence, which push to the forefront the speakers ability to switch evidence – speaker's claims (theses)

are “rebutted” by smearing the good name of the speaker. The paper will analyze the aforementioned pseudo argumentation method of the politicians participating in the election campaign for the early parliamentary elections in September 2016. The analysis will include the contents of public speeches given by the representatives of various political parties, published in the print media – Jutarnji list, Večernji list, Slobodna Dalmacija i Novi list – in the period from July 1, 2016 until September 9, 2016. The goal of the investigation is to ascertain how much do the modern politicians use “false” argumentation and thus distance themselves from the content as the basis of argumentation, as well as from ethics. The paper will also present the investigation carried out among the communicology students at the Centre for Croatian Studies and the Catholic University of Croatia, as well as students of journalism and political sciences at the Faculty of Political Science in Zagreb. This part of the paper will present points of view of future journalists and communication experts regarding the *ad hominem* argumentation and other peculiarities of the modern political discourse.

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Glasovni i slogovni simbolizam Andrićeve pjesme *Lili Lalauna*

Referat je posvećen tekstu *Lili Lalauna* – neobičnoj i zagonetnoj pjesmi Ive Andrića. U analizi se razmatra fonetsko-fonološka, slogovna, prozodijska, versifikacijska i semantička struktura ovih stihova. Oni su napisani 1950, a prvi put objavljeni 1976. u *Sabranim djelima* Ive Andrića u 16 toma. Tekst je neobičan jer u više elemenata odudara od onoga što je pisac do tada i kasnije sačinio. Teorijski okvir analize čine radovi iz poetike, zvukovnog simbolizma, fonike stiha i stilistike umjetničkog govora. Glasovni i slogovni simbolizam Andrićeve pjesme nije do sada cjelovito analiziran, niti postoji šira studija o tome. Kao metoda istraživanja izabrana je ona koja se koristi u suvremenoj fonostilistici (eksperimentalna i receptivno-perceptivna), između ostalog u zagrebačkoj stilističkoj školi.

Phonic and syllabic symbolism in the poem *Lili Lalauna* by Ivo Andrić

The paper is devoted to the text of *Lili Lalauna* – a mysterious poem by Ivo Andrić. The analysis focuses on the phonetic, phonological, syllabic, prosodic, verification and semantic structure of this poem. It was written and published in the collected edition of Ivo Andrić's works in 1950. The poem is really unusual and differs greatly from what was written by Ivo Andrić before and after it. In the present analysis, a theoretical framework comprises the studies of poetics, phonaesthesia, phonics and literary techniques used in creative writing. It's the first comprehensive study on the phonetic and syllabic symbolism of Andrić's poem. The method applied for this study is widely used in the contemporary phonostylistics (experimental and receptive-perceptive), in particular by the researchers belonging to the Zagreb Stylistic School.

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Vrijeme uključivanja glasa (VOT) kod hrvatsko-mađarskih bilingvala

Iako je *vrijeme uključivanja glasa* (eng. *Voice onset time* – VOT) naveliko istraživano u govoru dvojezičnih govornika, VOT hrvatsko-mađarskih bilingvala do današnjeg dana još nije analiziran. Neka od prijašnja istraživanja VOT-a dvojezičnih govornika drugih jezika (npr. englesko-španjolski ili grčko-engleski) pokazala su kako su bilingvali sposobni na oba jezika producirati VOT jednak monolingvalima tog jezika, dok prema drugim istraživanjima ipak postoji interferencija između dva jezika, odnosno dominantni jezik utječe na proizvodnju govora na nedominantnom jeziku. Budući da su ranija istraživanja VOT-a u mađarskom i hrvatskom jeziku dokazala kako je VOT mađarskih govornika duži od VOT-a govornika hrvatskog jezika, cilj je ovog istraživanja analizirati vrijednosti VOT-a kod hrvatsko-mađarskih bilingvala i usporediti ih s vrijednostima hrvatskih monolingvala, odnosno govornika čiji je materinji jezik samo hrvatski. Korpus se sastoji od 10 ranih bilingvala i 10 monolingvala. Svi su govornici odrasle osobe. Njihov je zadatak bio pročitati listu od 30 riječi na hrvatskom jeziku od kojih 10 riječi započinju okluzivom /p/, 10 započinju okluzivom /t/, a 10 okluzivom /k/. Svaki okluziv slijedi jedan on pet hrvatskih vokala, a za svaki vokal zadane su po

dvije riječi. Snimanje je provedeno u akustičkom studiju, a akustička analiza izvršena je u PRAAT 5.4.04 programu. Prije snimanja bilingvali su zamoljeni da ispune upitnik o svojoj jezičnoj pozadini. Na temelju tog upitnika kreirane su dvije skupine: hrvatski dominantni i mađarski dominantni. Usporedba VOT-a između te dvije skupine govornika također će biti predstavljena. Hipoteza je da će bilingvali producirati duže VOT vrijednosti od monolingvala, te da će mađarski dominantni bilingvali producirati duži VOT od hrvatskih dominantnih. Rezultati trebaju razjasniti mogu li dvojezični govornici producirati VOT jednak hrvatskim monolingvalima ili dominantni jezik ipak utječe na nedominantni, odnosno je li prisutna interferencija između ta dva jezika. Mjerenja su pokazala da postoje statistički značajne razlike u VOT-u između bilingvala i monolingvala. Hrvatski monolingvali produciraju duže VOT vrijednosti od bilingvala. Što se tiče usporedbe hrvatskih dominantnih i mađarskih dominantnih govornika, značajnih razlika nema. Mađarski dominantni produciraju duži prosječni VOT u slučaju /t/ i /k/ okluziva, dok je VOT hrvatskih dominantnih bilingvala duži u slučaju okluziva /p/, no te su razlike male i statistički neznačajne.

Voice onset time of voiceless stops in Croatian-Hungarian bilingual speakers

Up to this date, there have been no previous research of voice onset time (VOT) in Hungarian-Croatian bilinguals, but VOT was investigated in e.g. English-Spanish bilinguals, Greek-English bilinguals or French-English bilinguals. Some results show that VOT duration in both languages matches monolingual VOT production. Others show that there is a cross-language interference between the two languages in which the dominant language affects speech production in the non-dominant one. Since the previous researches have shown that VOT values in Hungarian are higher than the ones in Croatian, the purpose of this study is to investigate VOTs of word initial /p, t, k/ by Croatian-Hungarian bilinguals. The corpus that consists of group of Croatian-Hungarian bilingual adult persons was recorded in an acoustic studio in Zagreb. They were asked to read a list of 30 Croatian words that start with a voiceless stop which is followed by one of the five Croatian vowels (*u, o, a, e, i*). For every vowel there are two given words, which means that for every voiceless stop there is a total of 10 words to be read. PRAAT 5.4.04 is used to analyse the VOT values. Before recording, the bilinguals were asked to fill a questionnaire about their language background. Even though they all claim that they use both languages on a daily basis and can easily switch between languages at any time, two groups of speakers were formed: Hungarian dominant and Croatian dominant bilinguals. In this study VOT values of Croatian-Hungarian bilinguals will be compared to Croatian monolinguals'. The hypothesis is that bilinguals

will produce longer VOTs than monolinguals. For better comparison of the differences in dominance, the results will also be presented for both groups (Hungarian dominant and Croatian dominant) separately. The results will either provide evidence of monolingual-like productions of VOT in Croatian language for both groups, or they will show a cross-language interference between Hungarian and Croatian. Acoustic analysis shows that Croatian monolingual speakers produce longer VOT values than the bilingual speakers and those differences are statistically significant as well. As for the comparison of Croatian dominant and Hungarian dominant bilinguals, Hungarian dominants produce longer VOTs in the case of /t/ and /k/ stop, while in the case of /p/ stop Croatian dominants' VOT is somewhat longer, but all those differences are statistically insignificant.

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Pronunciation of Slovene in radio broadcasting of media communication students

The paper presents phonological analysis of spontaneous speech in the radio broadcast of second-year master's degree students (winter semester of academic year 2015/16 at the Faculty of Electrical Engineering and Computer Science (University of

Maribor). The students carried out the recordings every week within the optional subject *Radio and Radio Programmes*.

