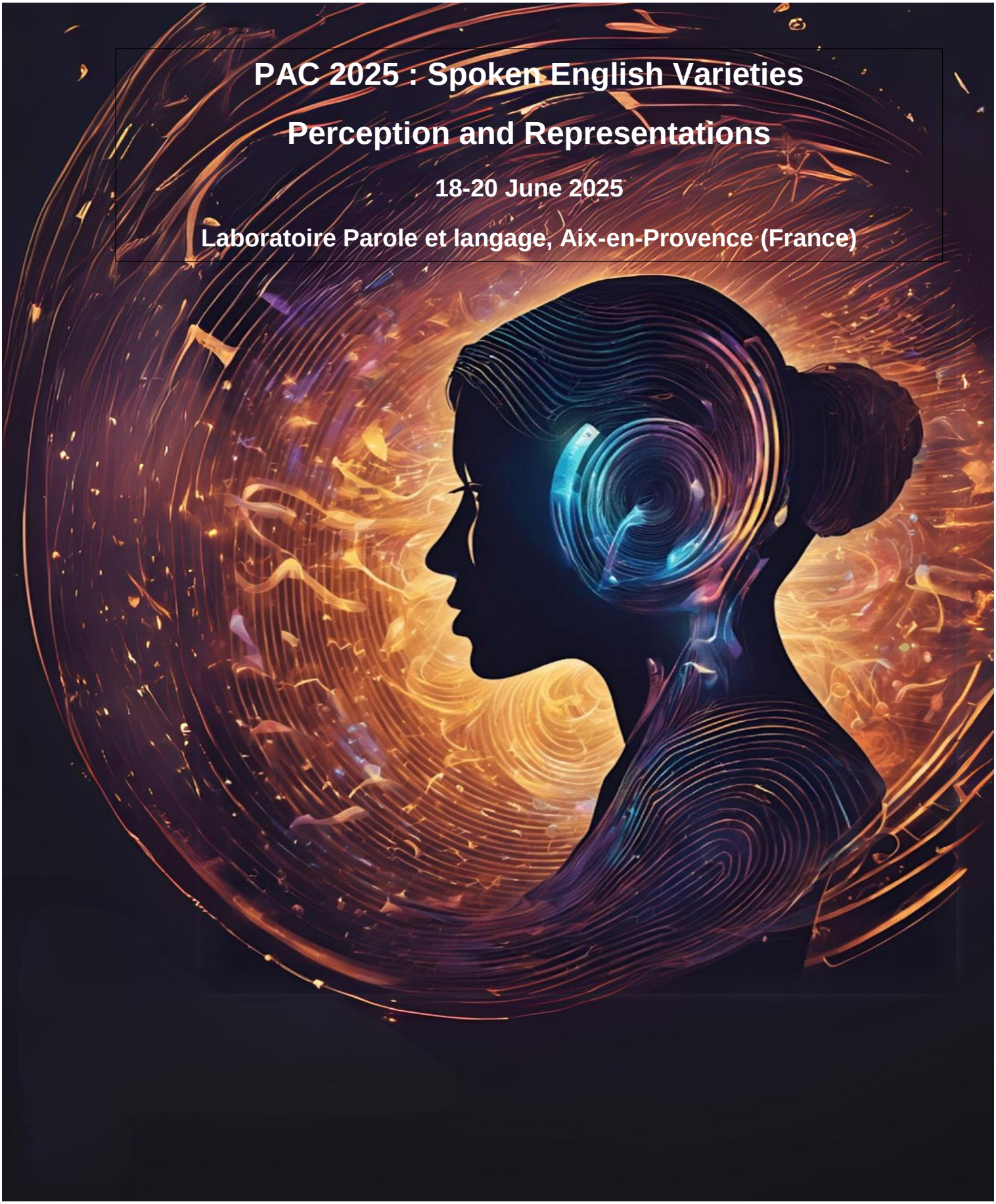
PAC 2025 : Spoken English Varieties

Perception and Representations

18-20 June 2025

Laboratoire Parole et langage, Aix-en-Provence (France)



PAC 2025 : Spoken English Varieties
Perception and Representations

18-20 June 2025, Aix-en-Provence (France)

