



University of Łódź  
Institute of English Studies  
Department of English Language and Applied Linguistics

# ACCENTS 2022

## Accents in communication

15th International Conference on Native  
and Non-native Accents of English

**Łódź, 8 Dec – 10 Dec, 2022**

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**THE BOOK OF ABSTRACTS**

*edited by:*

*Aleksandra  
Matysiak*

ACCENTS 2022  
CONFERENCE PROGRAMME

**Thursday, December 8th**

**Venue: Wydział Filologiczny UŁ (the Faculty of Philology), ul. Pomorska 171/173**

12.30-13.30 Lunch (provided)

13.30-13.50	<b>Conference Opening:</b> <b>Prof. Artur Gałkowski, the Vice Dean of the Faculty</b> <b>Prof. Tomasz Dobrogoszcz, the Head of the Institute of English Studies</b> <b>Prof. Iwona Witczak-Plisiecka, the Head of the Department of English Language and Applied Linguistics</b>		
14.00-14.55	<b>Featured talk</b> Chair: Magdalena Wrembel <i>The relationship between speech rhythm and comprehensibility and accentedness in L2 English speech: rhythm metrics, types of speech, and task complexity effects</i> <b>Joan Carles Mora</b>		
15.00-17.00	Parallel sessions		
	Session1 Chair: Izabela Grabarczyk	Session 2 Chair: Radek Skarnitzl	Session 3 Chair: Beata Walesiak
15.00-15.30	Hongzhi Wang <i>Systematic review: The identification of segmental mandarin-accented English features</i>	Jean-Pierre Gabilan <i>The evolution of phonetic symbols since the 14th edition of the English pronouncing dictionary: from phonemics to phonetics</i>	Lina Bikeliene <i>The pronunciation of the capital of Ukraine in English-speaking media</i>
15.30-16.00	Bálint Huszthy <i>Transylvanian Hunglish: Phonological properties of Hungarian accented English in Transylvania</i>	Arkadiusz Rojczyk, Janusz Arabski <i>The influence of transcription on word production in L2 English: An Eyetracking study</i>	Jim Talley <i>Non-native prosodic deviations from American English norms and their implications for accentedness: The case of Polish L1</i>
16.00-16.30	Gerard Stell <i>Erasing the 'ethnic' in Outer Circle English accents: The case of Namibian English</i>	Klára Přečková, Pavel Šturm, Jan Volín <i>Sonorant devoicing in L1 and L2 English plosive-sonorant clusters</i>	Kamil Kaźmierski <i>Abstractions vs. exemplars in the variation in Glasgow English preconsonantal /r/</i>
16.30-17.00	Wai Pong Darren Tang <i>Consonant cluster variations in Hong Kong English: An attitudinal study</i>	Łukasz Stolarski <i>Automatic placement of vowel articulations in the IPA Vowel Diagram</i>	Klementina P. Jurančič, Bernhard Kettemann <i>Qualitative criteria-based vowel charts for English spoken by learners in individual Slovene dialect regions</i>

17.00-17.30 Coffee break

17.30-18.25	<b>Plenary session (online)</b> Chair: Anna Jarosz <i>Intelligibility in global contexts: Accent and variability in second language speech</i> <b>Okim Kang</b>
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19.15 Dinner at CSK ul. Kopcińskiego 16/18 (the University hotel) (provided)

**Friday, December 9th****Venue: CSK ul. Kopcińskiego 16/18 (the University hotel)**

9.00-9.55	<b>Featured talk</b> Chair: Joan Carles Mora <i>Embracing the complex linguistic landscape: L3 vs. L2 phonological acquisition</i> <b>Magdalena Wrembel</b>	
10.00-11.00	Session 1 Chair: Beata Walesiak	Session 2 Chair: Małgorzata Baran-Łucarz
10.00-10.30	Martin Hinton <i>Accents and Artificial Intelligence</i>	Veronica G. Sardegna <i>Student-teacher conferences in an English pronunciation course: Goals, characteristics, and views</i>
10.30-11.00	Heini Kallio <i>Accent familiarity &amp; rater bias: an investigation with raters and EFL speakers from four typologically close L1s</i>	Marta Nowacka <i>The self-study of 'MOOC: English pronunciation in a Global World': fundamentals of phonetics and English accent variation</i>

11.00-11.30 Coffee break

11.30-12.30	Session 1 Chair: Marta Nowacka	Session 2 Chair: Alice Henderson
11.30-12.00	Lucia Mareková, Štefan Beňuš <i>Relationship of task complexity and L1 vs. L2 speech fluency</i>	Anna Jarosz <i>Trainee teachers' beliefs on pronunciation goals and teaching</i>
12.00-12.30	Kate Challis, Ewa Kusz, Zoë Zawadzki <i>Which minimal pairs matter the most? The link between phonetic similarity, L2 errors, and functional load, a corpus-based study</i>	Esther Gómez Lacabex, Hanne Roothoof <i>Pronunciation views in two different populations: Engineering vs. English studies students</i>
12.30-13.25	<b>Plenary session</b> Chair: Veronica G. Sardegna <i>Explicit and implicit (automatized) knowledge of second language pronunciation: Implications for theory, research and classroom practice</i> <b>Mirosław Pawlak</b>	

13.30-14.30 Lunch break (provided)

14.30-15.25	<b>Featured talk</b> Chair: Mirosław Pawlak <i>A role for phonetics in language teaching: Making the case</i> <b>Marnie Reed</b>	
15.30-16.00	<b>Featured talk</b> Chair: Anna Jarosz <i>The story of 'Accents'</i> <b>Ewa Waniek-Klimczak</b>	
16.00-17.00	<b>Invited talks introducing books</b> Chair: Veronica G. Sardegna and Anna Jarosz	
16.00-16.30	Sardegna, V., Jarosz, A., Mora, J. C., Bikelienė, L., Šturm, P., Wojtkowiak, E., & Wrembel, M. <i>Theoretical and practical developments in English speech assessment, research, and training</i>	
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17.00-17.30 Coffee break – Book raffle (bring your name tags)

17.30-19.00	Parallel sessions	
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17.30-18.00	Andrew Lee <i>The interactions among auditory input, learner characteristics, and second language speech perception</i>	Arkadiusz Rojczyk, Pavel Šturm, Joanna Przedlacka, Błażej Wieczorek <i>How is phonetic imitation conditioned by instructions? Explicit versus implicit imitation</i>
18.00-18.30	Sylvia Scheuer, Céline Horgues and Loulou Kosmala <i>When the “let it pass” strategy will not do: A multimodal study of how pronunciation-induced communication breakdowns are managed during NS-NNS conversations</i>	Michaela Rabanová and Radek Skarnitzl <i>Effect of speech rhythm manipulations on native English speakers’ credibility</i>
18.30-19.00	Noémi Gyurka, Ágnes Piukovics <i>Tailoring international pronunciation activities to specific L1’s</i>	Eva Maria Luef <i>Diffusion of phonetic learning within phonological neighborhoods</i>

19.30 departure for the Conference Dinner: Manufaktura ‘La Vende’ restaurant

### **Saturday, December 10th**

**Venue: CSK ul. Kopcińskiego 16/18 (the University hotel)**

9.00-9.55	<b>Plenary session</b> Chair: Marnie Reed <i>A principled framework for preparing teachers to teach pronunciation: Theory and application</i> <b>Veronica G. Sardegna</b>	
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10.00-10.30	Magdalena Szyszka, Pekka Lintunen <i>The effect of language anxiety on (dis)fluent monologue speech</i>	Vincent Chanethom, Alice Henderson <i>Alignment in ASR and L1 listeners’ recognition of L2 learner speech: A replication study</i>
10.30-11.00	Gisela Sosa-López <i>L2 speaking anxiety and L2 speaking fluency</i>	Barbora Bocková and Radek Skarnitzl <i>Phonetic realization of coda /t/ in current Southern British English pronunciation</i>
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12.00-12.30	Josh Frank <i>The benefits of HVPT depend on auditory/cognitive individual differences</i>	Aleksandra Matysiak <i>Acculturation strategy and its influence on the use of rhoticity by Polish adult immigrants to Wales</i>
12.30-13.30	Workshop <i>Accents and Automatic Speech Recognition</i> Miguel del Río, Corey Miller, Ján Profant, Shipra Chandra, Nishchal Bandari, Ilya Pirkin, Migüel Jetté, Peter Ha, Ryan Westerman	
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14.00-15.00 Lunch (provided)

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**Veronica G. Sardegna** — A principled framework for preparing teachers to teach pronunciation: Theory and application

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**Marnie Reed** — A role for phonetics in language teaching: making the case

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**Hongzhi Wang** — Systematic review: The identification of segmental Mandarin-accented English features

## WORKSHOP

**Miguel del Río, Corey Miller, Ján Profant, Shipra Chandra, Nishchal Bandari, Ilya Pirkin, Migüel Jetté, Peter Ha & Ryan Westerman** - Accents and Automatic Speech Recognition (A 45-minute workshop with 2 presentations and a discussion)

## **PLENARY TALKS**

### **INTELLIGIBILITY IN GLOBAL CONTEXTS: ACCENT AND VARIABILITY IN SECOND LANGUAGE SPEECH**

**Okim Kang**

Northern Arizona University, USA

With the rise of English as an international language (EIL), there is an increasing need for a comprehensive understanding of accent on the part of both English instructors and learners. Accented speech can advantage or disadvantage a speaker beyond day-to-day interactions. Currently, intelligibility-based communication (Levis, 2005) or mutual intelligibility (Smith & Nelson, 2019) has been emphasized over native-like accents. Establishing intelligibility is a complex endeavor as it is contextually determined (Nelson, 2011). Studies have shown mixed results regarding the effect of accent on listener perception. Some research showed that listeners' comprehension scores were lower for the accented English speaker than for the native speaker accent (Anderson-Hsieh & Kohler, 1988) or listeners had worse comprehension scores as the strength of speakers' accents increased (Ockey & French, 2016). At the same time, listeners' shared first language (L1) effect (Kang et al., 2019) or/and familiarity of the target language accent (Browne & Fulcher, 2017) played a role in the judgment of accented speech. Listeners' expectations and prejudice are also known to affect the judgement of accented speech as well (Kang & Rubin, 2009). Overall, it is still uncertain how the use of different English accents can affect listeners in the Global English contexts. In addition, what speaking features can actually determine the intelligibility of different varieties of accents is largely unknown, although some existing literature provides a starting point for considering which features contribute to speech that is adequate for listeners (e.g., Kang et al., 2020).

Therefore, in this presentation, the presenter will first review the concepts of intelligibility and accent, and describe listener and speaker variability, along with the relationship between speech properties and listener perception of L2 speech, and explain the variance attributable to listener background and attitudinal factors. Then, she will give an overview of current research issues in L2 intelligibility (i.e., mutual intelligibility, characteristics of intelligible speech, intelligibility measurement, and intelligibility-based instruction). She will conclude with a discussion of recent trends in learning and teaching successful communication skills in the context of Global Englishes and end with future directions and implications for listening and speaking pedagogy, test design, rater training, and curriculum development.

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## **EXPLICIT AND IMPLICIT (AUTOMATIZED) KNOWLEDGE OF SECOND LANGUAGE PRONUNCIATION: IMPLICATIONS FOR THEORY, RESEARCH AND CLASSROOM PRACTICE**

**Mirosław Pawlak**

Adam Mickiewicz University, Kalisz, Poland

University of Applied Sciences, Konin, Poland

The distinction between explicit and implicit knowledge of a second or foreign language (L2) has been at the core of second language acquisition (SLA) theory and research for several decades, although different labels may have been used (DeKeyser, 2017; Ellis, 2009; Pawlak, 2019, 2021). Recently, in line with the tenets of skill-learning theory, a valid argument has been made that, in the case of learners who have passed the critical period in contexts in which opportunities for L2 use in communication may be limited, it is reasonable to opt for the term automatized explicit knowledge rather than implicit knowledge (DeKeyser, 2017, DeKeyser & Juffs, 2007). Thus far, however, the distinction has mainly been applied to the knowledge of L2 grammar and it has been largely neglected with respect to other target language (TL) subsystems including pronunciation (Saito & Plonsky, 2019).