The article consists of a) the theoretical section, taking into account two aspects – general linguistic and media discourse (based mostly on the author's findings in her two monographs, *Kultura govora na radiu Maribor/Spoken Discourse of National Radio Maribor*, 2005, and *Med knjižnim in neknjižnim na radijskih valovih v Mariboru/Between Standard and Non-Standard on Maribor Radio Stations*, 2013; and b) the empirical section, analysing phonetic features of students' pronunciation in their own radio broadcasts (each app. 27 minutes long, specifically typical Maribor non-standard urban variety elements (deviations from the current language standard) which highly influence students' radio speech.

Phonological level: a) vowels: quality and quantity of vowels: (non-standard) [é] for (standard) [ê]: *idéja* (idea), [ê] for semi vowel [ə]: *pêš* (dog), *vêš* (all), [é] for [è]: *én* (one), *lé* (only, just), [ê] for [é]: *nasvêtom* (advice), *katêro* (which), [ó] for [ò]: *odnós* (attitude); [ó] for [ô]: *dóbre* (good), *kónca* (end), *róke* (hands); [ô] for [ó]: *razlôgov* (reasons) ...; reduction of vowels: *-mam* → *imam* (I have); *b-lo* → *bilo* (it was); *mor-mo* → *moramo* (we have to); *potrebno jest-* → *jesti* (need to eat) ...; b) consonants: preposition *v* (in): with semi vowel [ə] for bilabial [ɸ]: *və drogeriji* (druggist's shop), as */f/*: *f soboto* (on Saturday); phoneme */v/*: labiodental [ɸ] for [ɸ]: *vlogo* (function/role), as */f/*: *predfsem* (first of all), *z fsemi* (with all); "elkanje" */l/* for [ɸ]: *stol* (chair), *poslušalci* (listeners) ...

Elements that disturb the fluency of spoken language, i.e. on the syntactical level (parentheses, the recurrences of all types, not completed syntax pattern, truncated structure of sentences, repetition and correction) – as well as on morphological and lexical levels – are not discussed, although, certainly present.

The main purpose of the analysis is to determine the elements of Standard Slovene language as typical features of radio discourse, and encourage students to develop greater awareness of the importance of their mother tongue, which will serve them as a working "tool"

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Blinks in Hungarian Sign Language

Blinks are general part of human behavior – we may blink involuntarily, voluntarily or as a reflex. Reflexive blinks can occur as a defensive mechanism. The most frequent blinks are involuntary, periodic blinks. Wilbur proposed (1994) that there is a strong connection between blinks and syntactical structure in sign languages, as blinks may realize linguistic functions: expressing emphatic or stress functions or marking boundaries. Sze (2008) answered this proposition analysing 659 blinks in both monologue and conversation design. She suggested that while occurrence of blinks might correlate with the functions supposed by Wilbur, head movement might be better marker as they might cause blinks. Sandler also states (1999) that changes in head position might be markers of intonational phrase boundaries. The aim of the present paper is to find an answer for the question whether blinks are parts of the prosodical system of sign language as Wilbur stated, or they are subsidiary phenomena as Sze proposed. In this work we collected 62 minutes of sign language data, 31-31 from male and female informants. They are Hungarian deafs from Budapest, aged between 22 and 49. We assumed that duration and relative frequency of blink types will be similar between the two groups. We also hypothesized that the general frequency of blinks are lower when signing compared to resting. We examined the duration and relative frequency of blinks and their co-occurrence with certain pause types. According to the preliminary data only 56% of the pauses co-occur with boundary markers with limited variance between genders. Despite of this, our data shows that men tend to blink less frequently. In our data blinks and pauses co-occur in 32%, mostly with base, lengthening and Palm-up types of pauses. The data we gathered let us conclude that despite the head movement might serve as primary marker of intonational phrase boundaries, we should also consider blink as a secondary marker.

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Usporedba akustičkih vrijednosti vokalskih formanata prihvaćenoga izgovora hrvatskih i srpskih muških govornika mlađe dobne skupine

Uobičajeno se slušnom percepcijom određuje da su vokali u hrvatskom općeprihvaćenom izgovoru kardinalni u odnosu na vokalski trokut IPA, da je vokalski sustav otvoreniji u srpskom općem izgovoru osobito za vokal /e/. Svrha je ovoga rada bila provjera tih tvrdnji mjerenjem akustičkih vrijednosti vokalskih formanata F1, F2 i F3 na temelju istih izjavnih rečenica. Ciljani dvosložni izografní homofoni u različitim fonemskim okolinama za svih pet ispitivanih vokala bili su logički naglašeni, pokriveni sa sva četiri naglasaka. Ciljane riječi bile su na krajevima izjavnih rečenica. Dva eksperta verificirala su izgovor za opći hrvatski te srpski jezik i izdvojeno je po 14 govornika za svaku skupinu (N=28) prosječne dobi oko 22 g. Akustičke vrijednosti formanata vokala izmjerene su u programu Praat (6.0.14), a razlike među skupinama ispitane su t-testom. Rezultati su pokazali da je F1 statistički značajno viši za vokal /a/ kod hrvatskih govornika (704,86 : 632,72 Hz; $p < 0,0001$) što znači da je otvoreniji u hrvatskom, te da je F1 niži za /i/ (295,12 : 322,06 Hz) i /u/ (344,1 : 391,02 Hz; $p < 0,0001$), što znači da im je izgovor zatvoreniji nego u srpskom. F1 za vokal /e/ nije pokazao značajnu razliku između hrvatskog i srpskog izgovora, iako je nešto niža vrijednost kod srpskog izgovora. Vrijednosti F2 značajno su više u hrvatskom izgovoru za vokale /i/ (2177,19 : 2063,41 Hz) i /e/ (1811,21 : 1725,51 Hz) ($p < 0,0001$), što znači da su predniji u hrvatskom, a značajno niža vrijednost F1 i F2 vokala /u/ ($p < 0,0001$) te F3 ($p = 0,01$) ukazuje na stražnjiji izgovor u hrvatskom. Zanimljivo je da su prosječne vrijednosti F3 za svih pet vokala niže u hrvatskom izgovoru, značajno niže za /e/ i /u/ ($p = 0,01$), što ukazuje da je vokalni trakt nešto dulji u izgovoru hrvatskih vokala. Rezultati djelomično potvrđuju tvrdnju da su neki vokali zatvoreniji u hrvatskom, i to značajno /i/, /u/ te beznačajno /e/. Iznenađuje da je izgovor /a/ značajno otvoreniji u hrvatskom izgovoru. Potvrđeno je da je izgovor /i/ i /e/ predniji u hrvatskom izgovoru i to značajno. S obzirom na to da je ispitana ista dobna skupina muških govornika u kojoj se nisu očekivale tolike

razlike u izgovoru vokala, rezultati mogu biti zanimljivi u kontekstu razlike izgovora hrvatskih i srpskih mladih govornika.

Comparison of acoustic values of vowel formants in younger male speakers of Croatian Received Pronunciation and Serbian

Commonly, vowel formants in Croatian are perceptually defined as placed on cardinal positions in IPA's vowel chart, while vowels in Serbian are considered more open especially for vowel /e/. The aim of this paper was to test perceptual description by acoustic analysis of F1, F2 and F3 vowel formants. The acoustic values were measured in the same context, on statements in which target isographic homophones were placed in different phonetic context for all five vowels. All targets were stressed and included four accents and placed at the end of the sentence. Two experts verified pronunciation for Croatian and Serbian. The analysis included 14 speakers for each group (N=28) with mean age of 22 years. Acoustic values were measured in Praat program (6.0.14) and between group differences were tested by t-test. The results show that F1 values are significantly higher for vowel /a/ in Croatian (704.86 : 632.72 Hz; $p<0.0001$) meaning it is more open, F1 is lower for both /i/ (295.12 : 322.06 Hz) and /u/ (344,1 : 391,02 Hz; $p<0.0001$), meaning that they are more closed in Croatian than in Serbian. F1 values for vowel /e/ were not significantly different although somewhat lower in Serbian. F2 values are significantly higher for vowels /i/ (2177.19 : 2063.41 Hz) and /e/ (1811.21 : 1725.51 Hz) ($p<0.0001$) in Croatian implying more fronted pronunciation while F1 and F2 values for vowel /u/ are significantly lower ($p<0.0001$) and F3 ($p=0.01$) indicating back pronunciation. It is interesting that mean F3 values of all five vowels in Croatian are lower than in Serbian, significantly lower for /e/ and /u/ ($p=0.01$) implying that vowel tract is longer when Croatian vowels are pronounced. The results partly confirm the hypothesis that Croatian vowels are more closed; significant difference was found only for /i/, /u/ and without significance for /e/. Surprisingly, the results show that vowel /a/ is significantly more open in Croatian. It is also confirmed that pronunciation of /i/ and /e/ is significantly more fronted in Croatian. Several differences found in vowel pronunciation of younger male speakers of Croatian and Serbian were not hypothesised therefore the results provided new findings and can be interesting for the comparison of the groups.