Wednesday, June 18th

- **9:30-12:30 - Workshop "Perception Experiments"**

*Intervention by **Paolo Mairano** (University of Lille).*

From 1:15 - Registration & coffee

Start of the conference

- **2:15-2:30 - Welcoming speeches**
- **2:30-3:00 - Session 1 - Introduction**

Cécile Viollain (Paris Nanterre University), **Sylvain Navarro** (Paris Cité University), **Sophie Herment** (Aix-Marseille University), **Anne Przewozny-Desriaux** (University of Toulouse Jean Jaurès), *Representing sociolinguistic variation around the English-speaking world based on small phonological corpora: achievements and current challenges within the PAC program.*

- **3:00-4:00 - Keynote speaker:**

Sophie Dufour (Aix-Marseille University), *How do French listeners process phonemic variants that do not belong to their own regional variety?*

4:00-4:30 Coffee break

- **4:30-6:00 - Session 2 - Perception L2 by L1**

Victoria O'Callaghan, Anne Przewozny-Desriaux, Julie Lemarié (University of Toulouse Jean Jaurès), *How does French-accented English impact word recognition and comprehension in an academic context? From isolated words to speech.*

Ioana Dejeu (Paris Nanterre University), *Auditory evaluation of the pronunciation of /r/ in French learners by native speakers of English.*

Marine Mouquet (Aix Marseille University), **Paolo Mairano** (University of Lille), *Does orthography-driven pronunciation affect L2 English comprehensibility?*

6:00-7:00 - PAC meeting

7:30 Apéritif

Workshop

- **9:30-12:30 - Workshop “Perception Experiments”**

  *Intervention by **Paolo Mairano** (University of Lille).*

PsychoPy

Representing sociolinguistic variation around the English-speaking world based on small phonological corpora: achievements and current challenges within the PAC program

Cécile Viollain*, Sylvain Navarro**, Sophie Herment***, Anne Przewozny-Desriaux****

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Abstract

In this presentation, we aim to look back on the PAC program, and more precisely on its foundational Labovian principles (Labov 1972), its fieldwork methods and common protocol, and its original goals (Durand & Przewozny 2012), which were: a) to give a better picture of spoken English in its unity and diversity (geographical, social, and stylistic); b) to test existing theoretical models in phonology, phonetics, and sociolinguistics from a synchronic and diachronic point of view, making room for the systematic study of variation; c) to favor communication between specialists in speech and in phonological theory; and d) to provide corpus-based data and analyses which will help improve the teaching of English as a foreign language.

In doing so, we wish to take stock of the program's achievements. More precisely, we will present some of the results that the database of small PAC phonological corpora has yielded about sociolinguistic variation in the English-speaking world. We will notably consider the relevance of different factors, namely gender, age, speech-style (reading *vs*. conversational notably), self-identification as a member of the linguistic community, attitudes towards the local variety, and speakers' positions within the social space, for the analysis and understanding of a diversity of phonetic, phonological, and prosodic phenomena, such as rhoticity and r-sandhi phenomena, vocalic changes, or the distribution of different intonational contours (Navarro 2013, Viollain 2014, Chatellier 2016, Brunet 2023, Théveniaut 2023).

We also seek to reflect on the evolution of the program from a primarily production-oriented program to a broader platform which expanded into dedicated projects developing their own interconnected research: PAC LVTI (Language, City, Work, and Identity focusing on the sociolinguistic study of English in urban contexts); IPAC (Interphonology of Contemporary English on the basis of learner corpora); PAC ToE (Teaching of English notably through the PICL! Project and its embodied methodology, Rouaud *et al.* 2022); PAC Prosody (dedicated to the study of the rhythm and intonation of the varieties of English, at the interface with acoustics and syntax, Bongiorno 2021); and PAC Syntax (which focuses on the specific structure of conversational speech and the interface between syntax, morphology, pragmatics, semantics, and prosody, Raineri *et al.* 2023).

In doing so, we wish to tackle some of the epistemological and logistical challenges the program has been faced with as it relies on small phonological corpora which do not allow for the study of the multimodal characteristics of English and do not provide big data like other corpora do (Viollain & Chatellier 2018). What is more, as the PAC program considers itself sociophonological and sociophonetic in nature, it currently seeks to broaden its perspective by integrating issues of perception and representation in its current research protocols and strategy. We will detail some of these more recent research avenues, notably in relation to TV series and movies corpora (Viollain

2023), but also to the implementation of perception tests, for example within the IPAC project for the study of L2 English (Mairano & Bouzon, forthcoming).