In essence, explicit knowledge of pronunciation is drawn upon when learners are asked to engage in controlled production of segmental and suprasegmental features, as is the case with reading minimal pairs, sentences or even entire texts. By contrast, implicit or automatized knowledge is tapped into when learners are requested to apply what they know about pronunciation in spontaneous, real-time interaction, such as an unplanned conversation or some kind of communicative task. Although the distinction may have been implied in several theoretical accounts of how L2 pronunciation is acquired (e.g., Major, 2008), it has been acknowledged in some empirical studies (see Saito, 2021), and it has been highlighted in some teaching frameworks (e.g., Derwing & Munro, 2015), it has surely not been given the attention it deserves. The plenary aims to at least partly rectify this problem by showing how the differentiation between explicit and implicit (automatized) knowledge plays a crucial role in theoretical explanations of L2 pronunciation learning, empirical investigations of the efficacy of different instructional options that can be applied as well as the actual teaching of this TL subsystem in a variety of contexts. First, the distinction between the two types of L2 knowledge will be elucidated and the most relevant, recent empirical evidence will be overviewed. Subsequently, an attempt will be made to relate these issues to L2 pronunciation learning and the scant empirical studies that have incorporated measures tapping into both explicit and implicit (automatized) knowledge in this area will be overviewed. The talk will close with the discussion of the methodological recommendations that should be heeded in research on the effectiveness of pronunciation instruction as well as pedagogical implications that can make pronunciation teaching more effective.

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## **A PRINCIPLED FRAMEWORK FOR PREPARING TEACHERS TO TEACH PRONUNCIATION: THEORY AND APPLICATION**

**Veronica G. Sardegna**

Duquesne University, USA

We have been witnessing exponential growth in the number of articles (see Sardegna & McGregor, 2022, for a review) and books (e.g., Levis et al., 2022; Murphy, 2017; Sardegna & Jarosz, 2022, in press) dedicated to pronunciation learning. I have contributed to these efforts with a model of English pronunciation learning (The Enhanced Covert Rehearsal Model) (Sardegna, 2022), which highlights the role of the teacher in supporting students' self-regulated pronunciation practice. Yet, to help English pronunciation teaching regain its legitimate place in the second language classroom, we must go beyond learner- and classroom-related investigations. We should also include explorations of how to best prepare teachers for their role in the pronunciation learning process. Hence, in this plenary talk, I will extend Sardegna (2022) with a framework for preparing teachers to teach English pronunciation. First, I will describe the knowledge and support needs of the language learner in terms of English pronunciation. Second, I will review research on teachers' cognition and classroom practices to identify the specialized content and pedagogical knowledge English teachers need to acquire to assist their students' pronunciation learning efforts. Third, I will propose a set of principles that make up a pedagogical framework that teacher educators can follow to prepare teachers to teach English pronunciation. Finally, I will share a practical example that showcases how these principles can guide pedagogical decisions in teacher training programs.

### **References:**

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## FEATURED TALKS

### **THE RELATIONSHIP BETWEEN SPEECH RHYTHM AND COMPREHENSIBILITY AND ACCENTEDNESS IN L2 ENGLISH SPEECH: RHYTHM METRICS, TYPES OF SPEECH, AND TASK COMPLEXITY EFFECTS.**

**Joan Carles Mora**

University of Barcelona, Spain

Typical prosodic features indicating inaccurate pronunciation in the speech of L2 English learners include lexical stress errors involving vowel quality (Ghosh & Levis, 2021), limited duration variability in vowels and consonants (Ordin & Polyanskaya, 2015), and narrower pitch range values across intonational phrases (Mennen et al., 2014). Prosodic dimensions of L2 speech, and speech rhythm in particular, are nevertheless relatively under-researched in the domain of L2 phonological acquisition.

One reason partly explaining the dearth of research in this area is the difficulty in determining the set of L2 speech rhythm metrics that might best capture L2 speech rhythm development for L1-L2 language pairs placed along a rhythm continuum with syllable-timed languages (e.g. Spanish) at one end, and stress-timed languages (e.g. English) at the other end. The contribution of L2 speech rhythm to listeners' perception of comprehensibility (i.e., ease of understanding) and accentedness has already been attested in several recent studies (e.g., Polyanskaya et al., 2017; Van Maastricht et al., 2021), but most studies investigating the linguistic correlates of comprehensibility and accentedness (e.g. Saito et al., 2016) do not include measures of speech rhythm, or include language-specific measures rather than well-established rhythm metrics (e.g. Trofimovich & Isaacs (2012) use a vowel reduction ratio as a rhythm measure in L2 English). In addition, with few exceptions (e.g. Valls-Ferrer, 2011), studies on speech rhythm in L1 (Dauer, 1983; Dellwo, 2009; Ramus et al., 1999) and L2 (Ordin & Polyanskaya, 2015) have focused on sentence- or paragraph-long read materials rather than extemporaneous speech. Therefore, it is presently unclear to what extent L2 speech rhythm contributes to global pronunciation-related dimensions of L2 speech (comprehensibility and accentedness) in conversational and extemporaneous types of L2 speech.

In this talk I will use L2 speech data (sentence-long speech samples and oral narratives from a problem-solving speaking task) produced by 82 L1-Spanish advanced learners of English to illustrate methodological issues concerning the use of current rhythm metrics (Dellwo, 2006; White & Mattys, 2007) to predict listeners' judgements of comprehensibility and accentedness. I will also discuss the methodological challenge of identifying sensitive rhythm metrics capable of capturing task condition effects (e.g., tasks differing in difficulty or cognitive demands) for language pairs belonging to different rhythm classes, such as L1 Spanish and L2 English.

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## **A ROLE FOR PHONETICS IN LANGUAGE TEACHING: MAKING THE CASE**

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Teachers of English can benefit from knowledge of phonetics, the science that studies the characteristics of human speech and provides methods for their description, classification, and transcription (Crystal, 2003). While phonetic knowledge is useful for language teachers, studies report that many English Language Teaching (ELT) professionals receive insufficient training in phonetics, and that teachers feel ill-prepared for pronunciation teaching (Baker, 2014; Foote, Holtby, & Derwing, 2011; Murphy, 2014). This talk focuses primarily on articulatory phonetics while also briefly addressing acoustic phonetics and coarticulation, and aspects of English pronunciation related to prosody. The talk triangulates the role phonetics plays in language teaching by focusing on key areas, both content and pedagogical, necessary to language teaching. These include knowledge about the production of speech sounds, how they can be described, and skill in their transcription, knowledge of contextualized segmental articulation and connected speech processes, and familiarity with scholarly and practical approaches and treatment of suprasegmental features of intonation including prominence and variations in pitch (Ladd, 2008; O'Connor & Arnold, 1973).

Skill in using the International Phonetic Alphabet (IPA) is advocated to facilitate learners' conceptual grasp of perception, processing and production of speech sounds. Specifically, the IPA is advocated to help learners understand how phonemes in their L2 are similar to/differ from those in their L1s (Best, McRoberts, & Goodell, 2001; Vihman, 1993) and how the positioning of speech organs affects the production of sounds and comprehensibility (Howard & Messum, 2011; Mompean, 2003). Select implementation of the IPA is advocated to benefit learners in understanding how sounds can change when they occur in close proximity to other sounds in a stream of speech (Lowie & Bultena, 2007). Tools and strategies are provided to foster knowledge of aspects of English pronunciation related to prosody, such as pitch variation, stress, and rhythm.

Phonetic knowledge thus is extremely useful for language teachers. Connecting the fields of phonetics and language teaching contributes to the field of phonetics by bridging the divide between what language teachers already know about teaching phonetics and what they need to know in order to provide the most effective instruction.

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## **EMBRACING THE COMPLEX LINGUISTIC LANDSCAPE: L3 VS. L2 PHONOLOGICAL ACQUISITION**

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Rising awareness of a complex linguistic landscape in the modern world has led to the development of a wider perspective in language acquisition research, going beyond the second language (e.g. De Angelis 2007). A growing body of studies into the acquisition of third language phonology demonstrates an inherent complexity of the field reflected, among others, in multidirectional dynamic cross-linguistic influence (e.g. Wrembel and Cabrelli Amaro 2018). As shown, multilingual learners have at their disposal a broadened phonetic repertoire, a raised level of metalinguistic awareness and enhanced perceptual sensitivity, which may facilitate the learning of subsequent phonological systems (e.g. Gut 2010, Wrembel 2015). The present contribution aims to compare bilingual and trilingual phonetics and phonology by providing an overview of recent research into both subdomains, identifying their common features and, importantly, points of departure for L3 phonology, with the view to providing new insights into the acquisition of speech (Wrembel and Gut, forthcoming).

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## PARALLEL SESSIONS

### PERSONALITY AS A DETERMINANT OF FL ACCENTEDNESS AND COMPREHENSIBILITY IN A PRONUNCIATION NON-INSTRUCTED SETTING

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There is a general agreement among pronunciation researchers that success in pronunciation learning is determined not only by external factors but also by the “considerable ‘personal baggage’” that learners carry with them when they “embark on the study of an L2” (Cohen & Dörnyei, 2002, p. 170). The baggage refers to individual differences (IDs), some of which are stable, while others - more dynamic and changing over time, and in response to other IDs and context of learning. Among the internal factors whose importance in pronunciation learning has been explored are: aptitude (Granena & Long, 2013; Saito, 2019), working memory (Mora, 2022), motivation (Baran-Łucarz, 2017), anxiety (Baran-Łucarz, 2014, Szyszka, 2017), cognitive style (Baran-Łucarz, 2004; 2009), or ethnocentric tendencies (Gatbonton, Trofimovich & Segalowitz, 2011; Szyszka & Baran-Łucarz, 2022). Despite the fact that for many decades it is also personality that has been considered an important determinant of success in L2/FL learning (e.g., Ellis, 1985), there is evidently scarce data at our disposal verifying its influence on attainments in L2/FL pronunciation. Since it is linked with other IDs (e.g., identity, anxiety, motivation) and has cognitive and behavioural consequences (Piechurska-Kuciel, 2020), understanding its role in pronunciation learning is of utmost importance. This paper reports on a study that tries to fill in this research gap.

The presented data will have been gathered as part of a larger on-going mixed-method longitudinal project examining several IDs as predictors of FL accentedness and comprehensibility. Based on the Big Five Model (Costa & McCrae, 1995), personality will be regarded as a construct composed of five independent traits - Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Intellect/Openness to new Experience. The level of each trait is intended to be measured among English majors (N=50-70), prior to them receiving explicit formal instruction on English pronunciation, by the Polish version (Strus, Ciecuch & Rowiński, 2014) of IPIP-BFM-50 (Goldberg, 1990). The levels of the traits will be correlated with the participants’ accentedness and comprehensibility, each assessed by 3 judges of different nationalities on 9-point Likert scales. The former will be evaluated on the basis of a task consisting in passage reading; the latter – on the basis of spontaneous speech on one of the suggested topics. The observed size effects in the case of each trait will be supplemented with qualitative data gathered among selected participants via interviews and written open questions on their motivation and socio-affective traits on one hand, and preferred pronunciation learning strategies and potential difficulties accompanying their pronunciation practice on the other.

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## **THE PRONUNCIATION OF THE CAPITAL OF UKRAINE IN ENGLISH-SPEAKING MEDIA**

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The spread of global English altered the view on pronunciation. Though studies proved people with a stronger accent to be seen as less trustworthy (Lev-Ari & Keysar, 2010), for learners, the emphasis has shifted from normative pronunciation towards intelligibility. The attitude towards native speakers' pronunciation has also changed with prominent figures in politics and media exhibiting accent diversity (Lindsey, 2019). Since varieties are no longer stigmatised, if a person is intelligible, is his/her pronunciation of any importance? Should attention be paid to the pronunciation of geographical names if variation does not hinder the understanding?

Previous studies have observed the systematic nature of linguistic variation. Hay (2017) distinguishes several factors that might affect the realisation of a sound: linguistic context, speaker identity, addressee identity, and conversational topic. The present study is interested in the speaker identity factor. Studies on the language of politicians suggest that phonetic variations could not only help in forming speaker's identity (Hay 2018) but also index political meaning (Hall-Lew et al. 2010; Hall-Lew et al. 2017). This type of variation, thus, could be ascribed to politically conditioned one, which Sloman et al. (2021: 2) define as "linguistic variation that can be anticipated on the basis of the speaker's political identity".

The ongoing war in Ukraine, has affected not only the stability of the world but also the language. Ukraine taking an important part of news stories, allows one to observe the change in the names of its cities. Since "[o]ur pronunciation allies or isolates us from a community of speakers" (Parrino, 2013: 171), this study focuses on the phonetic realisation of the capital of Ukraine. The change of name in the media started prior to the beginning of the war in February 2022. In 2006, Kyiv was approved as one of the standard forms and on June 11, 2019, it became "the only name available for standard use within the United States (U.S.) Government" (BGN, 2019). The beginning of the war, however, moved the #KyivnotKiev campaign to a new level. The leading broadcasting companies have moved to the use of Kiev to various extents (the Belgian news service VRT NWS reported (Hodge, 2022)). The present study, thus, aims at reporting on the (in)consistency of the politically conditioned variation of the Ukrainian capital name on the English-speaking news channels. The results indicate variability in the written-spoken language correspondence in the use of Kyiv.