Usporedba mjera F_0 muških govornika hrvatskog jezika i srpskog jezika

Na uzorku od 111 muških govornika normalnog zdravog glasa podijeljenih u dvije dobne skupine od 19 do 28 godina ($N=37$ hrvatskog jezika i 37 srpskog jezika) i od 34 do 60 godina ($N=37$ hrvatskog jezika) snimljenih u uzorcima čitanja teksta u trajanju oko 70 sekundi te 3 minute spontanog govora ispitane su mjere fundamentalne frekvencije u Hz i polutonovima. Izračunate su prosječne vrijednosti aritmetičke sredine (mean F_0), vrijednosti medijana, prosječna bazična vrijednost (*baseline*: F_b) na temelju medijana, rasponi minimalnih i maksimalnih vrijednosti F_0 , $Alt\ F_b$, standardna devijacija (S. D. F_0 u Hz i u polutonovima) na temelju posebnih programa u Praatu (Harrison, Ver. 1.9; *f0analysis.praat* and *BaseLINE_F0*; Traunmüller and Eriksson, 1995). Vrijednosti su izračunane na ograničenoj postavki od 65 Hz do 300 Hz kako bi se dobile sve moguće frekvencije za raspon F_0 i izbjegla oktavna skakanja (kod Lindh, 2006: uzet raspon od 75-350 Hz). Razlike između skupina ispitane su t-testom te pomoću Anova: Two-Factor With Replication. Poznato je da se F_0 mijenja s obzirom na biološke informacije prema spolu (e.g. Traunmüller and Eriksson, 1995), dobi (e.g. Kitzing, 1979), zdravlju. Svrha je bila usporediti mjere u Hz i polutonovima radi robustnijih budućih usporedbi među skupinama. Očekivalo se da će se skupine mlađih govornika hrvatskoga te srpskog jezika više razlikovati nego skupine prema dobi. Rezultati pokazuju da se u čitanju i u spontanom govoru znatno manje razlikuju govornici hrvatskoga jezika mlađe i srednje dobi, statistički se razlikuju samo u $S.D._{F_0}$, i to više u spontanom govoru u polutonovima ($p < 0,001$) te u minimalnim vrijednostima F_0 ($p = 0,004$). Hrvatski govornici srednje dobi značajno se razlikuju od govornika srpskog jezika mlađe dobi mjereno u Hz i u polutonovima u $Alt\ F_b$, u $S.D._{F_0}$, minimalnim ($p < 0,001$) i maksimalnim vrijednostima F_0 u Hz ($p = 0,001$) i polutonovima ($p < 0,001$) te u F_b nešto više u polutonovima ($p = 0,01$) u čitanju. Zanimljivo je da se u spontanom govoru potonje dvije skupine najviše razlikuju u maksimalnoj vrijednosti F_0 u oba mjerenja ($p = 0,001$) i u F_b u polutonovima ($p = 0,03$). Govornici mlađe dobi hrvatskog i srpskog jezika najviše se razlikuju u oba mjerenja respektivno u maksimalnoj vrijednosti F_0 ($p < 0,001$), potom u srednjoj vrijednosti F_0 (mean F_0), medianu F_0 ($p = 0,02$), $Alt\ F_b$ ($p = 0,03$), te u $S.D._{F_0}$ u mjerenju u Hz ($p = 0,004$). Iz svih podataka može se zaključiti da je intonacija razlikovnija među skupinama hrvatskih i srpskih govornika, što je važno za daljnja ispitivanja tih dvaju vrlo

sličnih jezika. Ukupno gledajući, nešto bolje razlikovanje pokazalo se u mjerenju polutonovima, ali se može zaključiti da je dobro ako se oba mjerenja, u Hz i u polutonovima uvrste u usporedbe među skupinama prema dobi, a pogotovo u usporedbi govornika različitih jezika.

Comparison of F₀ measures for male speakers of Croatian and Serbian

The sample of 111 male speakers with normal, healthy voice was divided into two age bands; 19 – 28 years (37 speakers of Croatian and 37 speakers of Serbian) and 34 – 60 years (37 speaker of Croatian). Participants recorded reading passage (cca 2 min) and spontaneous spoken utterance (cca 2 min) which were used for fundamental frequency measures in Hz and semitones. Mean F₀, median, baseline F_b (based on median), F₀ ranges (from minimal to maximal values), Alt_F_b, standard deviation (S. D.) of F₀ in both Hz and semitones were calculated. For the calculation special programs in Praat were used (Ver. 1.9; f0Analysis.praat and BaseLINE_F0, acc. Philip Harrison and S. P. French Associates). The calculation was done on a limited setting between 65 and 300 Hz to get all the possible frequencies for the F₀ range and to avoid octave jumps (Lindh, 2006 used a setting between 65 and 300 Hz). T-test and Anova: Two-Factor With Replication were used to test the between group differences. It is known that F₀ changes due to biological information and it depends on gender (e.g. Traunmüller and Eriksson, 1995), age and health status. The aim of this paper was to compare measures expressed in Hz and in semitones which can be used for more robust, future comparison between groups. It was expected that the younger groups of Croatian and Serbian speakers will show greater differences than age groups. The results from both speech samples show smaller differences between Croatian speakers from two age groups (younger and middle-aged group). Significant differences were found only for S.D._F₀ and the differences were greater for spontaneous speech sample and semitones ($p < 0.001$). Croatian middle-aged speakers differ significantly from younger Serbian speakers in Hz and in semitones for Alt_F_b, in S.D._F₀, F₀ minimums ($p < 0.001$) and maximums expressed in Hz ($p = 0.001$) and semitones ($p < 0.001$) and for F_b somewhat more when expressed in semitones ($p = 0.01$) for reading. It is interesting that in the spontaneous utterances of the latter two groups the greatest differences were found in F₀ maximums for both measurements ($p < 0.001$) and in F_b in semitones ($= 0.03$). Younger Croatian and Serbian speakers show respectively the greatest differences for both measurements in F₀ mean, F₀ median ($p = 0.02$), Alt_F_b ($p = 0.03$), and in S.D._F₀ measured in Hz ($p = 0.004$). It can be concluded from the collected data that intonation patterns show

more differences between groups of Croatian and Serbian speakers which is important for further research in the two similar languages. Overall, it can be concluded that clearer differences were found in the semitone measures but both type of measurements, Hz and semitones, are useful for age comparisons and especially for speakers with different mother tongues.

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Govorni jezik u hrvatskim kazalištima

U školovanju hrvatskih glumaca od samih se početaka velika pozornost pridavala njihovu jeziku i akcentima. Od kraja 19. stoljeća, otkada se u Zagrebu sustavnije počinju predavati gluma i hrvatski jezik, u školi postoji nastavnik akcentologije. Od Nikole Andrića, preko Stjepana Ivšića (1920.), 1939. hrvatski jezik počinje predavati Bratoljub Klaić, kojega nasljeđuje Đurđa Škavić, i danas jezikoslovna savjetnica u kazalištima. Uz nastavnike hrvatskog jezika i akcentologije, za glumčev govor brinu i profesori scenskog govora. U toj su se ulozi oduvijek nalazili izvrsni i nagrađivani glumci s posebnim interesom za govorni jezik. U različitim esejima i raspravama koje su u dvadesetom stoljeću vodili S. Ivšić, B. Klaić, M. Mulić, P. Cindrić i dr., jasno je da se posebno brinulo o hrvatskom jeziku i izgovoru glumaca u kazalištima.