Key words: PAC program, sociophonology, variation, perception, representation

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Keynote speaker

How do French listeners process phonemic variants that do not belong to their own regional variety?

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It is now well established that adult listeners have difficulties discriminating phonemic contrasts in foreign languages. More surprisingly, similar difficulties have been found within the native language for phonemic contrasts that do not exist in the listener's regional variety. In this talk, I will present behavioral studies that examine how southern French speakers perceive and represent standard French phonemic variants. In particular, I will focus on the /e/-/ɛ/ and /o/-/ɔ/ contrasts which are contrastive in standard French but not in southern French. The implications of the results regarding the main models of spoken word recognition will be discussed.

How does French-accented English impact word recognition and comprehension in an academic context? From isolated words to speech.

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Abstract

Despite extensive study and practice, many L2 speakers struggle to acquire native-like phonological patterns. Much seminal research has thus been directed towards what makes speech intelligible as opposed to focusing on making learners sound like (SBE/RP or GA) native speakers (Bamgbose, 1998; Derwing & Munro, 1995, 1997, 2015; Jenkins, 2000, 1998; Levis, 2005). However, it is relatively unclear what constitutes intelligible pronunciation and which specific features may impede recognition and understanding. Intelligibility and comprehensibility are influenced by the shared experiences of the speaker and listener and their L1s (Bent & Bradlow, 2003; Gass & Varonis, 1984). While there are several definitions for both concepts, intelligibility is often measured by the number of words a listener can recognise (Derwing & Munro 1995, 1997, 2015; Duffy, 2013; Kent et al., 1989; Smith & Nelson, 2008), whereas comprehensibility is usually evaluated using perception of difficulty ratings (Derwing & Munro, 2015). Drawing on theoretical and methodological paradigms from variationist sociolinguistics, cognitive psychology and L2 phonology (including dynamic approaches such as those in Levis, Derwing & Munro, 2020), this presentation aims to describe the interphonological (segmental) system of a cohort of French adult speakers and to relate findings on the intelligibility and comprehensibility of French-accented English in an academic context.

Following the interphonological and sociophonological components of the PAC protocol (Mairano & Bouzon, 2021; Przewozny et al., 2020), thirteen French Psychology researchers were recorded speaking L2 English. The adapted corpus protocol includes reading and interactional tasks using psychology-specific materials (Budson et al, 2002; Xodabande & Xodabande, 2020) and collecting videos of conference presentations the informants had given in English in a variety of ecological academic contexts. Our analysis examines Pillai scores for pairs of short vowels and descriptions of the consonantal realizations of /h/, /θ/, and /ð/. The results show considerable overlap for certain vowel pairs and suggest that dental fricative substitutions are affected by word position. These findings contribute to previous descriptions of the interphonological system of French speakers' L2 English (Capliez, 2011; Jenkins, 2000; Kenworthy, 1987; Mairano et al., 2019; Rouaud et al., 2022).

The second phase of our study consists in evaluating the intelligibility and comprehensibility of our French speakers' L2 English. The corpus recordings were used to create the experimental material and three Southern British English speakers provided the control stimuli. A set of French and English participants were asked to perform three perception tasks. The participants had to listen and transcribe isolated words orthographically, complete a cloze test and finally they had to listen to an extract of a conference presentation and answer comprehension questions. Likert scales and certainty ratings were also used to evaluate the participants' perception of difficulty associated with the tasks. Results show that English listeners found French-accented speech less intelligible and comprehensible than SBE-accented speech, whereas French listeners were not significantly affected by different accents. Familiarity with the accents presented may explain these patterns. These findings offer insights into the challenges of international academic communication for L2 English speakers and extend our knowledge of how different listeners perceive French-accented speech.

Key words: Interphonology, intelligibility, comprehensibility, perception, L2 English.