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## PHONETIC REALIZATION OF CODA /t/ IN CURRENT SOUTHERN BRITISH ENGLISH PRONUNCIATION

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The English stop /t/ is characterized by its extensive phonetic variability throughout the varieties of English (see Skarnitzl & Rálišová, 2022 for a summary). Apart from a “plain” voiceless alveolar stop [t], the variants include aspirated [tʰ] and affricated [ts], flapped [ɾ], fricated (or slit) [t̪], ejective [tʼ], approximant [ɹ] or laryngeal [h], pre-aspirated [ʰt], as well as various realizations involving a glottal gesture (i.e., glottal replacement as in [wɔ:ʔə] and glottal reinforcement as in [wɔ:ʔtə]). Many of these variants may be regarded as manifestations of lenition, or weakening. The realization of /t/ is conditioned both by linguistic factors, such as segmental environment or lexical stress, and by social factors, such as the speaker’s region, sex, or socioeconomic background.

The present study aims to explore the realizations of /t/ in current Southern British English (SBE) pronunciation; we only focus on the coda position where the variability seems to be highest (see Wells, 2008 for syllabification rules). The realization of /t/ has been investigated especially in relation to the remarkable rise of glottalling (e.g., Fabricius, 2002; Schlee, 2013, 2021; Bjelaković, 2018). A more detailed analysis of /t/ realizations was conducted by Gavalda (2016), who focused on the within-speaker stability of flapping, glottalling and frication. Our study is based on recordings of 16 speakers of SBE (8 females, 8 males) from BBC political debates. Auditory analysis of the target consonants (55 per speaker) was conducted and subsequently, the occurrence of individual variants was evaluated in terms of segmental, prosodic as well as semantic context.

The results confirm that the semantic status of the target word (lexical vs. grammatical) significantly affects the realization of coda /t/ in speech (see the left panel of Figure 1), with the lenited variants accounting for over 80% in grammatical words and about 65% in lexical words; this is particularly salient in glottalling.

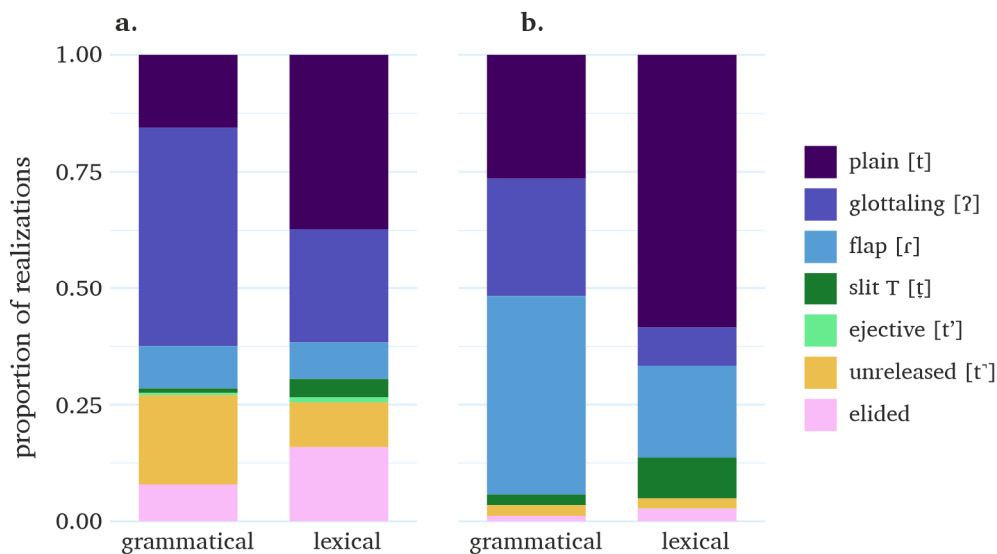


Figure 1. Occurrence of phonetic realizations of coda /t/ according to semantic status in all words (a.) and in the intervocalic position (b.).

Moreover, stress, the word's position within a phrase, its segmental environment, and the speaker's sex all have an influence on the phonetic shape of /t/. The right panel of Figure 1 shows results for intervocalic contexts only. Interestingly, nearly a half of the realizations in grammatical words is flapped; for a variant which is traditionally not included as a feature of SBE, [ɾ] seems to be a major and stable component of the accent (cf. Hannisdal, 2006). The presentation will feature more detailed analyses.

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## **WHICH MINIMAL PAIRS MATTER THE MOST? THE LINK BETWEEN PHONETIC SIMILARITY, L2 ERRORS, AND FUNCTIONAL LOAD, A CORPUS-BASED STUDY**

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Although the concept of functional load was first mentioned about a century ago by the Prague School of Linguists (e.g., Jakobson, 1931), the practical application of functional load in L2 pronunciation learning and teaching methods remains largely ignored (e.g., Munro and Derwing, 2006; Kang and Moran, 2014; Suzukida and Saito, 2019; Sewell, 2021). This paper examines the extent to which functional load and L2 errors are predicted by the phonetic similarity between phones in a minimal pair, as measured by their manner and place of articulation. The purpose of this study is to determine the importance of prioritizing sound pairs with high functional load in L2 pronunciation instruction. The minimal pairs in this study were gathered from the L2 Arctic corpus which is a set of audio recordings with extensive phonetic transcriptions of sentences from literature read by 24 non-native speakers of English whose L1s are Hindi, Korean, Mandarin, Spanish, Arabic and Vietnamese (about 100 sentences), as well as a control group of L1 speakers. Minimal pairs were selected using an R script based on the transcriptions of L1 speakers. Phonetic features, including manner and place of articulation, were manually classified for each minimal pair phone based on O’Grady et al. (1993), allowing for an R script to then calculate the phonetic similarity between two phones. Then, the selected minimal pairs were extracted for all L2 speakers, and L2 errors were then calculated with an R script that measured the phonetic similarity between the phonetic transcriptions of L2 speakers to those of the L1 speakers. Next, the functional load of the minimal pairs in the corpus was calculated by two separate methodologies 1) change in entropy (Surendran, 2003), and 2) relative minimal pair counts. Finally, a multiple linear regression model was used to analyze the relationship between phonetic similarity, L2 error, and functional load in minimal pairs.

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## **ALIGNMENT IN ASR AND L1 LISTENERS' RECOGNITION OF L2 LEARNER SPEECH: A REPLICATION STUDY**

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Automatic Speech Recognition (ASR) programs could provide useful feedback to L2 pronunciation learners (Levis & Suvorov, 2020; McCrocklin, 2016). Many researchers have explored their potential in L2 learning, including learner perceptions of ASR for learning a vowel and a suprasegmental feature in L2 French (Liakin, Cardoso, & Liakina, 2017), and learner beliefs about ASR's general usefulness and for learning vowel contrasts (Inceoglu et al. 2020). Some have examined different programs' accuracy (McCrocklin et al., 2019), or how programs perform compared to native listeners (Inceoglu et al., forthcoming).

The latter assessed English spoken by Taiwanese intermediate learners, using L1 English listeners and the Google Voice Typing dictation system. We replicated their study using a different ASR tool (dictation.io) and speakers of a different L1 (French instead of Chinese) yet with a similar low-to-intermediate proficiency level. French-accented English is interesting as it may pose ASR challenges similar to Spanish-accented English; McCrocklin and Edalatshams (2020) found no significant correlations between the accuracy of Google's ASR output for L1 Spanish learners and measures of recognition, comprehensibility and accentedness. This raises the issue of whether different ASR tools may suit different learner L1s.

Our pilot compares intelligibility (or recognition) assessments of ten L1 English listeners and the output of the dictation.io program. The rated speech was L2 English from four L1 French speakers and intelligibility was measured by word transcription. One research question is: How (mis)aligned are ASR outputs & L1 listeners' transcriptions?, a sub-question being 'How accurate is dictation.io currently for this L2 English?'

Listeners were asked to use standard English orthography to transcribe 76 monosyllabic words (19 from each of 4 speakers) elicited from a word-reading task. Their transcriptions were compared to the ASR output, using the speaker's first production. Error types were classified following Inceoglu et al. (forthcoming), for either an incorrect vowel or incorrect consonant, or multiple combined errors.

Additionally, recordings of read-aloud sentences were rated on a Likert-scale for comprehensibility, operationalized as amount of effort required to understand. This was necessary for the second research question: Does the accuracy of dictation.io for this L2 speech correlate with human listener recognition (intelligibility) and with their ratings of comprehensibility?

The error types and proportions were generally consistent with those of Inceoglu et al.'s findings for the ASR system and the L1 listeners. This supports their statement that current ASR technology may be particularly useful for lower proficiency learners, with some pedagogical provisos.

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## THE BENEFITS OF HVPT DEPEND ON AUDITORY/COGNITIVE INDIVIDUAL DIFFERENCES

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Perception and production of L2 sound contrasts depends on individual differences (IDs). High Variability Phonetic Training (HVPT), where learners perceive L2 speech sounds from multiple talkers in different phonetic contexts, is shown to improve recognition and discrimination of subtle acoustic differences found in contrasting L2 vowels (Mora & Mora-Plaza, 2019; Thomson, 2018) and may be advantageous over Low Variability Phonetic Training (LVPT). Despite evidence of associations between L2 learning performance in HVPT and LVPT to attentional or auditory processing abilities, the influence of IDs have yet to be examined (Perrachione et al., 2011). Given benefits from HVPT may require higher abilities in attentional and/or auditory processing skills, this experiment aims to understand the influence of respective IDs on gains from HVPT or LVPT.

Participants (N=45) were native Catalan-Spanish learners of English as a foreign language. IDs were measured on auditory selective attention (ASA), and auditory processing, consisting of three discrimination tasks, assessing duration, formant, and pitch (Kachlicka et al., 2019). Phonetic training for both HVPT and LVPT consisted of four 30-minute training sessions on the English /æ/-/ʌ/ and /i/-/ɪ/ vowel contrasts, difficult for Catalan-Spanish learners. Perception was trained using forced-choice identification and AX discrimination tasks using minimal-pair non-words with /æ/-/ʌ/ and /i/-/ɪ/ spoken by different native speakers according to training group. Participants were randomly assigned to either HVPT (N=23) with 4 voices (2 Female/2 Male) or LVPT (N=22) with 2 voices (1 Female/1 Male). Pre- and post-test training effects were evaluated using an ABX discrimination for perception, delayed word repetition (DWR) and free sentence production tasks for production. To assess L2 English proficiency level a yes/no vocabulary task was used.

Results revealed both training groups significantly improved accuracy from pre- to post-test in perception (ABX discrimination) of the /æ/-/ʌ/ and /i/-/ɪ/, vowel contrasts. There was a marginally significant main effect of training type ( $p = .073$ ), with higher perception accuracy for LVPT than HVPT. To examine IDs, participants were categorized into High or Low ASA and High or Low Auditory Processing groups using a median split. Results within phonetic training groups showed significant perception gains for HVPT in groups for High but not Low ASA and for High but not Low Auditory Processing. The production data is currently being analyzed.

This has implications for understanding L2 perception gains from the type of phonetic training based on learners' individual differences to inform optimal training paradigms based on learners' auditory/cognitive abilities.

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## **THE EVOLUTION OF PHONETIC SYMBOLS SINCE THE 14TH EDITION OF THE ENGLISH PRONOUNCING DICTIONARY: FROM PHONEMICS TO PHONETICS.**

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The 14th edition of The English pronouncing dictionary (E.P.D.) – originally compiled by Daniel Jones and revised by A.C. Gimson - introduced new symbols, thus laying emphasis on phonetics rather than phonemics. From then onwards successive editions of the same dictionary and other books on the pronunciation of English have, too, introduced new symbols or variations and some dictionaries (e.g. O.E.D.) have their own symbols. The most striking features which appeared in the 14th edition of the English pronouncing dictionary (1977) were the following :

/i/ became /ɪ/ and /i:/ remained  
/u/ became /ʊ/ and /u:/ remained  
/ɔ/ became /ɒ/ and /ɔ:/ remained  
/ə:/ became /ɜ:/ and /ə/ remained

These new symbols meant, rightly or wrongly, that the concept of opposition (minimal pairs) had disappeared and that the dictionary, which had so far a phonological approach, had gone phonetically oriented. Classic oppositions such as :

live/leave, soot/suit, cot/court

ceased to appear - on paper - phonologically relevant. Yet, foreign learners are still struggling with such oppositions.