Ovim se radom pokušalo utvrditi kakvo je današnje stanje. Razgovaravši s jedne strane s jezikoslovnim stručnjacima i fonetičarima ($N=3$), a s druge strane s glumcima i nastavnicima scenskog govora ($N=5$) na akademijama u Zagrebu, Splitu i Osijeku, pokušalo se saznati koji su njihovi stavovi o hrvatskom govornom jeziku, kako ga zamišljaju, s kime se savjetuju, smatraju li ga bližim klasičnom, prihvatljivom ili općeprihvaćenom govoru iz podjele Ive Škarića.

U rezultatima možemo vidjeti minimalne razlike u pristupu govoru i jeziku glumaca u odnosu na jezikoslovne stručnjake. Glumci su itekako svjesni važnosti standardnog izgovora i standardnih naglasaka, bez obzira na grad u kojem poučavaju, a dijele i stajališta vezana uz dijalektalna obilježja i njihovu (ne)poželjnost. I stručnjaci i glumci slažu se navodeći dvije osnovne razine koje mladi glumac mora postići. Prvo mora od svog organskog govora usvojiti standardni jezik, koji će mu tada kao temelj poslužiti za svladavanje različitih dijalekata. Kombinirajući ostala prozodijska i jezična obilježja svojoj će glumi dodati treću, umjetničku razinu i prenijeti emocije i priču.

Ispitanici se ne slažu u tome jesu li rođeni štokavci u prednosti pred ostalim govornicima, a teško imenuju i govornike koji po rođenju govore uzornim hrvatskim jezikom. U različitim se gradovima uglavnom favorizira vlastiti urbolekt, a u učenju glume i teksta još se uvijek osjeti snažan utjecaj Branka Gavella.

The spoken language in Croatian theaters

From the very beginning of the education of Croatian actors, the great attention was given to their language and accents. In the late 19th century in Zagreb systematical acting and Croatian language teaching has begun. We can track teachers from Nikola Andrić as the first accentology teacher, Stjepan Ivšić in 1920s, and Bratoljub Klaić since 1939, whose successor was Đurđa Škavić, still language adviser in theaters. For actor's spoken language the stage speech teachers are responsible as well. In that role we could always find excellent actors with particular interest in the spoken language. In various essays and discussion in 20th century, led by S. Ivšić, B. Klaić, M. Mulić, P. Cindrić et al, it is clear that Croatian language and pronunciation in theaters was taken care of.

This paper attempts to determine today's situation. Speaking with both linguistic experts and phoneticians ($N=3$) and actors as the stage speech teachers ($N=5$) at the dramatic art academies in Zagreb, Split and Osijek, we tried to find out what are their viewpoints on the Croatian language, how do they imagine it, with whom do they consult, and to which type of speech, based on I. Škarić's classification, would they say that the Croatian spoken language belongs to.

In the results we can see the minimal difference in dealing with speech and language within the actors in relation to linguistic experts. The actors are well aware of the importance of the standard pronunciation and standard accents, regardless of the city in which they teach. They as well share their positions related to dialectal features and their (un)desirability. Both experts and actors point out two basic levels every young actor must achieve. First, they have to adopt their organic speech to standard language, and then use standard language as the basis for mastering different dialects. Combining other prosodic and linguistic characteristics will then result in adding the third layer, their artistic level in conveying emotions and stories to the audience.

The participants do not agree whether born Stokavians have advantages in learning standard Croatian language, and have disagreements in naming speakers whose idiom is the most similar to standard language. In different cities they favor their own *urban variety*. In acting and teaching, they are still strongly influenced by Branko Gavella.

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Utjecaj govorne brzine na razumijevanje vijesti

Svrha istraživanja bila je utvrditi utječe li govorna brzina na razumijevanje vijesti na temelju dvaju eksperimenata. U prvom objektivnom testu slušanja s razumijevanjem željela se utvrditi granica govorne brzine pri čitanju vijesti od koje razumijevanje obavijesti opada. Drugi je metodički cilj bio ispitati jesu li retorički uređene vijesti ispitanicima razumljivije. Govornici obaju eksperimenata bili su voditelji HRT4 (N=6, prosječne dobi 35 g.), ravnomjerno muškarci i žene, a ispitanici za objektivni test razumijevanja i subjektivne procjene bili su studenti fonetike i kroatistike (N= 30, prosječne dobi 22 g.). Analize su učinjene u IBM-ovu SPSS-u, radi utvrđivanja razlika korištena je ANOVA, linearna regresija te korelacija. ANOVA pokazuje da je brzina govora (TG) utjecala značajno na objektivno razumijevanje, procjenu razumijevanja i procjenu brzine ($p<0,01$). Retorički uređene vijesti značajno su bile razumljivije ispitanicima ($p<0,05$). U metodičkom smislu važan je podatak da od brzine govora od 6,33 slog/s naviše, razumijevanje strmije opada, tj. granica je od 6,63 slog/s za odnos točnih odgovora. Tempo artikulacije (TA) srednje značajno korelira s razumijevanjem ($r=0,51$, $p<0,01$); poslije granice oko 6,75 slog/s razumijevanje počinje strmije padati. Udio stanki (prosječno oko 0,4) nije bio presudan, što ukazuje da su drugi prozodijski čimbenici važniji za razumijevanje. Dakle, rezultati pokazuju da je poželjna određena brzina i artikulacijska sposobnost za razumijevanje vijesti, s tim da te vrijednosti ne bi trebale biti iznad dobivenih vrijednosti od kojih opada razumijevanje. Što se tiče sadržaja vijesti, ispitanici su točnije odgovarali na pitanja o vijestima iz unutarnje politike i laganijih tema u usporedbi s vanjskom politikom. Rezultati će biti korisni kako u radu s govornim profesionalcima informativnoga programa, tako i u nastavi metodičkih predmeta na diplomskom studiju fonetike na smjeru govorništva.

The influence of speech tempo on news comprehension

The aim of this research is to investigate the influence of speech rate to news comprehending, based on two experiments. Within the first objective test of listening comprehension we wanted to establish the limit of news reading speech rate from which

the comprehension of the information falls. The other, methodical goal was, to see if rhetorically edited news are more understandable to listeners. The speakers in both experiments were TV news presenters (N=6, M=35 years old), equally men and women, and the participants in two tests were students of phonetics and Croatian language (N=30, M=22 years old). Analyses were conducted in IBM's SPSS, and we used ANOVA, linear regression and correlation tests. ANOVA showed that the speaking rate (SR) highly influenced both objective and self-evaluated comprehension and speech tempo estimation ($p<0.01$). Rhetorically edited news were significantly more understandable to participants ($p<0.05$). It is important to methodically notice that when speaking rate is higher than 6.33 syllables per second the self-evaluated comprehension downgrades steeper. For objective listening comprehension test, the boundary is at 6.63 syllables per second. The articulation rate (AR) correlates significantly with the comprehension ($r=0.51$, $p<0.01$); and after the boundary of 6.75 syllables per second, the comprehension downgrades steeper. The percentage of pauses in the speech, around 4 % in this experiment, was not crucial for understanding, what means that there are some other prosodic features which are more important. The results have shown that is important to have a certain speech tempo and articulatory ability to have comprehensible speech, but, syllables per second values should not be higher than the calculated boundaries. When we look at the different news topics covered, the participants had more correct answers to domestic policy news and soft news, in comparison to foreign policy. Those results will be useful in working with voice professionals in news program, and in methodical subjects teaching at MA study program of phonetics and rhetoric.