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Auditory evaluation of the pronunciation of /r/ in French learners by native speakers of English

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Abstract

Assessing the quality of EFL learners' achievements in pronunciation is generally a more challenging task than assessing the lexical or grammatical dimensions of the same learners' productions, given that the assessment of non-native speakers is conducted based on a concept of 'standard' which itself is difficult to define (Detey, 2014). A substantial body of research has been dedicated to investigating the comprehensibility, intelligibility and the degree of nativeness in EFL learners (Levis, 2018; Derwing et al., 2022). However, to the best of our knowledge, no study has hitherto investigated the correlation between the pronunciation of /r/ in French speakers of English and their general comprehensibility. The objective of this research is twofold: firstly, to obtain an objective assessment of the pronunciation of /r/ in French learners of English, as well as their comprehensibility and nativeness; and secondly, to examine the correlation between the pronunciation of /r/ and their comprehensibility.

The material and experience employed in this paper were sourced from Trifu Dejeu's thesis (2024) within the IPCE-IPAC corpus. In order to assess French learners' pronunciation, an audio survey was crafted on LimeSurvey based on a survey model used by Mairano et al. (2019). Four sentences were segmented from the text reading task for each of the 18 learners of the IPCE-IPAC corpus and presented randomly to the native English speakers. The native speakers participating in the survey were asked to assess the nativeness, the comprehensibility and the pronunciation of the phoneme /r/ in the 18 learners of English by answering an array of questions on a Likert scale. The objective was to obtain scores for the pronunciation of /r/ in each of the English learners and to ascertain whether there was a correlation between learners' pronunciation of /r/ and how comprehensible their pronunciation of English was. The underlying assumption regarding the audio assessment was that there would be a correlation between learners' pronunciation of the phoneme /r/ and their comprehensibility in English, due to a high functional load of the phoneme /r/ (Brown, 1991).

The study yielded trends in the scores obtained for the pronunciation of IPCE-IPAC learners. The findings revealed that the scores for the pronunciation of /r/ and comprehensibility were higher than the ones for nativeness in each learner. Archibald's (2019, p. 9) assertion that native speakers possess a 'harsh nativelikeness metric' could provide a theoretical framework to explain these resuts. The results for nativeness corroborate the findings presented in Bongaerts, Van Summeren, Planken and Schils (1997) (cited in Levis, 2018), who attested that a native-like accent is uncommon for adult learners and that one of the reasons for this could be the distance between L1 and L2. The present study also examined the relationship between the pronunciation of the phoneme /r/ and the comprehensibility of the language output of French learners of English. The investigation found a correlation between the pronunciation of /r/ and comprehensibility, which was an expected outcome given the potential importance of the phoneme in this regard, particularly when it occurs at the onset of a syllable (Brown, 1991). In other words, learners who were judged to have higher levels of comprehensibility in English were also judged to have better pronunciation of the phoneme /r/, and vice versa.

Key words: phoneme /r/, learners of English, comprehensibility, nativeness, auditory evaluation.

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Does orthography-driven pronunciation affect L2 English comprehensibility?

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Abstract

It is now established that spelling can lead to non-target-like pronunciations in the speech of instructed L2 learners (see Hayes-Harb & Barrios 2021 and Bassetti 2023 for literature reviews). Among the numerous orthographic effects reported in the literature, it has been shown that L1 Italian and L1 French learners of L2 English produce intrusive consonants corresponding to silent letters (e.g. *sa<u>l</u>mon, clim<u>b</u>*, Bassetti & Atkinson 2015, Mouquet & Mairano 2023a, 2023b), and that L1 Italian and L1 Japanese learners of L2 English produce long vs short consonants corresponding to double vs single letters (e.g., *Fi<u>nn</u>ish* vs *fi<u>n</u>ish*, Bassetti et al. 2018, Sokolovic-Perovic et al. 2020; we shall refer to this as *non-native gemination*). However, to the best of our knowledge, no study has yet investigated the communicative consequences of orthographic effects: Hayes-Harb & Barrios (2021: 322) suggest that *"Research is therefore needed that explores the L2 orthographic input effects* […] *in light of more pedagogically meaningful constructs such as intelligibility and comprehensibility*". This is exactly the goal of the present study.

We considered two types of orthographic effects: silent letters and non-native gemination. They are of a very different nature and may have different communicative consequences: the former results in intrusive consonants that are likely to be noticed by native (and potentially non-native) listeners, while the latter results in longer consonants that may sound foreign-accented or that may go unnoticed by listeners whose L1 does not have a length contrast. We investigated comprehensibility by native English speakers, but also by other non-native speakers.