In 1991 - 15th edition of the EPD - new symbols appeared, definitely phonetically oriented :

/i/ as in pretty and /u/ as in educate. Both were nothing short of reduced or weak forms and not new phonemes – pretty, whether it is pronounced / 'prɪti/ or /'prɪti/ remains the same word. More recently, undoubtedly relying on regional variations, diphthong / aɪ/ as in price has become / ʌɪ/, which is slightly disturbing (cf. Cruttenden, 2014).

The question is whether symbols should be very accurate descriptions of what is actually pronounced with all the phonetic parameters or simply and more efficiently rely on phonemics.

We propose to comment on old and new developments in phonetic/phonemic symbols and argue that phonemics should prevail.

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## PRONUNCIATION VIEWS IN TWO DIFFERENT POPULATIONS: ENGINEERING VS. ENGLISH STUDIES STUDENTS

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Research on pronunciation attitudes which has explored differences between learners' backgrounds is scarce (Kang, 2015, Henderson et al. 2012, Nowaka, 2012). Interestingly, nowadays, as a consequence of internationalization programs and Content and Language Integrated Learning (CLIL) methodologies, there is a growing number of English students who experience the learning of English using it as they learn other content. Some literature has already observed differences between these learners and those students who experience English language learning as a target of expertise such as EFL or English studies or linguistics students, indicating that the former learners exhibit a more communicative interpretation of pronunciation, distancing from native-like models and prioritizing intelligibility (Wanick-Klimczak and Klimczak, 2005; Stanojević, Borenić and Smojver, 2012, Gómez-Lacabex & Gallardo-del-Puerto, 2021). The present study aims to contribute to this line of research by exploring English pronunciation views and interlocutor anxiety of a group of learners in an English Studies Degree at a Faculty of Letters and two groups of learners at a Faculty of Computer and Industrial Engineering.

We explored these students motivational selves, wishes for pronunciation reference models, uneasiness owing to teacher's pronunciation, learning preferences and interlocutor anxiety by means of a questionnaire with moderate consistency in the first part ( $\alpha = .66$ ,  $n = 28$ ) and high consistency in the second part ( $\alpha = .89$ ,  $n = 36$ ) and selected interviews. 126 students were surveyed at an Engineering Faculty and 38 students were surveyed at a Faculty of Letters. Results indicated that the two groups of students did not differ in their ideal and ought-to-selves, or in the fact that their teachers' pronunciation does not cause uneasiness or impedes understanding during lectures. The two groups presented differences in their learning preferences, the English Studies students indicating that more technical procedures such as repetition and segmental practice are very good pronunciation learning techniques. They also expressed significant lower agreement with the statement "*I don't want to sound native, I just want to be understood*". We also obtained significant differences between the groups when analysing interlocutor anxiety: the English Studies students exhibited more anxiety, specifically fear of ridicule and worry of making mistakes, when considering their teachers and local and international peers as interlocutors. These results seem to suggest that we can expect differences regarding English pronunciation attitudes between different learner profiles, which may need to be considered during their learning progress.

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## **TAILORING INTERNATIONAL PRONUNCIATION ACTIVITIES TO SPECIFIC L1'S**

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While the importance of pronunciation has been gaining increased attention in international contexts (Murphy & Baker, 2015), it seems to remain side-lined in the Hungarian EFL classroom, as the shift from being “the Cinderella of language teaching” (Kelly, 1969, p. 87) to an equally important skill is yet to happen. It is not unrelated to this general neglect that there is limited research available focusing on pronunciation teaching practices in the Hungarian educational context. Therefore, a pilot study was carried out to uncover the effects of integrated pronunciation activities on students’ pronunciation improvement and their perceptions of pronunciation integration.

In the course of the pilot study, a set of international pronunciation activities were modified to fit the needs of Hungarian learners of English. Afterwards, these activities were integrated into the EFL lessons of a group of 16-year-old students (N=13). Data was collected through (1) a pronunciation test taken by the students before and after an 11-week-long teaching period, (2) feedback forms the students filled in before two unit tests, (3) semi-structured interviews conducted with four volunteering participants, and (4) classroom observations.

In our paper, we will discuss how two of the modified activities (one based on unstressed syllables, and the other on words with counterintuitive pronunciation) were further developed taking into consideration the results of the pilot study. The interviews revealed that the students found the pronunciation activities superfluous and unnecessary (cf. Kontráné Hegybíró & Csizér, 2011), as most of the participants did not realise the positive effects of pronunciation inclusion on communicative competence. Their lack of interest contributed greatly to their pronunciation not developing substantially – in the case of the target words appearing in the two activities, the students’ pronunciation in the post-test improved by only 5.1% and 6.6% compared to the pre-test.

The classroom observations revealed that the activities could not achieve their full potential because they were too challenging for an EFL group with limited previous exposure to explicit pronunciation teaching. The activities were therefore divided into smaller and more focused steps to provide a more gradual introduction of the target features. Moreover, as the amount of production practice did not prove to be enough to noticeably develop the participants’ pronunciation, the activities were supplemented by new communicative production practice elements to engage the students to a larger extent and to further facilitate the acquisition process.

The objective of our presentation is to give an insight into the process of redesigning international activities based on a contrastive analysis of the phonology of participants’ L1 and the target language as well as empirical data.

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## ACCENTS AND ARTIFICIAL INTELLIGENCE

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In this talk I raise a number of issues connected with the production and perception of accents of English brought about by the development of artificially intelligent computer systems. My aim is to engage the accent-research community in a discussion of their role in the use of accents in and by AI, by posing certain questions from the philosophy of linguistics pertaining to the field.

I begin by introducing the recently developed real-time accent translation technology from Sanas and contrasting it with the previously available methods of voice and accent translation based on machine learning from large pre-recorded datasets (Afonja et al. 2021, Pasini 2019, Zhao et al. 2018, 2019). I discuss the rationale put forward by Sanas for the value of its service, that it represents a choice for speakers and is ‘a step towards empowering individuals, advancing equality, and deepening empathy’ (sanas.ai), which also reduces misunderstandings and improves conversation satisfaction. This includes a brief consideration of wider issues of the importance of accent in perceptions of competence

and trust (Caballero & Pell 2020, Jiang et al. 2020). I also consider some of the points raised in the media reaction to the launch of the Sanas system (Chan 2022, Kan 2022) and ask questions about the ethics of accent manipulation and how such doubts might relate to similar worries in traditional accent teaching.

This is followed by a broader discussion of the role of accents in mechanised speech. I introduce the concept of Machine Ethos, part of the Rhetoric of Machines, and discuss how aspects of presentation, such as accent and other characteristics of mechanised voice, may affect the level of comfort of AI/human interactions and the degree of trust placed in AI decision making software. I conclude by inviting the audience to consider ways in which researchers in the field of accents can influence developments in AI speech and what new avenues of study might be created by this growing phenomenon.

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## **“TRANSYLVANIAN HUNGLISH”: PHONOLOGICAL PROPERTIES OF HUNGARIAN ACCENTED ENGLISH IN TRANSYLVANIA**

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Hunglish is a term for Hungarian native speakers' English pronunciation. It is a well recognisable and quite homogeneous non-native accent of English, which is thoroughly described in the literature of second language acquisition (Altenberg & Vago 1983; Doughty & Thompson 1983; Nádasdy & Szigetvári 1996; Nádasdy 2006; Balogné Bérces & Szentgyörgyi 2006; Balogné Bérces & Piukovics 2019; Piukovics 2021; etc.). However, this paper proposes that Hungarian speakers living in Romania use a phonetically and phonologically different Hunglish compared to those living in Hungary. The study is built on direct speech recordings made with 30 Hungarian speakers descending from various parts of Transylvania. Their accent is confronted with the Hunglish pronunciation of 15 speakers from Hungary, who had to read out loud twice the same English sample texts.

Results indicate that the English pronunciation of the two groups primarily shows phonetic differences (e.g. in vowel quality), but the accents are considerably uniform in phonological terms. Only minor persistent phonological differences can be identified, which mostly originate in the fact that Transylvanian speakers' interlanguage is much more heterogeneous than that of Hungarians' (i.e., Transylvanians speak a substandard version of Hungarian as L1, they speak a Transylvanian dialect, they speak Romanian at high level, and they usually speak further foreign languages as well beyond English; these varieties all affect their foreign accent). The paper takes account of the most important characteristics of Transylvanian Hunglish, with a synchronic phonological analysis, and a contrastive analysis with the general phonological properties of Hunglish found in the literature.

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## **TRAINEE TEACHERS' BELIEFS ON PRONUNCIATION GOALS AND TEACHING**

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The role of the teacher in the learning process cannot be underestimated since they shape and affect the learners' outcomes (Ivanovaa & Skara-Mincane, 2016; Korthagen, 2004; Sardegna, 2020, 2022). Although teachers recognize the importance of pronunciation instruction, many tend to avoid it in their classrooms for numerous reasons such as time constraints or lack of adequate preparation. In response to a growing need for pronunciation pedagogy courses addressing both pre-service and in-service teachers' lack of preparation to teach pronunciation, Burri, Baker and Chen (2017) investigated pre-service and in-service teachers' cognition evolution triggered by a pronunciation pedagogy course. They perceived teacher education and teacher cognition development as separate but intertwined processes. Koster, Korthagen, and Schrijnemakers (1995) observed that the trainee teachers they studied remained under the influence of their own former educators and their teaching methods. In other words, their professional self-image, teaching practices and behaviour had been shaped by their past role models. As Warford and Reeves (2003) found, teachers' deeply entrenched beliefs and perceptions about teaching and learning are also frequently resistant to change.

To extend this line of research, this study investigated the beliefs of last-year MA students at the Institute of English Studies, who chose the pedagogical track with a view to becoming English teachers. The trainee teachers completed a 15-hour pronunciation pedagogy course. The course instructed them on practical take-away tips on how to teach different pronunciation features and aspects. Their beliefs about teaching pronunciation were elicited via a Likert-scale questionnaire with 35 items and follow-up semi-structured interviews. A descriptive analysis of their questionnaire and interview responses revealed a relatively high pronunciation awareness of the trainee teachers, their determination to teach pronunciation in the classroom as well as both declarative and procedural knowledge of how to do it. Pedagogical implications will be discussed.

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## **QUALITATIVE CRITERIA BASED VOWEL CHARTS FOR THE ENGLISH SPOKEN BY LEARNERS IN INDIVIDUAL SLOVENE DIALECT REGIONS**

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The present paper discusses the possibility of developing vowel charts of the English spoken by Slovene learners for each individual dialect group in Slovenia based on qualitative rather than quantitative judgements, the latter being the case of vowel charts for the mentioned dialect groups in Slovenia.

The analysis and chart design will draw from data gained in a previous pan-Slovenian study of the pronunciation of English in Slovenia (2007). Since the respondents involved in the study were chosen with the help of the ANN (Artificial Neuron Network) program (2017), which should vouch for the sample of 287 respondents from 35 primary and secondary schools to represent the situation of the pronunciation of English by Slovene learners for the entire Slovenian territory, the latter assurance should also hold for the pronunciation of English across the seven Slovene dialect groups. When the results across the 7 dialect regions were compared (in the 2007 study based on auditory impressions), the differences in the pronunciation of English in Slovenia showed most pronouncedly in the case of vowel sounds and specifically across the seven Slovene dialect groups ('magnet effect' discussed in 2014).

The resulting designs of vowel charts of the English spoken by Slovene learners across Slovenian dialect regions (produced with the help of the PRAAT computer programme available on the internet) could encourage the creation of vowel charts for individual Slovene dialects per se based on qualitative distinctions. Such charts would have been very useful in the initial phases of the 2007 study when contrastive analysis between English sounds and Slovene (dialect) sounds was carried out as the basis for the mentioned research.

The vowel chart for Standard Slovene demonstrating qualitative distinctions between vowel sounds in the Slovenian vowel system has already been made by Šuštaršič/Komar (1999).

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## **IS ACCENT FAMILIARITY & RATER BIAS: AN INVESTIGATION WITH RATERS AND EFL SPEAKERS FROM FOUR TYPOLOGICALLY CLOSE L1s**

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Reliability and fairness are important in language assessment. Previous research suggests that both trained and untrained as well as native and non-native raters can assess L2 speech relatively constantly, and that rating experience, phonetic and/or linguistic training, and specific rating instructions increase the inter-rater reliability (Thompson, 1991; Cucchiariini et al., 2022; Derwing et al., 2004; de Wet et al., 2009; Xi & Mollaun, 2009; Huang et al., 2016). However, raters' backgrounds can contribute to their perception and attitudes towards non-native accents, which, in turn, can affect their rating behavior and contribute to undesirable test score variance. Yet there is no consensus on the effect of accent familiarity on L2 speech assessment: some studies have found evidence for accent-based rater bias (Winke et al., 2013), while some have not (Xi & Mollaun, 2009).