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Fonetika Branka Vuletića

Branko Vuletić (1937-2014) istaknuti je znanstvenik i nastavnik koji je dao velik doprinos hrvatskoj fonetici. Sudjelovao u osnivanju studija fonetike, Odsjeka za fonetiku šezdesetih godina prošloga stoljeća i Zagrebačke fonetske škole. Svojim dugim akademskim radom pomogao je da se fonetika trajno učvrsti u hrvatskoj filologiji i humanistici. Izradio je i uveo programe i niz predmeta na matičnome, ali i na drugim odsjecima Filozofskoga fakulteta te na Fakultetu političkih znanosti. Prvo Vuletićevo

područje interesa bilo je učenje izgovora u stranome jeziku. Istraživao je korektivne postupke u audio-vizualnoj globalno-strukturalnoj metodi (AVGS) te sustav fonetskih grešaka i načine korekcije Francuza koji uče engleski. Međutim, brzo se udaljio od usko fonetskih tema te je već u svojoj prvoj knjizi *Fonetika književnosti* znanstveni interes usmjerio prema književnosti i objedinio ga s fonetikom. Kroz različite poetske predloške pokazao je da pjesnički znak vrijednosti gradi na materijalnim, fonetskim i govornim vrednotama te na unutarnjoj motiviranosti pjesničkoga znaka. U monografskoj studiji *Sintaksa krika* analizirao je govornu organizaciju Krležine ratne lirike, a u knjizi *Jezični znak, govorni znak, pjesnički znak* posebnu pozornost posvetio je zrcalnoj strukturi kao ključnom postupku pjesničke strukture u suvremenome hrvatskom pjesništvu. Svoja teorijska polazišta primijenio je na pjesničkome opusu Jure Kaštelana u knjizi *Prostor pjesme*, za koju je dobio i godišnju nagradu za znanost. U *Fonetici pjesme* pokazao je da je metonimija ključna figura pjesničkog teksta jer djeluje blizinom i osnovnim pjesničkim postupkom – ponavljanjem. Pod blizinom je podrazumijevao fizičku, prostornu, materijalnu, bliskost i metonimiji je, kao takvu izrazu, davao prednost nad metaforom. Odnos govora i književnosti bio je u središtu cjelokupnoga znanstveno-istraživačkoga rada Branka Vuletića. Njegove fonostilističke analize doprinose su i fonetici i znanosti o književnosti jer razotkrivaju vrijednosti književnoga izraza skrivene u govornoj realizaciji.

The phonetics of Branko Vuletić

Branko Vuletić (1937-2014) was a prominent scientist and a professor who greatly contributed to the Croatian phonetics. He participated in establishing the study of phonetics, the Department of Phonetics in 1960's, as well as the Zagreb school of phonetics. His long academic career helped to permanently strengthen phonetics among the Croatian philology and humanities. He developed and introduced programs and a series of courses on his home department, as well as in other departments of the Faculty of Humanities and Social Sciences and the Faculty of Political Science. The first area of Vuletić's interest was learning the pronunciation in a foreign language. He explored the corrective procedures in the audio-visual global-structural method (SGAV), as well as the system of phonetic errors and ways of correcting the French students of English. However, he quickly moved away from the topics narrowly related to phonetics and, already in his first book *The Phonetics of Literature (Fonetika književnosti)*, he directed his scientific interest towards literature and united it with phonetics. Through various poetic templates he showed that the poetic sign of value is being built on the material, phonetic and speech values, as well as its internal motivation. In the monographic study *The Syntax of a Scream (Sintaksa krika)*, Vuletić analysed the speech organization of

Krleža's war poetry, and in the book *The linguistic sign, the speech sign, the poetic sign* (*Jezični znak, govorni znak, pjesnički znak*) he paid special attention to the mirror structure as the key procedure of poetic structure in modern Croatian poetry. He applied his theoretical starting points to the poetic oeuvre of Jure Kaštelan in the book *The space of a poem*, for which he received an annual award for science. In *The Phonetics of a Poem* (*Fonetika pjesme*) he showed that metonymy is the key figure of a poetic text because it acts with proximity and the basic poetic process - repetition. This proximity implied physical, spatial, and material closeness. Also, metonymy as such was preferred over metaphor. The relationship of speech and literature was the focus of the entire scientific research of Branko Vuletic. His phonostylistic analyses contributed to phonetics and the literary science by revealing the value of literary expression hidden in speech realization.

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Leksička i prozodijska tročlana ponavljanja u scenskom govoru

Ponavljanje je bitan stilistički postupak i njegova je funkcija isticanje koje može biti u rasponu od jednostavno obavijesnoga pa sve do izraza umjetničke vrijednosti. U radu opisujemo tročlana ponavljanja u scenskom govoru koja se ostvaruju u leksičkom i prozodijskom ostvarenju i njihova značenja u glumačkim govornim ostvarenjima, zatim procjenjujemo njihov prinos u stvaranju dobrih ili odgovarajućih govornih slika dramskih osoba. Navedene govorne stilističke postupke analizirali smo na kazališnim predstavama Hrvatskoga narodnog kazališta u Zagrebu i Gradskoga dramskog kazališta *Gavella*. Analizirane zvučne isječke ilustrirali smo sonogramima i oscilogramima. Nakon provedene analize (subjektivne i objektivne) navodimo najučestalije leksičke i prozodijske postupke tročlanih ponavljanja: ponavljanje tročlanih podjednakih intonacijskih obrazaca, ponavljanje istih riječi (tri puta), tri podjednako jaka isticaja naglašenih riječi, tri uzastopne stanke podjednakih trajanja, isprekidani ritam nastao pucanjem rečenice na tri intonacijske jedinice i tri govora u falsetu s nevelikim vremenskim razmakom. Iz analize značenja tih leksičkih i prozodijskih ostvarenja u scenskom govoru zorno možemo vidjeti kako se afektivna vrijednost istih stilističkih

postupaka leksičkih i prozodijskih tročlanih ponavljanja mijenja s obzirom na značaj dramske osobe (karakter).

Threefold lexical and prosodic repetition in stage speech

Repetition is a significant stylistic procedure and its main function is placing an emphasis on expression, ranging from informative to artistic expression. In the paper we describe threefold lexical and prosodic repetition in stage speech and their significance in actors' stage speech, and we assess their contribution to the creation of good or appropriate speech images of dramatic personae. The above mentioned stylistic procedures were analysed in plays performed by the Croatian National Theatre in Zagreb and *Gavella* City Drama Theatre. The analysed sound clips were illustrated by sonograms and oscillograms. Having carried out the analysis (both subjective and objective) of the sound clips, we can list the most frequent lexical and prosodic procedures of threefold repetition. These are: threefold repetition of more or less equal intonation patterns; repetition of the same words (three times); three equally strong emphases of the stressed words; three consequent pauses of equal length; an interrupted rhythm created by breaking the sentence down into three intonation units and three speeches delivered in falsetto within a short time period. The analysis of the meaning of these lexical and prosodic features in stage speech makes it clear that the affective value of the same stylistic procedures of threefold lexical and prosodic repetition changes according to the importance of the dramatic persona (character).

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Kognitivizam i scenski govor

Ovaj rad proučava scenski govor u kazališnim dramama i povezuje ga s najnovijim saznanjima kognitivnog pristupa. Ideje o povezivanju kognitivnih znanosti i teatrologije prisutne su u anglosaksonskome svijetu od 1960-ih (Blair, Cook 2016); međutim stvarni utjecaj kognitivizma na teorijske pristupe u teatrologiji raspravljaju se tek od 21. stoljeća (McConachie, Hart 2006). U kazalištu, govor je (uz tijelo) „osnovni glumački izraz“ (*Gledališki terminološki slovar*). Oblik scenskog govora ne ovisi samo o pisanomu obliku uprizorenoga teksta, nego i o oblikovanju govora, temeljenoga na scenskim

konceptima. Jezični savjetnik, čija teorijska pozadina može biti dijelom različitih jezikoslovnih disciplina, najčešće odabire određeni oblik govora za scenu. Budući da se u 20. stoljeću strukturalističko jezikoslovlje širi, većina jezičnih savjetnika u kazalištu se oslanja na strukturalne teorije kao i na ostala saznanja u području dramaturgije. Cilj ovoga je rada pokazati kako se za usklađivanje scenskog govora 's tekstualnim i scenskim uvjetima u estetici dramskog teatra' (*Gledališki terminološki slovar*), jezikoslovni stručnjak ne bi trebao oslanjati samo na strukturalističke normativne priručnike, nego bi trebao primijeniti i kognitivni pristup; trebao bi se uzdati i u osjećaj za jezik cijeloga kreativnoga tima. Na temelju analitičkoga postupka, ovaj rad usredotočuje se na ključna saznanja kognitivnoga pristupa u pogledu oblikovanja scenskoga govora, proučavajući slijedeće publikacije (navedeno kronološki): B. McConachie, F. E. Hart: *Performance and Cognition; Theatre studies and the cognitive turn*(2006), R. Blair: *The Actor, Image, and Action; Acting and Cognitive Neuroscience* (2008), B. McConachie: *Engaging Audiences; A Cognitive Approach to Spectating in the Theatre* (2008), A. Cook: *Shakespearean Neuroplay; Reinvigorating the Study of Dramatic Texts and Performance through Cognitive Science* (2010), N. Shaughnessy: *Affective Performance and Cognitive Science; Body, Brain and Being* (2013), R. Blair, A. Cook: *Theatre, Performance and Cognition; Languages, Bodies and Ecologies* (2016). Cilj nam je stvaratelje procesa uprizorenja, koji se u teoriji i/li praksi susreću sa scenskim govorom, i koji se, u svom poslu još uvijek većinom oslanjaju na lingvističke i teatrološke teorije, stvorene prije kognitivizma, upoznati s našim saznanjima. Rezultati analize tako će biti korisni za jezikoslovne savjetnike (u kazalištu, na televiziji ili na filmu) pri oblikovanju scenskoga govora, za glumce pri oblikovanju uloge, te za dramaturge i redatelje pri stvaranju scenskih koncepata.