In previous studies the L2 speakers and raters have generally had L1s that are typologically distant from each other. However, the attitude towards one's own non-native accent can also vary from negative to positive (Dewaele & McCloskey, 2015). The current study investigates raters and speakers from typologically close L1s: the EFL speakers (N = 56) and raters (N = 40) come from same four language backgrounds with either Polish, Czech, Slovak, or Hungarian as their L1 (see detailed description of data in Kallio et al., 2022). All raters were university students with either phonetics or English as their major, and they participated in a training session prior to the assessment task.

The objective of this study is to investigate the effect of rater L1, speaker L1, and accent familiarity on assessments of EFL pronunciation and prosody production. Rater bias is studied by comparing grade distributions based on rater L1, speaker L1, and guessed L1 (provided by raters for each speech sample). Preliminary results show that the grade distributions are more even when based on guessed speaker L1 than real speaker L1, indicating that the raters attempt to be fair in their judgements. However, some L1-based effects on L2 assessments are visible. In my presentation I will discuss the implications of this study to L2 assessment and further research.

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## **ABSTRACTIONS VS. EXEMPLARS IN THE VARIATION IN GLASGOW ENGLISH PRECONSONANTAL /r/**

**Kamil Kaźmierski**

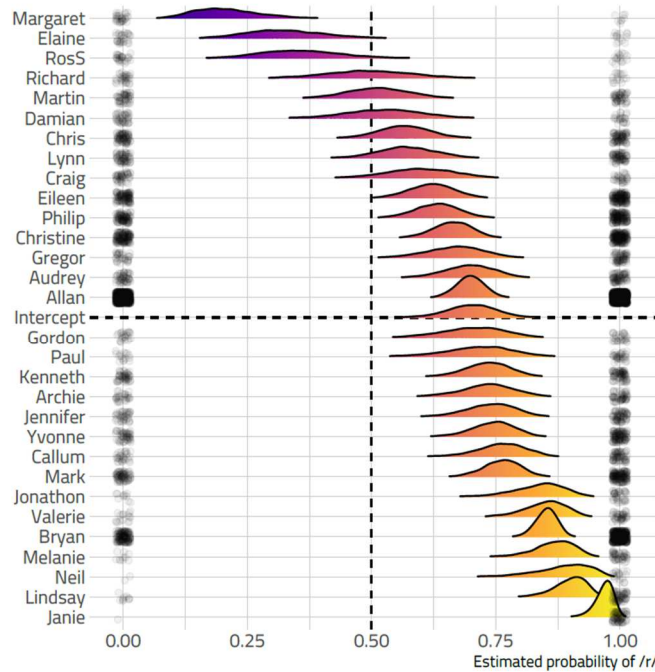
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Scottish English accents are generally thought of as rhotic, with /r/ being realized as a consonant (usually one of: [r, ɾ, ɹ]) regardless of syllabic position. However, there is considerable variation with regard to both the quality of, and the presence/absence of pre-consonantal /r/ in Scottish English accents (Schützler 2010; Meer et al. 2021), including Glaswegian (Stuart-Smith et al. 2015; Sóskuthy et al. 2020).

This paper uses the recordings and annotations of the HCRC Map Task Corpus (Anderson et al. 1991) to investigate the variability in the realization of pre-consonantal /r/ in Glasgow English. The relationship between the gender of the speaker, as well as their familiarity with the interlocutor, and the presence/absence of pre-consonantal /r/ will be described. Additionally, the dataset will be used to probe for evidence of abstract representations versus exemplars in the storage of /r/.

A statistically significant influence of the interaction between talker familiarity and word identity on the likelihood of the presence of pre-consonantal /r/ will be taken as supporting exemplars. A statistically significant influence of a clearly definable phonological context (that is a natural class of preceding vowels) on the likelihood of the presence of pre-consonantal /r/ will be taken as supporting abstract representations.

Preliminary exploration of the data set has been conducted by fitting a Bayesian mixed-effects logistic regression model of the presence/absence of /r/ as a function of by-speaker and by-word varying intercepts (an intercept-only model). An inspection of the by-speaker varying intercepts (see Figure 1) has revealed a considerable degree of individual variation with regard to the probability of producing pre-consonantal /r/, vividly indicating the need for by-participant random effects in regression modelling of naturalistic speech data.



**Figure 1: Estimated probabilities of retaining a pre-consonantal /r/ for each speaker in the corpus (densities of posterior samples of estimates of by-participant varying intercepts). Each dot is one token: either non-rhotic (at 0) or rhotic (at 1); transparency added to reduce overplotting.**

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## THE INTERACTIONS AMONG AUDITORY INPUT, LEARNER CHARACTERISTICS, AND SECOND LANGUAGE SPEECH PERCEPTION

**Andrew Lee**

It has been well established that accurately perceiving nonnative sounds poses a substantial challenge for second language (L2) learners (Best & Tyler, 2007; Flege, 1995). Previous studies (e.g., Derwing et al., 2022) have reported multiple factors that influence the difficulty in L2 speech perception, such as cross-linguistic influence, age, length of residence, and orthographic effects. In this line of research, there is still a need for further research on factors related to auditory input. Hence, the present study investigates the ways in which and the extent to which L2 speech perception is influenced by talker variability and lexical frequency in auditory input. More importantly, the current study examines how they interact with individual differences, particularly working memory, receptive vocabulary knowledge, and L2 proficiency.

To this end, 120 Korean learners of English participated in an experimental study. Using 28 English words (14 minimal pairs) of varying lexical frequency, the current study targeted the /i/-/ɪ/ phonemic contrast in English, which is notoriously difficult for Korean learners of English (Kim et al., 2018; Lee & Lyster, 2016). Each participant completed one of three AX discrimination tasks (i.e., 40 participants per task). Each task included 336 target trials with the same 28 words, but with varying numbers of talkers: two, six, or twelve. The participants also completed a digit span task that measured their working memory capacity and the Lexical Test for Advanced Learners of English (LexTALE) that measured their receptive vocabulary knowledge. Their general English proficiency was assessed based on their Test of English for International Communication (TOEIC) scores.

Results show not only the roles that talker variability and lexical frequency play in L2 speech perception but also how they interact with individual cognitive and proficiency differences across L2 learners in the perception of L2 speech. Specifically, low-frequency words in the high talker variability condition were the most difficult to perceive for the L2 learners, whereas high-frequency words in the low talker variability condition were the easiest to perceive. In their perceptual accuracy of L2 speech, individuals with higher working memory were less influenced by talker variability. Similarly, individuals with higher receptive vocabulary knowledge and with higher L2 proficiency were less influenced by lexical frequency. This presentation will conclude by highlighting the significant roles that variability in auditory input and learner characteristics play in L2 speech learning, in addition to providing a useful empirical foundation for individualized L2 pronunciation training.

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## **DIFFUSION OF PHONETIC LEARNING WITHIN PHONOLOGICAL NEIGHBORHOODS**

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Phonological neighborhood density is known to influence lexical access, speech production as well as perception processes (Luce & Pisoni, 1998; Vitevitch & Luce, 2016). Lexical competition is thought to be the central concept from which the neighborhood effect emanates: highly competitive neighborhoods are characterized by large degrees of phonemic co-activation, which can delay or facilitate speech recognition and production (Wedel, 2004; Yiu & Watson, 2015). Using spoken learner corpus data, the present study investigates the advancement of phonetic learning of plosive consonants in English as a foreign language in relation to neighborhood density to see whether dense or sparse neighborhoods are more conducive to the incorporation of novel phonetic detail. In addition, the effect of minimal pairs on neighborhood competition is explored, as well as the difference between experimentally elicited and spontaneous conversational speech. Results indicate that sparser neighborhoods with weaker competition show the furthest advancement of phonetic learning; the presence of a minimal pair also affected neighborhood acoustics, suggesting that lexical competition plays a defining role in the dissemination of phonetic updates in the lexicon of foreign language learners.

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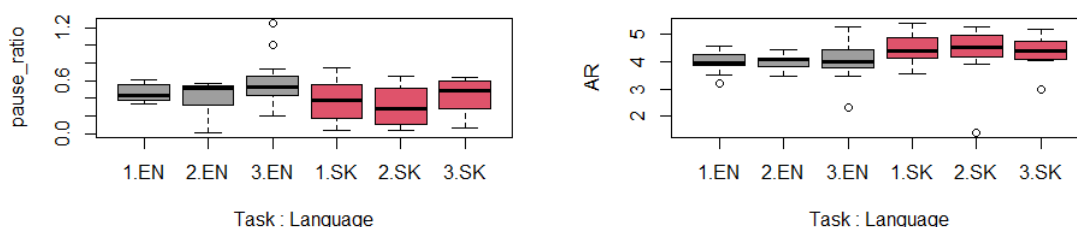
## RELATIONSHIP OF TASK COMPLEXITY AND L1 VS. L2 SPEECH FLUENCY

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Most of the approaches towards speech fluency involve a description of disfluency. Silent and filled pauses, repetitions and repairs are the most significant disfluency indicators. Their frequency tends to rise with rising task complexity. and the effect of task complexity on speech fluency has been examined already in various languages [1, 2, 3]. However, it seems that none of these studies considered a possible correlation between the way L1 and L2 speech fluency changes under the influence of different task complexity. Whether the disfluencies in speech are indicators of L2 non-proficiency or are just a natural reaction to a gradually increasing task complexity remains unanswered.

Our work examines how speech fluency changes under the influence of gradually rising task complexity in both L1 and L2. The current corpus of this ongoing study consists of 72 recordings of spontaneous dialogic speech. The subjects are 12 Slovak native undergraduate students of English. The tasks are based on an information gap game of giving directions and are sequenced into 3 levels.



**Figure 1. The relationship of pausing ratio and task complexity with respect to language (left panel) and the relationship of AR and task complexity with respect to language (right panel).**

We analysed the effect of task complexity (a within-subjects effect) and language (a between-subjects effect) on the number of silent pauses (ratio) and articulation rate (AR) using mixed ANOVA. The first results show a significant relationship between the pausing ratio and language ( $F = 5.913$ ,  $p = 0.018$ ) and the pausing ratio and task complexity ( $F = 3.164$ ,  $p = 0.049$ ), see Figure 1. The interaction of task and language in relation to the pausing ratio does not show significant results ( $F = 0.048$ ,  $p = 0.953$ ). Additional TukeyHSD test showed a significant difference between Task 2 and Task 3 in pause\_ratio ( $p = 0.05$ ) which applies for both languages as can be seen from Figure 1. It seems that L2 contains significantly more pauses than L1 and this pausing frequency varies significantly across tasks in both languages (though the trend for Slovak is surprising).

The way in which the pausing ratio correlates to rising task complexity is not significantly different for Slovak than for English. AR is significantly higher in L1 than in L2 ( $F = 7.378$ ,  $p = 0.008$ ) but does not significantly vary across tasks ( $F = 0.035$ ,  $p = 0.965$ ). The interaction of task and language in relation to AR is not significant ( $F = 0.067$ ,  $p = 0.935$ ).

In line with our expectations, L2 contains more pauses and is slower in AR than L1. It seems that L1 is similar to L2 in the manner of how pausing and AR vary with rising task complexity.

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## **ACCULTURATION STRATEGY AND ITS INFLUENCE ON THE USE OF RHOTICITY BY POLISH ADULT IMMIGRANTS TO WALES**

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When migrating to a foreign country, people often confront various difficulties, including adjusting to a different culture and learning to communicate in a new language. One of the most vital aspects of changing the environment is acculturation, understood as the process of second-culture learning and, at the individual level, it refers to the socialization process by which not-dominant culture individuals (foreign-borns or people representing ethnic minorities) combine their native values, norms, and behaviour patterns with those of the host culture. The choice of acculturation strategy may either accelerate or hinder the process of L2 acquisition (Schumann, 1986; Berry, 1997). Among the variety of second language skills, pronunciation is considered to play a pivotal role in the mediation of immigrants' identity (Piske et al., 2001). The present paper focuses on the pronunciation patterns within the group of ten adult Polish immigrants to Welshpool (Wales).

The purpose of the presented study is to investigate a possible relationship between a chosen acculturation strategy (adaptation or preservation) and the use of rhoticity which is considered to be one of the most salient features of British English pronunciation with its variable use and quality depending on the region (Wells, 1982). Previous studies on the use of rhoticity by Polish speakers (Jaworski, 2010; Jaworski & Gillian, 2011; Stolarski, 2013, 2015; Zająć, 2016; Rojczyk & Zająć, 2017; Matysiak, 2020) point out at the extensive use of taps, mostly in intervocalic and post-vocalic positions. The presented study revealed numerous inconsistencies in the use of rhoticity in English and in Polish.

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## **THE SELF-STUDY OF 'MOOC: ENGLISH PRONUNCIATION IN A GLOBAL WORLD': FUNDAMENTALS OF PHONETICS AND ENGLISH ACCENT VARIATION**

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The paper reports on research in progress with the use of Rupp's (2018) MOOC: English pronunciation in a Global World, an open platform for practising English pronunciation, accessible on any device used by around 101,000 learners in 191 countries. Among three major aims of MOOC Rupp et al. (2022:3) list as follows: providing a free of charge online academic course on English pronunciation, enhancing understanding and appreciation of variation in English accents; and raising awareness and helping combat accent discrimination. Apart from typical activities such as explanatory videos, listen-and-repeat exercises, the platform also offers analytical assignments of near-real life data, peer-review, mentor assistance, experience sharing comments, learner discussions and live sessions. There is a large number of analytical exercises referring to a student's own pronunciation, e.g. "How do you pronounce words like 'turn', 'nurse', 'heard' and 'bird'? What is your native language and does it have the NURSE-vowel?"

The aim of the study is to examine if this online course influences students' pronunciation and expertise in English phonetics and thus if it facilitates pronunciation education. It is also intended to verify if this platform helps the Polish sophomores to become more aware of accent variation and phonetic problems of students of other nationalities.

Around 100 first year students of English, were divided into 3 treatment and 2 control groups. The former was asked to self-study MOOC in the first four weeks of their phonetics course at university. The study started with a written and oral pre-test and consisted of four successive tests and three recording sessions. The participants' weekly task was to self-study one section of MOOC on: introductory topics (accent, intelligibility, credibility, identity, etc.), vowels, consonants and suprasegments, respectively. The students' knowledge was verified in the classroom the following week with the use of a form in Teams and a recording of some words and sentences.

Because the study is still in progress, no final results can be presented at this stage. However, it is expected that this program teaches the students not only pronunciation of some words and basic concepts of English phonetics such as rhoticity, the short-long vowel distinction, linking but that it also enhances their understanding of variation in English accents.

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## SONORANT DEVOICING IN L1 AND L2 ENGLISH PLOSIVE-SONORANT CLUSTERS

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Many languages exhibit phonetic devoicing in specific positions in a word (e.g., initially, finally or in stressed syllables). With regard to English, plosive consonants are found to be especially affected by this process, which is reflected in the abundance of research into obstruent (de)voicing, VOT or aspiration (e.g., Lisker & Abramson, 1964; Docherty, 1992; Cho & Ladefoged, 1999; Hoole, 1999; Abramson & Whalen, 2017; Chodroff & Baese-Berk, 2019). However, devoicing is also observed in sonorant sounds, namely in plosive-sonorant clusters such as *plan* or *troops*. In fact, the devoiced [ɫ] or [ɰ] in these words is a consequence of aspirating the [p<sup>h</sup>] or [t<sup>h</sup>], respectively, which would elsewhere be released into a vowel. If a sonorant follows, it is partially or completely devoiced (Docherty, 1992; Hoole, 1999; Volín, 2002; Laver, 2012; Cruttenden, 2014; Ogden, 2017). In French or Polish, final clusters also typically manifest devoicing, such as in *wiatr* [vjatr̥] ‘wind’ or *quatre* [katR̥] ‘four’ (Sieczkowska, Möbius & Dogil, 2010).

However, not all languages devoice their phonologically voiced obstruents and/or sonorants (Lisker & Abramson, 1964). Czech belongs to languages where phonologically voiced sounds retain phonetic voicing in all positions unless assimilation occurs (thus English *David* [dɛvɪd] but Czech [davɪt]), and sonorants are always voiced, even after voiceless plosives (thus English *play* [pleɪ] but Czech *plavat* [plavɔt], ‘swim’). This scenario suggests that the Czech implementation norms will be incorrectly used in L2 English pronunciation, predicting a lower degree of devoicing in Czech-accented English than in native English production.

Our experiment involves three groups of speakers: 8 native British English speakers, 8 speakers with a strong Czech accent, and 8 speakers studying English at a university level with generally near-native pronunciation. They read the same text with 35 instances of plosive-sonorant clusters. Two measures were taken, assumed to be somewhat correlated: the plosive VOT and the duration of the devoiced part of the sonorant. The groups differed in both measures, with more accented speakers yielding smaller degrees of devoicing. There was unequal strength of the effect in individual clusters and speakers within groups. The lack of devoicing in Czech-accented English is in line with our analyses of dozens of maturita (‘A-levels’) textbooks, in which sonorant devoicing is not mentioned at all (and obstruent devoicing only briefly in some of them). As sonorant devoicing might be of similar importance for comprehension as aspiration, more attention should be paid in TEFL to this phenomenon.

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## **EFFECT OF SPEECH RHYTHM MANIPULATIONS ON NATIVE ENGLISH SPEAKERS' CREDIBILITY**

**Michaela Rabanová & Radek Skarnitzl**

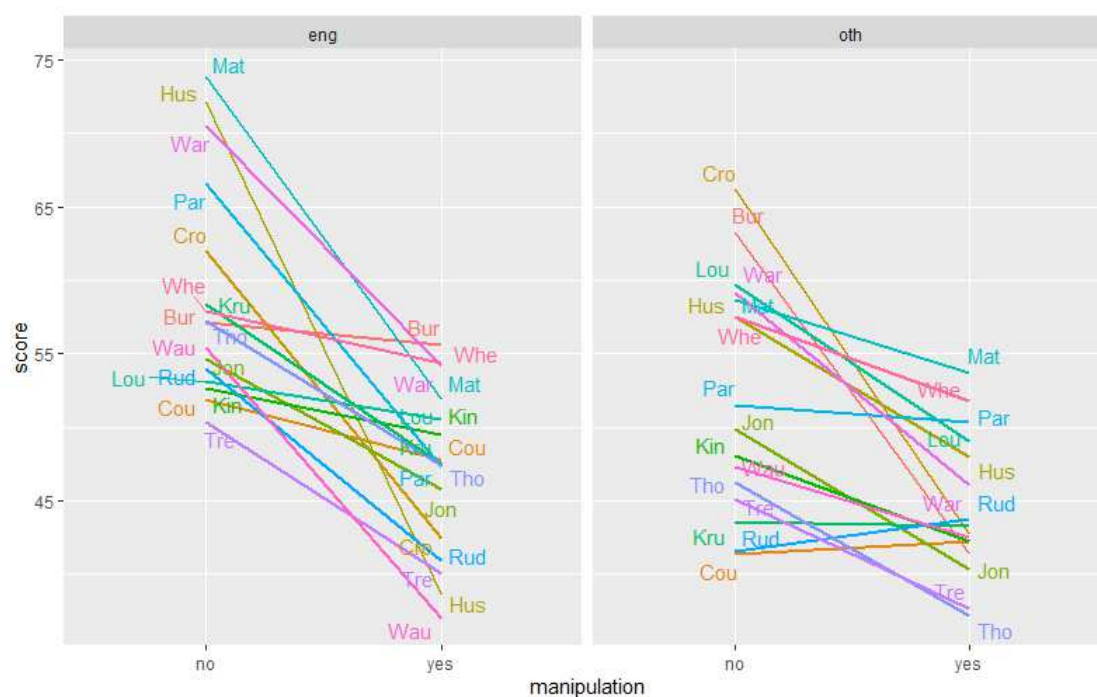
Institute of Phonetics, Charles University

Speech rhythm plays a crucial role in how listeners perceive speech and the speaker: predictability of temporal patterns is of great importance if speech perception is to be smooth (Volín, 2010), and unexpected irregularities in the speech signal result in increased demands for cerebral processing of speech (Grossberg, 2003). Since listeners routinely make implicit judgements about speakers' personality based on their speech (McAlear, Todorov & Belin, 2014), it is not surprising that greater cerebral effort is, in turn, associated with negative perceptions of the speaker.

In an earlier study, Volín, Poesová and Skarnitzl (2014) examined the impact of halving the duration of stressed vowels and doubling that of unstressed vowels; these distortions increased the neuroticism factor in the image of the speaker. Berkovcová, Černíková and Skarnitzl (2016) investigated the effect of tempo fluctuations on the perception of speaker competence and showed that ratings were significantly lower for speakers whose speech rate was manipulated; the difference in ratings remained even if listeners had no knowledge of the language (Spanish), pointing to the importance of predictable speech timing in general.

The present study follows up on the above-mentioned studies by focusing on the credibility of native English speakers. We used 8–10second excerpts of 16 Standard Southern British English speakers (8 females, 8 males), participants in the BBC Radio 4 political discussion *The Westminster Hour*. A manipulated version to each excerpt was created using PSOLA in Praat (Boersma & Weenink, 2022), with stressed vowels shortened and unstressed ones lengthened, but in a more subtle manner than in Volín et al. (2014). The 32 items were used to create a listening test in PsyToolkit (Stoet, 2010; 2017), with original and manipulated items divided randomly into two blocks and items within each block randomized. Online data collection has not finished; so far, the test has been administered to 23 respondents, 8 students of English Studies and 15 active in other fields. Participants are asked to indicate on a visual analogue scale (1–100) how trustworthy in general they find the speaker.

As shown by the preliminary results in Figure 1, mean credibility scores of the rhythm-manipulated items are lower for most speakers, and the difference appears to be more salient in the perception of the “English” group. The presentation aims to feature results of 20 English and 20 other respondents.



**Figure 1.** Mean credibility score of individual speakers by English students (left) and other participants (right) in the original and manipulated version.

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## **HOW IS PHONETIC IMITATION CONDITIONED BY INSTRUCTIONS? EXPLICIT VERSUS IMPLICIT IMITATION.**

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Phonetic imitation is a process whereby a speaker adjusts spectral and temporal properties of his or her speech towards those of an interlocutor (Babel 2012; Pardo et al. 2012; Trofimovich & Kennedy 2014). Previous research has shown that multiple speech properties are subject to imitation such as Voice Onset Time (Nielsen 2011; Shockley et al. 2004), vowel quality and duration (Babel 2012; Pardo et al. 2010; Rojczyk 2013; Zająć & Rojczyk 2014), allophonic variants (Honorof et al. 2011), as well as speaking rate, intensity, or long-term average spectra Gregory & Webster 1996; Namy et al. 2002).

However, our analysis of methodological aspects in studies of phonetic imitation has revealed that frequently instructions given to participants do not clearly specify whether the observed imitation was explicit or implicit. By ‘explicit’ we understand instructions that patently inform participants that they should sound as much alike as a model talker. On the other hand, ‘implicit’ instructions do not encourage participants to copy pronunciation features of a model talker, but rather require them to simply produce or repeat what word they have just heard. To our knowledge, there are no studies that directly compare these two types of instructions and how differently they contribute to the robustness of phonetic imitation.

In the current study, we tested how Polish and Czech university learners of English imitate English words depending on the instruction type. In each language, one group was explicitly instructed to imitate accurately the pronunciation of a model talker, while the other group was asked to produce the word they had just heard without clear expectations to sound like a model talker. The tested parameters were English long VOT values for aspirated /p, t, k/ and vowel shortening/lengthening indicating the voicing contrast of a following obstruent consonant. The results are expected to show how and to what degree the instruction type conditions the degree of imitation.

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## **THE INFLUENCE OF TRANSCRIPTION ON WORD PRODUCTION IN L2 ENGLISH: AN EYETRACKING STUDY**

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Correct pronunciation is considered to be one of the most challenging aspects of learning English (Moyer 1999; Scovel 1988). Accordingly, progress in this skill requires not only high quality exposure (Derwing & Munro 2015), but also providing explicit instructions (Gordon & Darcy 2016) as well as raising explicit metaphonetic awareness (Wrembel 2011). Phonetic/phonemic transcription fulfils the majority of these requirements in that it provides learners with graphic representations of sequences of sounds which are independent of orthographic representations. Our teaching experience points to an observable effect of transcription on progress in correct sound and word productions in L2 English by Polish students. However, it is not known to what extent learners actually rely on transcription when presented with an orthographic representation of words and their phonemic transcription. We assume that there may be individual between-learner differences as well as differences between word tokens.

In order to test it, we designed an eyetracking study during which university students of English were presented with orthographic representations of English words considered to be difficult to pronounce for Polish learners followed by their phonemic transcriptions. The students were asked to pronounce the words without specific instructions on which modality (spelling vs. transcription) they should use. The TOBIIX3-120 screen-based eyetracker was used to measure the students' gaze concentrations defined as AOIs (areas of interest). The results allowed us to analyse how much individual learners relied on orthography and how much on transcription in producing the test words.