Cognitivism and stage speech

This piece focuses on stage speech in drama theatre, and, in connection to this, stresses the most recent findings of the cognitive approach. Ideas about connecting cognitive science and teatrology have been present in the Anglo-Saxon world since 1960s (Blair, Cook 2016); nonetheless, the actual influence of cognitivism on theoretical approaches in teatrology began to be discussed only in the 21st century (McConachie, Hart 2006). In drama theatre, speech (in addition to the body) is 'the basic acting expression' (*Gledališki terminološki slovar*). The form of stage speech in a separate staging is not, in principle, dependant only on the written form of the staged text, but rather also on the consequent moulding of speech, which is based on the staging concept. The form of speech is usually chosen and substantiated by a language consultant, whose background can be, theoretically speaking, in various language

disciplines. Since structural linguistics is so widely spread in the 20th century, the majority of language consultants are relying on it in their work in drama theatre, as well as on the findings in the area of (practical) dramaturgy. The aim of this piece is to indicate that in order to harmonise stage speech 'with textual and stage circumstances, drama theatre aesthetics' (*Gledališki terminološki slovar*), the language consultant should not rely solely on structural normative manuals, but should rather also employ cognitive approach; moreover, it is important to rely also on the sense for language of the whole creative team. On the basis of analytical method, this piece focuses on the key findings of cognitive approach regarding the moulding of stage speech from the following publications (in chronological order): B. McConachie, F. E. Hart: *Performance and Cognition; Theatre studies and the cognitive turn* (2006), R. Blair: *The Actor, Image, and Action; Acting and Cognitive Neuroscience* (2008), B. McConachie: *Engaging Audiences; A Cognitive Approach to Spectating in the Theatre* (2008), A. Cook: *Shakespearean Neuroplay; Reinvigorating the Study of Dramatic Texts and Performance through Cognitive Science* (2010), N. Shaughnessy: *Affective Performance and Cognitive Science; Body, Brain and Being* (2013), R. Blair, A. Cook: *Theatre, Performance and Cognition; Languages, Bodies and Ecologies* (2016). With our findings, we aim to familiarise mainly those creators in the performing process who are theoretically and/or practically dealing with stage speech, and who, in their work, predominantly still rely on linguistic and theatrical theories, which were conceptualised before cognitivism. Results of the analysis will therefore be useful for language consultants (in drama theatre and television or film) in their moulding of stage speech, for actors in their moulding of a role, and for dramaturgs and directors in their forming of a staging concept.

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Jezične vještine i strategije učenja djece sa slušnim oštećenjem

Djeci sa slušnim oštećenjem usvajanje prvog jezika često je velik izazov. Uz to, učenje još nekog jezika često se i ne preporučuje u ranoj dobi, kako taj proces ne bi ometao otežan razvoj prvog jezika. Međutim, potreba za višejezičnošću danas raste, a prema posljednjim podacima, 2013. je u Hrvatskoj bilo više od 1200 djece sa slušnim oštećenjem, što je oko 3,6 % djece s teškoćama u razvoju. U ukupnoj populaciji osoba

sa slušnim oštećenjem, oko 11 % zauzimaju djeca u dobi do 19 godina, iako je ono prisutno u svim dobnim skupinama.

Odgoj i obrazovanje djece sa slušnim oštećenjem odvija se s jedne strane u izdvojenim zdravstvenim ustanovama poput Poliklinike SUVAG, a s druge u redovnim školama u koje su integrirana, ali i dalje pod redovnim nadzorom stručnog tima. Inkluzija i integracija učenika sa slušnim oštećenjem svakako donosi prednosti poput bolje socijalizacije učenika, ali i nedostatke poput nepripremljenosti okoline na posebne potrebe učenika.

Iz tih razloga, ovaj je rad usmjeren na vještine razumijevanja i pripovijedanja na materinjem i stranom jeziku djece sa slušnim oštećenjem u usporedbi s kontrolnom skupinom. Svim ispitanicima prvi je jezik (L1) hrvatski, a strani jezik (L2) engleski. Njihova jezična vještina u oba jezika određena je koristeći Višejezični instrument za ispitivanje pripovijedanja (eng. Multilingual assessment instrument for narratives - MAIN, 2012.) – instrument koji dosad nije korišten u objavljenom istraživanju na hrvatskim ispitanicima. Opisane su i glavne jezične razlike ispitanika, individualno i u skupinama, kao i strategije učenja koje su ispitanici u procesu koristili, što unosi više informacija u analizi i zaključcima.

U rezultatima je vidljiva očekivana prednost djece tipičnog razvoja u oba jezika, ali u nekim slučajevima ne u očekivanoj mjeri. Glavni zaključak je potreba za individualnim pristupom jer su međusobne razlike ispitanika unutar iste skupine ponekad veće od onih u usporedbi s drugom. Kvalitativna analiza pokazuje posebnosti djece sa slušnim oštećenjem u području vokabulara, gramatike te nekih govornih vrednota. Ovi zaključci svakako otvaraju prostor daljnim istraživanjima, ali daju i vrijedne povratne informacije nastavnicima (engleskog) jezika koji se susreću s ovakvim posebnim procesom učenja.

Proficiency and learning strategies of hearing impaired language learners

Learning the first language is often a great challenge for children with hearing impairment. Moreover, learning another language is often seen as a difficulty, even not recommended at an early age in order to not interfere with the first language acquisition. However, multilingualism seems to be growing today, and the last available data suggests that in 2013 there were over 1200 children with hearing impairment in Croatia, making 3,6 % of children with disabilities. In the population of people with hearing impairment, 11 % are the children up to the age of 19, although it is present in all age groups.

Education of children with hearing impairment is organized in special health institutions, such as The SUVAG Polyclinic on one side, and regular schools on the

other. If a child with hearing impairment attends a regular school, it is usually supervised by a team of specialists. This not only brings advantages like socializing, but also problems such as lack of preparedness of the environment to react adequately to the needs of the student.

For these reasons, this research focuses on the narrative and comprehension skills in the first and the second language of hearing impaired and typically developing native speakers of Croatian (L1), with English as their foreign language (L2). Their proficiency in both languages is determined by using a predefined Multilingual assessment instrument for narratives (MAIN, 2012) – an instrument which had never been used in a published research on hearing impaired learners in Croatia before. Additionally, the main differences on different linguistic levels are determined and the learning strategies are observed, bringing more data to the analysis.

The results of the research have shown the expected advantage of the typically developing group in both languages, but in some cases not as much as it was expected. The main conclusion is the need to approach each child individually, as the individual differences inside one group are occasionally higher than in comparison to the other group. Also, the qualitative analysis shows characteristics of the language and speech of the children with hearing impairment. which can not only help the further research, but also give a good feedback to the (English) language teachers about this specific learning situation.

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Does accent familiarity help recognizing words in a second language?

Second language (L2) learners usually retain a foreign accent even after years of training. The present study aimed at finding reasons for why accents are so persistent. One explanatory approach is that non-native listeners interpret L2 sounds through a ‘grid’ of the phonetic system of the native language (L1), that is, L2 sounds are perceptually shifted towards L1 categories, which affects perception as well as production (Flege, 1995). Another reason for a persisting accent may be the quality of the input (Flege, 1995). If the L2 is learned in the learners’ native L1 environment, the

main input is likely to come from other non-native speakers. The purpose of the present study was to further investigate the role of non-native input and specifically the role that familiarity with an accent plays in second language word recognition. Previous research has shown that L2 learners are better at understanding an L2 when spoken by other learners of the same L1 background than by learners of other L1 backgrounds (Bent & Bradlow, 2003). The present study builds on this finding and asks whether, in addition to the shared L1 phonetic inventory, familiarity with an accent could affect L2 learners' performance in recognizing L2 words. We hypothesized that familiarity with an accent due to frequent exposure leads to adaptation which in turn allows listeners to understand the accent better, reducing the need for improvement. If this was the case listeners should be better able at understanding words spoken in a familiar than unfamiliar accent. To test this account, English minimal pairs containing sound contrasts that are difficult for German learners (/ɛ/-/æ/ and voiceless vs. voiced word-final stops) were presented to native German listeners who had to identify the intended word. The tokens were produced by native speakers of English who served as a control, fellow Germans whose accent was highly familiar, Italians whose accent was supposed to be somewhat familiar and Finns whose accent was unfamiliar. Results showed that words spoken by native English speakers or fellow Germans were recognized best, but words with the unfamiliar Finnish accent were recognized better than Italian accented words. A closer analysis of the acoustic differences the speakers produced suggests that the acoustic cues available in the speech signal determined how well the words were identified. We thus concluded that quality of the productions and hence overall accent strength are more important in L2 listening than mere accent familiarity.

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Accentual classes of morphemes in Old Souletin Basque

Both Old Souletin and modern Souletin dialects of Basque are characterized by phonological accent. This fact allows the analysis of Old Souletin in terms of morphological accentology, according to which the word accent can be predicted as a realization of accent properties of the morphemes of the word (Garde 2006: 89). As reported by Hualde (1999), the morphemes in Souletin Basque can belong to two accentual classes: marked and unmarked ones. If a word contains only unmarked morphemes, the penultimate syllable gets the default stress (*mithil-a* boy-DEF ‘the boy’). If some of the morphemes are accentually marked, one of them is stressed (*gizun-é-k* man-PL-ERG ‘(the) men’, where the second morpheme is accentually marked). What Hualde does not mention is that with several marked morphemes in the same word, the accentuation rules can be complicated: both the first and the last marked morphemes can get the stress depending on different classes of morphemes, as well as on different locations.

The paper analyses the only accentuated Old Souletin text, i.e. The New Testament according to Matthew (Inchauspe 1856). A comprehensive list of the word forms is provided where all the forms of the text have been analysed in terms of their accentual properties.

Based on the results of the study, the third accentual class of morphemes (preaccented morphemes) is postulated in Old Souletin. If a word contains a morpheme of this class with the other morphemes unmarked, the accent precedes the preaccented morpheme, if it is the last or penultimate syllable (cf. *edá-te-ra* drink-NML-RA ‘to drink’, where the second morpheme is preaccented). If the preaccented morpheme contains the antepenultimate syllable, the penultimate syllable can be stressed as well (cf. *ikhoús-ti-a-ri* vs *ikhous-ti-á-ri* see-NML-DEF-DAT ‘seeing’, where the second and the third morphemes are preaccented). Three preaccented morphemes have been attested in the text: *-a-* (the definite/singular marker), *-te-/ti-* (the action noun marker; interestingly enough, the other allomorph of the action noun marker *-tze-* is an unmarked morpheme), and *-le-/li-* (the agent noun marker).

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Postoji li povezanost između fonotaktičke vjerojatnosti i razlikovnih obilježja?

U podlozi produktivnosti jezika je ograničen broj strogo određenih razlikovnih jedinica (fonema) koje su usložnjene u nizove tvoreći slogove i riječi. Redoslijed fonema i nizova fonema u slogovima i riječima nekog jezika je određen fonotaktičkim vjerojatnostima. Iako se fonološki sustavi jezika razlikuju, mogućnosti su ograničene akustičkim i artikulacijskim sposobnostima koje definiraju razlikovna obilježja. Razlikovna su obilježja dobro objašnjena u nekoliko različitih teorija, a fonotaktika je vrlo iscrpno istraživana, ali jesu li ova dva fenomena povezana i kako, nije čest predmet istraživanja. U ovom je istraživanju ispitano kako razlikovna obilježja utječu na fonotaktičku vjerojatnost. Kako postoje vrlo velike razlike u načinu na koji se razlikovna obilježja definiraju i opisuju unutar različitih teorija, u ovom su se radu razlikovna obilježja promatrala u tri različita teorijska okvira (strukturalističkom, generativnom i višeglasnom) i zasebno je ispitana njihova povezanost s fonotaktičkim vjerojatnostima kako bi se istražilo subleksičku razinu fonoloških reprezentacija. Ovakav pristup omogućuje usporedbu opisa razlikovnih obilježja u različitim teorijama i procjenu njihove učinkovitosti pri rješavanju postavljenog problema. Rezultati su pokazali da opis razlikovnih obilježja predložen višeglasnom teorijom uspješno objašnjava fonotaktičke vjerojatnosti.

Is there a relation between phonotactic probability and distinctive features?

Underneath fascinating productivity of language there is limited number of well-defined discriminative units that are available, i.e. phonemes which are arranged in

sequences creating syllables and words. The ordering of the phonemes and phoneme sequences in the syllables and words of a given language is described by phonotactical probabilities. Although phoneme systems of languages differ, the pool of phonological possibilities is limited by acoustical and articulation abilities which are defined as distinctive features. Distinctive features are well described across different theories of phonology and phonotactics is exhaustively investigated, but are these two phonological phenomena related and in what manner remains an open question. In this study we examined how distinctive features affect phonotactic probability. Since there are extensive differences in the way distinctive features are defined in different linguistic theories, in this study distinctive features were observed in three theoretical frameworks (structuralist, generative and functional) and correlated separately with phonotactic probability of pseudowords in order to investigate sublexical level of phonological representations. Additionally, this gives an insight into differences between the descriptions of distinctive features within different theories and into efficacy of different theoretical frameworks in explaining posed research question. Results showed that distinctive features explained within functionalist theory successfully predict phonotactical probabilities.

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Vrednovanje govornoga slovenskoga jezika među mladima

Prvi jezik koji svaki govornik usvaja je govorni jezik. To je najčešće socijalni varijetet govornoga jezika koji se usmeno prenosi s generacije na generaciju, poklapajući se s okolinom, na primjer u emocionalnom stavu prema svojoj posebnoj jezično-kulturnoj zajednici. Kada ulazi u obrazovni sustav, dijete se upoznaje sa standardnim slovenskim jezikom, koji se suprotstavlja nestandardnome jezičnome sustavu. To može izazvati drugačiju percepciju jezika, na primjer s jedne strane emocionalan stav prema domaćem jeziku naspram racionalnoga stava prema nacionalnome jeziku. Oba stava u obzir uzimaju javni obrazovni sustav i programe učenja (pogotovo slovenski jezik kao materinski), u čemu se kontinuirano planira usvajanje jezičnoga sustava kao standardnoga i nestandardnoga. Društveni varijeteti jezika vide se kao polazne točke za usvajanje standardnoga slovenskoga, kada učenici postupno usvajaju varijetete i tipove

varijeteta jezika učeći pravila upotrebe, s različitim sugovornicima u drugim komunikacijskim i situacijskim kontekstima.

Ovaj rad pokazuje rezultate istraživanja u kojem se vrednovao govorni jezik među mladima između 12 i 18 godina, među kojima se utvrđivao stav učenika prema jeziku, razina svladavanja jezika, stav prema različitim društvenim varijetetima jezika, (ne)svjesnost upotrebe jezika, stav prema stranim elementima unutar slovenskoga jezika i vrednovanje jezika kao načina iskazivanja identiteta (osobnoga i nacionalnoga). Istraživanje pokazuje rezultate analiza anketa među mladim ljudima u dobi od 12 do 18 godina, prikazane analitički, usporedno i sintetički.

U ovome se istraživanju istaknulo da na stvaranje, razvoj i vrednovanje jezika utječu unutarjezični (fonetski, tvorbeni, analoški) kao i izvanjezični faktori, koji se često smatraju osobno označenima (sociolingvistika, psiholingvistika). Rezultati ovog i sličnih novijih istraživanja pokazuju promjenu u vrednovanju govornoga jezika tijekom vremena i društvenih promjena.