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## **STUDENT-TEACHER CONFERENCES IN AN ENGLISH PRONUNCIATION COURSE: GOALS, CHARACTERISTICS, AND VIEWS**

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Instructors and students value student-teacher conferences as an effective pedagogical tool for individualized writing instruction that cannot typically be provided in a whole-class setting (Anderson, 2018; Maliborska & You, 2016; Sowell, 2020). During these one-on-one meetings, there are more opportunities for more timely, targeted, and accurate feedback on students' writing drafts (Anderson, 2018; Keh, 1990), and for students to develop strategies for subsequent writing (Wu & Lin, 2015). In contrast, the value, characteristics and perceptions of student-teacher meetings for individualized oral/pronunciation instruction have not been thoroughly investigated. To fill this gap, this action research study explored the goals, format, length, frequency, materials, topics and overall satisfaction of student-teacher meetings for individualized pronunciation instruction and feedback.

The participants were 24 ESL students taking different sections of an ESL pronunciation course offered to undergraduate and graduate students at an American university, and five instructors of that course. The student-teacher meetings were required, conducted one-on-one in an office outside of class, and offered every two weeks for 13 weeks. The characteristics, goals, and perceived effectiveness of these meetings were identified through a qualitative analysis that triangulated data from learners' responses to three questionnaires, instructors' responses to one questionnaire, and a videotaped oral discussion with a focus group of learners. The results indicated that the instructors and students strongly agreed on the success of these meetings for providing more targeted information based on students' pronunciation needs and wants, individualized feedback, and encouragement on progress. They also strongly agreed that these meetings should be required, out of class, and frequent. The presentation will conclude with a discussion of the perceived beneficial aspects of these student-teacher meetings, and recommendations of practice for pronunciation instructors looking to incorporate them into their ESL/EFL curriculum.

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## **WHEN THE “LET IT PASS” STRATEGY WILL NOT DO: A MULTIMODAL STUDY OF HOW PRONUNCIATION-INDUCED COMMUNICATION BREAKDOWNS ARE MANAGED DURING NS-NNS CONVERSATIONS**

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The paper offers further findings from the exploration of communication breakdowns (CBs) found in the English section of the SITAF tandem corpus. The corpus (Authors 2015) contains video recordings of face-to-face interactions held by 21 pairs of undergraduate students, each consisting of a native speaker of English and a native speaker of French. The tandems were recorded in two sessions, three months apart, each time performing collaborative reading and semi-spontaneous conversation tasks (story-telling and debating) in both languages. Unlike the bulk of previous research, which examined L2 miscommunication within markedly asymmetrical constellations such as the L2 classroom or migration contexts (e.g., Guido 2017; Varonis & Gass 1985), ours will be focusing on the ways in which pronunciation-induced CBs get managed by naïve (= non-teacher) interactants in a non-formal setting, where the NS tandem partner is an empathizing peer. The problem-solving strategies adopted by the participants are therefore shaped by the linguistic, intercultural and psychoaffective setting specific to tandem exchanges, which are based on reciprocity and solidarity (Brammerts & Calvert 2003).

We will be looking at cases where it was the non-native participant's output that was the main communicative stumbling block, with a view to reporting on:

- the frequency and types of communication problems identified, such as misunderstanding, lack of understanding, avoidance;
- the most likely nature of the problems (e.g., segmental / suprasegmental);
- the ways in which the mis- or lack of comprehension manifests itself and is signalled to the interlocutor (verbal / vocal / visual / multimodal cues);
- how the interactants collaboratively negotiate meaning, and how the speaker consequently modifies their output to resolve the communication problem.

Our preliminary results reveal that NNS pronunciation seems to be a major factor in 56% of all CBs identified in the English conversation tasks (34 out of 61 instances; no clear bias towards segmental or suprasegmental), lack of understanding is more frequent than misunderstanding, and multimodality is paramount in dissecting interactional behaviour. Given that the overwhelming majority of those CBs get successfully resolved, our study provides further evidence that prior linguistic or pedagogic training is not a prerequisite for being able to overcome communication breakdowns arising in NS-NNS conversations. The paper will show how those pronunciation issues are dealt with in a highly collaborative manner, through multimodal communication strategies (Gullberg 2011), in keeping with the tandem learning environment, where the relation between the participants is relatively non-hierarchical and reversible.

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# ASYMMETRICAL EQUIVALENCE CLASSIFICATION – CLUSTER AFFRICATION VS. LENIS STOPS IN THE SPEECH OF POLISH LEARNERS OF ENGLISH

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According to the Speech Learning Model (Flege 1995), successful acquisition is facilitated by the formation of new phonetic categories in the L2. However, category formation may be hindered by equivalence classification (Flege 1987), in which speakers perceptually merge L1 and L2 sounds, and fail to attend to phonetic differences between them. This means that if cross-language phonetic interaction (L1 interference on L2, or vice versa) is observed in one phonetic parameter but not another, we may conclude that equivalence classification has taken place only in the interacting parameter. For example, Herd et al. (2015) studied L1 phonetic drift of US English speakers learning Spanish as an L2, and found interaction in the vowel system, as well as in the production of lenis stops /bdg/, but not in the production of fortis /ptk/. These results suggest equivalence classification between English and Spanish vowels, as well as between English and Spanish voiced stops, but not between English and Spanish voiceless stops.

This study examines L1 Polish learners of English, including a phonetic parameter that has received minimal attention in the L2 speech literature: affrication of /tr/ and /dr/ clusters in English. Two groups of speakers (B1-level ‘students; C2-level ‘teachers’) produced word lists containing both initial /tr/ and /dr/ clusters, as well as singleton voiced stops /bdg/. We recorded 1291 total items. Cluster-initial items were coded as correct if they were produced with affrication; /bdg/-initial items were coded as correct if they were produced without L1-style pre-voicing. Results (see Fig. 1) revealed an asymmetry: both groups had a hard-time suppressing pre-voicing in /bdg/, but were successful in producing affricated clusters. We may conclude that a new category has been formed for the clusters, but not for the singleton stops. Phonological implications of this finding will be discussed.

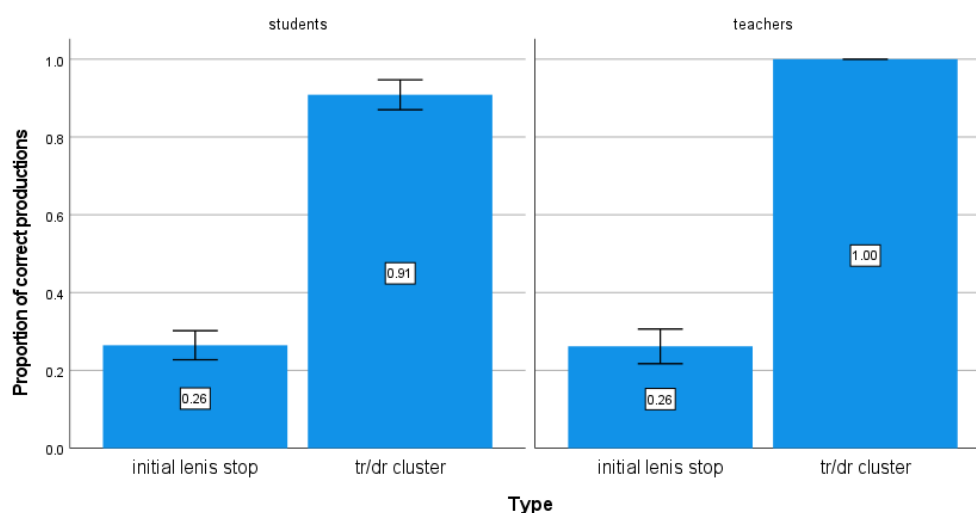


Figure 1. Proportion of ‘correct’ productions with affricated clusters and unvoiced lenis stops

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## **L2 SPEAKING ANXIETY AND L2 SPEAKING FLUENCY**

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Foreign Language Anxiety (FLA) is an important sociopsychological factor and a source of individual differences in the acquisition of foreign languages (Teimouri et al, 2019). FLA is known to have a negative effect on language achievement, since it hinders learners' ability to perform in a FL class successfully (Horwitz et al, 1986). Despite extensive previous research on FLA, L2 speaking anxiety (the feelings of nervousness when speaking the target FL) and its influence on L2 speaking fluency is currently under-researched, even in instructed FL classrooms where learners report speaking-oriented activities, especially oral presentations, to be highly anxiety-evoking (Price, 1991; Young, 1990). Moreover, typically, FLA has been assessed subjectively through questionnaires and interviews, but more recent research (Gregersen et al, 2014) includes physiological measures of emotional arousal, such as the heart rate (HR) and the electrodermal activity (EDA), which are variations in the electrical characteristics of the skin based on the state of sweat glands in the skin. Nonetheless, the relationship between subjective and physiological measures of speaking anxiety are still not well understood.

The present study investigates the distress levels (HR, EDA) generated by two oral presentation contexts (one-to-one vs. public), their influence on L2 speaking fluency, and the extent to which they align with post-task perceptions of speaking anxiety (by speakers and their audience). Sixty-seven EFL learners performed 4 speaking tasks in counterbalanced order differing in task complexity/difficulty (descriptive vs. argumentative) and presentation mode (public: in front of a small audience of 7 vs. individual: in front of a single person) while wearing an unobtrusive physiological sensor on their wrist. They also performed comparable speaking tasks in the L1. After task performance, participants self-assessed their distress through questionnaires and an idiodynamic task (Gregersen et al, 2014) where learners self-assessed their levels of distress as they watched the video recording of their own speaking performance. Individual differences in proficiency, vocabulary size and working memory were controlled for. These data, currently under analysis, is expected to uncover insights into the relationship between speaking anxiety and linguistic dimensions of oral performance.

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## **ERASING THE 'ETHNIC' IN OUTER CIRCLE ENGLISH ACCENTS: THE CASE OF NAMIBIAN ENGLISH**

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New Englishes, that is, English varieties from the postcolonial Outer Circle, have typically been emerging in multi-ethnic and multilingual national environments (Schneider 2007). The socio-phonetic literature on New Englishes typically assumes that they are prone to transfers from native languages. Meanwhile, little attention has been paid to the possibility that New English accents may develop ethnolinguistically neutral forms. This paper addresses this research gap by taking a qualitatively contextualised variationist approach to sociophonetic data. These data come from Namibian English, an emerging New English that has already received much scholarly attention since it began developing lingua franca functions only three decades ago and thus offers a quasi-real-time vantage point on how new varieties develop. The sample includes 94 young urban Namibian high-school learners representing the most prominent ethnolinguistic groups in Windhoek, Namibia's capital city.

Since Namibia is a post-apartheid society, these ethnolinguistic groups include 'Whites' and 'Coloureds', both with Afrikaans as a native language, and 'Blacks' with Bantu and Khoesan native languages. The sample includes equal numbers of men and women, while making a distinction between government and private school learners, which coincides with a distinction between middle and lower classes in Namibia's context.

The data are elicited via reading tasks in both English and the informants' respective native languages. Additionally, the informants are administered sociolinguistic interviews on their attitudes towards foreign and local English accents. Vowel variation patterns among the informants reveal polarization between Whites and government school Blacks. They also reveal an ethnoracially heterogeneous variety cluster located in between the White cluster and the government school Black cluster and displays combined Coloured, female, and private school associations. Another momentous finding is that lower classes and men tend to transfer native language vowel patterns into their English varieties. In contrast, middle classes and women seem to be developing English accents that often form compromises between different native language phonetic systems. The sociolinguistic interviews suggest that Non-White middle classes and women are leaders in using English as the only interactional medium, which creates scope for the consolidation of a new High-status English variety, as well as peer-pressure for using neither 'ethnic accents' nor 'fake American Youtube accents'. The study concludes with support for Mesthrie & Bhatt's (2008) contention that postcolonial English varieties (New Englishes, English as a Second Language or 'ESL' varieties) develop differently from English as a Foreign Language ('EFL') varieties.

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## **AUTOMATIC PLACEMENT OF VOWEL ARTICULATIONS IN THE IPA VOWEL DIAGRAM**

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In a series of articles, Pfitzinger (1995, 2003, 2005) proposes several models for automated prediction of the location of vowel articulation in the IPA Vowel Diagram. These algorithms were developed using multiple linear regression analysis and are based on the placement of German vowels in the Diagram by trained phoneticians. The models use pitch and formant measurements as input and output x-y values for the coordinate system Pfitzinger devised for the Vowel Diagram.