Evaluation of spoken Slovene among the youth

The first language mikrogenetically adopted by every individual, is the spoken language. It is usually the spoken social variety of language, that it is orally transmitted from generation to generation, coinciding with the homestead, ie. emotional attitude of the specific linguistic community language culture. Entering the educational system children become familiar with Standard Slovene, which juxtaposes the social Non-standard language system. This triggers a different perception of language, ie. in addition to the emotional homestead attitude also the rational national attitude. Both take the public educational system in curricula into consideration (especially the Slovene language as the mother tongue), are directed and continuously planned to acquire the language system in terms of Standard and Non-standard language. Social varieties of language are seen as a starting-point for acquiring the Standard Slovene, wherein the pupils gradually dominate the varieties and types of varieties of language and thereby master the rules of use, taking into account the interlocutor and other communicative and situational contexts.

The paper presents the findings of the research taking into account evaluation of spoken language among young people between 12 and 18 years of age in order to determine the attitude of the pupils towards the language, the level of mastering the language, the attitude towards the use of social varieties of the language, (un)awareness of the language use, the attitude towards the of foreign languages elements intrusion in the Slovene language, and to evaluate the language as an expression of identity (personal and national).

The research presents the results of the analysis of the survey conducted on the sample of young people between 12 and 18 years of age, presented with the methods of analysis, comparison and synthesis.

This research studies emphasise that forming, development and evaluation of language are influenced by intralinguistic (phonetic, word formation, analogic) as well as extra-linguistic factors, which are often personally marked (sociolinguistics, psycholinguistics). The results of this research and similar up-to-date researches indicate a change in the evaluation of spoken language over time and social changes.

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Rhetoric and argumentation in Slovenian education

In the paper we present some of the results and follow-ups of the research project *Professional Bases, Strategies and Theoretical Frameworks of Education for Intercultural Relations and Active Citizenship* (Žmavc 2011), where one of the goals was to analyse what role rhetoric and argumentation (should) play in the contemporary Slovenian education. After a brief discussion on some of the notions of rhetoric and argumentation based on the views of classical rhetoric followed by contemporary theoretical conceptualizations and approaches (Billig 1996; Crowley and Hawhee 2004; Tindale 2000), we problematize contemporary teachings of rhetoric and argumentation in Slovenia and their (weak) incorporation into educational practice (with a special focus on the citizenship education). Secondly, we present an analysis of Slovenian curricula and education programs as well as the results of the empirical study of the role of rhetoric and argumentation in Slovenian primary and secondary schools. The latter provides an answer to the two main questions: what Slovenian teachers know and think about rhetoric and argumentation and what principles regarding rhetoric and argumentation they use in their everyday school life. The overall results of our analysis provide a perspective on the role that Slovenian school and teachers play in the knowing, understanding and the use of the rhetorical-argumentative skills and techniques in the context of particular school subjects, activities and interpersonal relationships.

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Prozodijska sredstva u individualnoj glumačkoj realizaciji

Studija *Prozodijska sredstva u individualnoj glumačkoj realizaciji* teoretski se naslanja na prethodna istraživanja scenskoga govora (Škarić, Varošanec-Škarić, Vrban Zrinski, Podbevšek, Žavbi Milojević). Scenski je govor umjetnički govor koji na kazališnoj sceni izgovaraju glumci, a "usklađen je s tekstualnim i scenskim okolnostima i kazališnom estetikom" (Humar et al., 2007: 135). U studiji pokušavam dokazati da se individualna govorna interpretacija pojedinih glumaca najkreativnije izražava u uporabi prozodijskih (intonacija i ton, boja glasa, brzina govora sa stankama te glasnoća) i vidnih neverbalnih sredstava (mimika, geste, kretanje u prostoru) govora (Prozodijska sredstva govora razumijem u članku tako kao što ih navodi Podbevšek, koja među njih ubraja intonaciju, stanke, glasnoću, brzinu govora, boju i ton glasa, način izgovora i modulaciju glasa, dok vidne elemente govora ubraja u neverbalna sredstva komunikacije), pri čemu se prije svega ističe intenzivnost njihove uporabe. Katarina Podbevšek je ustanovila da je za umjetničku govornu interpretaciju, više nego za neumjetničku, karakteristična intenzivnija uporaba prozodijskih sredstava, prije svega njihova kreativna i neuobičajena uporaba, "što govori o velikoj govornoj fantaziji" (Podbevšek, 2007: 245). To na konkretnom primjeru pokušavam dokazati. U ovom istraživanju proučavam dvije kreativne govorne realizacije u predstavama Cankarovih *Sluga* – Radka Polića u ulozi Jermana u predstavi *Sluge* iz 2015. godine (redatelj Sebastijan Horvat, Slovensko stalno

gledališče Trst) i Veronike Drolc u ulozi Jermanove majke u predstavi *Sluge.pdf* iz 2005. godine (redatelj Samo M. Strelec, Drama SNG Maribor). Scenski govor istražujem pomoću kombinacije fonetske slušne analize i računalnog programa Praat, kojim istovremeno provjeravam svoju slušnu procjenu. Usredotočavam se na individualnu i kreativnu uporabu prozodijskih sredstava pojedinoga govornog intepretatora (npr. na neobične promjene intonacije, stanke, glasnoću, brzinu govora i sl.), koja na scenski govor djeluju i na estetskom nivou. Oba govorna interpretatora doprinose svojom govornom kreativnošću estetizaciji scenskoga govora. Cilj je studije pokazati kako pojedini glumac oblikuje svoj govor – kojim prozodijskim sredstvima i na koji način. Isto tako želim estetiku i kreativnost (neobičnost) govora obaju glumaca, koja je vidljiva iz fonetske analize, i znanstveno dokazati, stoga rezultate analize prikazujem mjerno i grafički. Kod govornika koje sam analizirala govorna se kreativnost odražava prije svega u neobičnim promjenama intonacije i neobičnim stankama, u njihovoj odsutnosti na očekivanim mjestima u rečenici, a isto tako i u ritmu govora.

Prosodic features in individual acting speech realisations

The paper *Prosodic Features in Individual Acting Speech Realisations* leans on previous theoretical research of stage speech (Škarić, Varošaneć-Škarić, Vrban Zrinski, Podbevšek, Žavbi Milojević), the artistic speech that actors speak on stage "in accordance with the text and stage environment, the theatrical aesthetic" (Humar et al., 2007: 135). I attempt to show that individual actors' speech interpretations are most creatively expressed in the use of the prosodic (intonation and register, timbre, tempo with pauses and loudness) and visual non-verbal (facial expressions, gestures, movement in the space) features of speech (In this paper, I understand prosodic features of speech in the same way as Podbevšek, who sees them as intonation, pauses, loudness, tempo, timbre and register of voice, pronunciation and vocal modulation; the visible elements of speech are seen as a means of non-verbal communication), in which the intensity of their use stands out. Podbevšek concluded that artistic speech interpretation is characterised by a more intensive use of prosodic features than non-artistic speech, mainly in the creative and unusual use of such features, "revealing great speech imagination" (Podbevšek, 2007: 245). I will demonstrate this using concrete examples. I examine two stage speech realisations of Cankar's *Hlapci* (eng.: *The Bondsmen*): Radko Polič as Jerman in *Hlapci* (dir. Sebastijan Horvat, Slovene Permanent Theatre in Trieste, 2015) and Veronika Drolc as Jerman's mother in *Hlapci.pdf* (dir. Samo M. Strelec, Drama SNT Maribor, 2005). I research stage speech with an auditory and phonetic computer analysis using Praat software and my own auditory perception. I focus on the speech interpreter's individual and creative use of prosodic features (unusual intonation

flow, breaks, loudness, tempo) that are also effective for aesthetic stage speech. In the paper I aim not only to show how an individual actor shapes his/her speech by using prosodic features but also to scientifically demonstrate the aesthetic and creative (unusual) speech of both actors that is noticeable through auditory perception, thus measurements and graphs display these results. The creativity of the actors' speech is reflected in the presence of an unusual flow of intonation and unusual pauses – also in their absence at appropriately expected moments – as well as in the rhythm of speech.

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