The present project introduces a new approach to automatic placement of monophthongs in the IPA Vowel Diagram that eliminates many of the shortcomings found in Pfitzinger's proposals. It is based on actual Cardinal Vowel articulations recorded by different phoneticians. For each of these articulations mean values of F0 and the first three formants normalized in Miller's (1989) Auditory-Perceptual Space were obtained. Additionally, each Cardinal Vowel was assigned values in an x-y coordinate system based on the dimensions of the 2015 IPA Vowel Diagram version. All these data were used to train two separate artificial neural networks to predict the x and y coordinates of vowel articulations. Finally, the neural networks were employed in a prototype of free and open-source software available at [vowelmeter.pythonanywhere.com](http://vowelmeter.pythonanywhere.com).

In order to test the precision of the models, validation tests were performed. The results of these test indicate that the accuracy of the software varies locally along different dimensions of the Diagram. As a consequence, in order to draw meaningful conclusions, a representative sample of different recordings of the same vowel should be analysed.

The software may be useful in any research on the differences in vowel quality across different languages and also dialects of the same language. In the future, the models could also be further developed and used in computer programs to teach pronunciation.

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## THE EFFECT OF LANGUAGE ANXIETY ON (DIS)FLUENT MONOLOGUE SPEECH

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One of the negative affective factors in second language acquisition, language anxiety, has long been associated with cognitive processing difficulties (MacIntyre & Gardner, 1994; Piechurska-Kuciel, 2008). Eysenck et al.'s (2007) attentional control model explicates that an anxious speaker perceives a task as threatening and divides his attention between task-relevant and task-irrelevant thoughts. This shift of attention from the task itself to the stimulus perceived as threatening leads to switching off the automatic processing mechanisms, necessary for fluent performance. Therefore, cognitive fluency (Segalowitz, 2010), reflecting a speaker's efficiency of performing the underlying processes responsible for speech planning and production, may vary in groups of anxious and non-anxious language learners.

The aim of the study, which is a part of a larger project Fluency and Disfluency Features in L2 English (FDF2), is to examine whether anxious and non-anxious learners of English differ in the efficiency of their speech production processes, measured with the temporal aspects of spoken language, associated with utterance fluency (speech rate, articulation rate, number of silent pauses, repetitions per minute and filled pauses per minute) (De Jong, 2016; Lintunen et al., 2020).

The following research questions are proposed:

1. Which temporal aspects of (dis)fluency are related to levels of language anxiety, fear of negative evaluation and communication apprehension?
2. To what extent do anxious and non-anxious learners of English differ in temporal (dis)fluency aspects?

The samples of L2 monologue speeches from 64 participants were collected and analysed quantitatively for temporal fluency. The levels of language anxiety were measured with the Foreign Language Classroom Anxiety Scale (FLAS) developed by Horwitz et al. (1986). Several statistical analyses were conducted in order to address the research questions. The findings of the study lead to important pedagogical implications concerning L2 spoken language teaching.

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## **NON-NATIVE PROSODIC DEVIATIONS FROM AMERICAN ENGLISH NORMS AND THEIR IMPLICATIONS FOR ACCENTEDNESS: THE CASE OF POLISH L1**

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Across the world's languages, we find four primary acoustic means of signaling prominence – duration (D), pitch (P), loudness (L), and (non-)reduction of vowels. English, somewhat exceptionally, utilizes all four (Chrabaszcz, et al., 2014) in trading relations (Howell, 1993), potentially making mastery of English prosody challenging for ESL/EFL learners.

In this study, intuitively accessible features representing the three suprasegmental (D/P/L) prosodic signals are extracted from two subsets of the Speech Accent Archive (Weinberger, 2015) – Polish speakers of English (PE) and native General American English (GAE) speakers. Those descriptive features are used to examine ways in which PE prosody deviates from that of GAE speakers, and how predictive those deviations are with respect to the perceived accentedness of the PE sentences.

Research on prosody frequently uses (highly technical) descriptive features – e.g., the 1000's in the openSMILE suite (Coutinho, et al., 2016). But, for this study, a small set of simple features was chosen instead, given that eventual utilization in ESL/EFL didactic contexts was a consideration. The selected descriptive features are both from whole sentences (pause-to-speech ratio/D, speaking rate/D, pitch dynamism/P, and loudness dynamism/L) and from syllable triplets (D/P/L center syllable values and left & right deltas, plus inter-syllable gaps/D). All of the features are automatically extracted, and normalized, after manual review/correction of word boundaries.

There are three steps in the basic analysis pipeline. First, the GAE data are used to construct a simple statistical model for each prosodic feature – estimating native speaker population norms. Those normative GAE models are, in turn, used to characterize the degree to which the observed PE feature values deviate from native-like productions. Finally, the collected feature deviances from each PE sentence are analyzed with respect to the sentence's mean accentedness score (as assessed on a 5-point scale by four GAE speakers).

Results show that the observed PE deviations from GAE prosodic norms generally correlate with judgments of accentedness. However, across the range of D/P/L prosodic features, there is substantial variation in the degree of correlation. This paper examines the relative strengths of association for the features (both individually and sub-grouped), especially with respect to their synergistic combination. It, additionally, gives consideration to (1) the features' potential utility for predicting human accentedness judgments (e.g., in an automated assessment context) and (2) their potential yield as foci for accent mitigation (e.g., in an ESL/EFL context).

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## CONSONANT CLUSTER VARIATIONS IN HONG KONG ENGLISH: AN ATTITUDINAL STUDY

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Growing evidence suggests the linguistic systematicity and acceptance of Hong Kong English (HKE), which has emerged as a field of scholarly interest (e.g., Hansen Edwards, 2019; Setter, 2008; Setter et al., 2010). Despite substantial literature on HKE, research to date tends to be devoted to identification of features and investigation of attitudes towards the variety. Attitudes towards features of HKE have been under-explored. Given that people are often judged and stereotyped by how they speak, language learning and production are inextricably linked with social expectations. Investigating attitudes towards not only HKE as a whole but also its specific features can provide a broader understanding into the expectations associated with its use.

This study examined the impact of consonant cluster variations (CCVs) on Hong Kong university students' attitudes towards HKE. The CCVs studied include word-initial (e.g., broadly ['brɔːd.li:] as ['blɔːd.li:]) and word-final ones (e.g., important [ɪm'pɒ.tənt] as [ɪm'pɒ.tən]). Using the matched-guise technique (MGT), we explored participants' perception of the accent in terms of (1) status and solidarity, (2) position of CCVs within a word, and (3) appropriateness in contexts (a) differing in formality and (b) involving native and non-native interlocutors. Participants rated four speech samples recorded by the same HKE speaker reading the same English passage.

Participants were 354 students from an English-medium university in Hong Kong who spoke Cantonese as their first language (L1). (1) In relation to both status and solidarity, CCVs led to a more negative perception of the HKE accent, suggesting that the more HKE differs from L1 accents, the more it is associated with a lower status and solidarity. (2) Specifically, word-initial CCVs were perceived more negatively than word-final ones, probably because onset clusters are more perceptually salient than coda ones. (3a) Regardless of whether CCVs were present, the students showed higher tolerance towards the use of the HKE accent in less formal English-speaking situations. This agrees with previous findings (e.g., Chan, 2013, 2016) that speakers show fewer reservations to HKE in more informal contexts. (3b) However, the perceived presence or absence of 'native' interlocutors had no noticeable impact on the students' judgment about the appropriateness of the accent. A possible explanation concerns the indigenisation of HKE norms, a process which has gradually made HKE pronunciation more adaptable to local contexts. The findings imply that CCVs have a considerable impact on attitudes to HKE and point to internal variations within the construct of 'attitudes to HKE.'

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## SYSTEMATIC REVIEW: THE IDENTIFICATION OF SEGMENTAL MANDARIN-ACCENTED ENGLISH FEATURES

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Segmental Mandarin features are commonly assumed to affect, as an L1 transfer factor, native Mandarin speakers' English production. However, there is a research gap in systematically synthesizing segmental Mandarin-accented English features (MAEFs) from the existing literature. This systematic review sets out to answer one research question "What are segmental Mandarin-accented English features?". In addition to addressing the research gap, this research also attempted to account for MAEFs by analyzing two Second Language Acquisition models (Speech Language Model, SLM (Flege, 1995) and Perceptual Assimilation Model, PAM (Best, 1995)), and explored other potential factors, including Onset Age of Acquisition (AoA) and Length of Residence in Target-language Speaking Countries (LoR).

The author used eleven search terms on nine databases and obtained 1,224 papers. After screening with eight criteria, 20 papers were included as evidence base. During data extraction, both significant MAEFs (which were the MAEFs that are significantly different from native English features) and insignificant results (which were the MAEFs that were insignificantly different from native features) were extracted. This process yielded 65 MAEFs: 37 vowel features, 21 consonant features, and seven nasalance features. Three criteria were developed to determine the strength of evidence for MAEFs results, and to highlight four key MAEFs: 1) variations in vowel height and frontness for vowels /i, ɪ, e, æ, u, ʊ/ and vowel contrasts /i-ɪ/, /e-æ/, /u-ʊ/; 2) the occurrence of schwa epenthesis, i.e., inserting a schwa-like sound after the word-final consonant; 3) variations in the closure duration of plosives; 4) variations in consonant deletion.

The four key findings were discussed respectively, in relation to conflicting results, affecting factors and SLA models, potential intelligibility impacts and implications in English Language Teaching (ELT) practice. Regarding the AoA and LoR factors, in general, there was insufficient evidence supporting the correlation between the factors and MAEFs within the current evidence base. However, one out of 20 studies did indicate that the Mandarin English speakers with longer LoR might have a more successful acquisition of cross-word consonant coarticulation (e.g., /kip 'peɪs/ for keep pace), compared with the speakers with shorter LoR. In terms of the theoretical explanations for MAEFs, although the two models were not applicable for many MAEFs, the SLM (Flege, 1995) appeared to be able to explain more segmental MAEFs than PAM. This work will be beneficial for ELT practitioners, researchers interested in Mandarin accent, and native listeners who have frequent interlocutions with Mandarin English speakers.

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## **WORKSHOP**

### **Accents and Automatic Speech Recognition (A 45-minute workshop with 2 presentations and a discussion)**

**Miguel del Río, Corey Miller, Ján Profant, Shipra Chandra, Nishchal Bandari, Ilya Pirkin, Migüel Jetté & Peter Ha**  
Rev.com

**Ryan Westerman**  
Zoom

### **PRESENTATION 1: INTRODUCTION TO ACCENTS AND AUTOMATIC SPEECH RECOGNITION**

Automatic Speech Recognition (ASR), also known as Speech-to-Text (STT), is a technology that produces orthographic transcription of human speech in audio/video files, or streamed through microphones. It is used in a variety of applications, such as command and control (car, Siri, Alexa...), call centers, and content transcription, which will be our focus.

Most ASR software today is monolingual. An English ASR “language package” converts English speech into text, and would typically be trained on large amounts of orthographically transcribed English speech. That speech typically comes from inner circle (Kachru 1992) native English-speaking populations. Consequently, ASR performance, measured by word error rate (WER), is lowest (best) for such populations.

Since non-native English speech from the inner circle, and all speech from the outer circle and expanding circle are less well sampled in typical English ASR training regimens, performance on these populations is significantly worse than for inner circle native speakers. We review methods proposed to improve ASR accent performance and discuss the potential for bias and means for mitigating it. This sets the stage for the next presentation, which is a case study using a new accents corpus created by Rev.com.

## **PRESENTATION 2: EARNINGS-22: A MACHINE BENCHMARK FOR ACCENTS IN THE FINANCIAL DOMAIN**

Modern Automatic Speech Recognition (ASR) systems have achieved superhuman Word Error Rates (WER) on many English Speech-to-Text (STT) testing corpora despite lacking adequate performance in real-world settings. Moreover, there is a distinct lack of accented English speech in STT training corpora making further improvements to mitigate biases against accented speakers hard to achieve.

To highlight this discrepancy in ASR performance over various accents by focusing on a case-study of earnings calls, we present Earnings-22: a 119-hour corpus of 125 English-language earnings calls gathered from global companies. Financial conversations cover a broad range of topics, use rare and novel words such as company or product names, and a wide range of currency amounts and other quantitative measures, all of which are extremely important to properly recognize and understand the financial state of a company. In scenarios like these, improper recognition of speech can lead to catastrophic misunderstandings with financial consequences. Using company headquarter locations as a heuristic to identify accents, we compare four commercial models to show the degradation in performance over seven accent groupings illustrating variation in accent-specific performance. We highlight errors common to the transcriptions of all four ASR systems.

We release Earnings-22 to provide a free-to-use benchmark of real-world, accented audio to bridge academic and industrial research.



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