We developed a standard judgment test where listeners rate the comprehensibility of audio stimuli on a 1-to-9 scale (Thomson 2017). The stimuli are short sentences (8 to 10 words) produced by L1 Italian and L1 French learners: 15 of them contain a target word with a silent letter (e.g., *wa<u>l</u>k, <u>p</u>sychology, su<u>b</u>tle, autumn*) and 15 of them contain a target word with double letters (e.g., *Fi<u>nn</u>ish, a<u>dd</u>, mi<u>ss</u>ed, ma<u>nn</u>ers*). Each silent letter stimulus was recorded with and without an intrusive consonant by L1 Italian and L1 French learners (who were specifically coached by the experimenter); each double letter stimulus was recorded only with a short consonant (as per *finish, ad*, etc.), and then manipulated in *Praat* to obtain a geminate counterpart 100% longer than the original one to simulate a full geminate. Stimuli are organised into two randomised presentation lists, so that listeners only hear one version of each stimulus.

Listeners belong to three different cohorts: native English, L1 Italian, and L1 French listeners. Responses by L1 English listeners will reveal potential effects of L2 orthography-induced pronunciations for communicative interactions with native speakers, while responses by non-native listeners will give us insights into such effects for interactions within an international EFL (*English as a Lingua Franca*) context, where spelling pronunciations may even be judged to be more comprehensible than target-like pronunciations. Preliminary results do not highlight any strong effects on comprehensibility: for the conference we aim to present results for 20 listeners per cohort (tot: 60 listeners).

Key words: L2 English pronunciation, orthographic effects, comprehensibility, listener perception.

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PAC 2025 : Spoken English Varieties

Perception and Representations

18-20 June 2025, Aix-en-Provence (France)

Thursday, June 19th

- **9:00-10:00 - Keynote speaker:**

Robert McKenzie (Northumbria University), *Implicit and explicit language attitudes and attitude change.*

- **10:00-11:00 - Session 3 - Perception L1 / L1**

Airelle Théveniaut (University of Bretagne Sud), **Florent Chevalier** (University of Nantes), *"Do you think they have Irish?" - Perception study on County Galway English.*

Julie Rouaud (Sorbonne Nouvelle University), *Representing Canadianness: Canadian Raising and the Canadian Shift.*

11:00-11:30 Coffee break

- **11:30-12:30 - Session 4 - Syntax**

Cécile Viollain, Romain Delhem, Hugo Chatellier, Sophie Raineri (Paris Nanterre University), *A multidimensional study of 'like' in the PAC Dunedin corpus: functions, syntactic position, and phonetic and prosodic features.*

Leela Azorin (Aix Marseille University), *VAP-G (Spoken): Variation, Acceptability and Perception of gonna and its variants in a spoken corpus.*

12:30-2:00 Lunch in the garden

- **2:00-3:30 - Session 5 - Perception L1 by L2**

Marine Mouquet (Aix Marseille University), *Are L2 phonetic reductions encoded in the mental lexicon? A perceptual study on French learners of English.*

Miki Mori (University of Mayotte), *PAC in the Indian Ocean's French territories: Students' Attitudinal Perceptions of Five English Varieties.*

Raphaëlle Magnin (Aix Marseille University), *Using a bi-sensory approach to improve perception accuracy of English intonation patterns among L2 learners.*

Keynote speaker

Implicit and explicit language attitudes and attitude change: Evaluations of BATH use in England

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Knowledge of public attitudes towards language-based diversity can help uncover wider societal prejudices. Nonetheless, (socio)linguists and (socio)phoneticians are increasingly aware of the limitations of using traditional explicit self-report measures to gauge attitudes towards linguistic variation. Accordingly, a growing number of studies have adapted socio-psychological techniques to assess participants' implicit evaluations of linguistic stimuli. However, there is some debate amongst theorists regarding precisely what implicit attitude measures tap into and, relatedly, the nature of the relationship between implicit and explicit evaluations.

This talk discusses the merits of employing both implicit and explicit attitudinal measures in language attitude research. Specifically, the talk introduces the ongoing *Speaking of Prejudice* research project and details the results from a recent large-scale study (McKenzie and McNeill, 2023) investigating English nationals' implicit and explicit attitudes towards the status and social attractiveness of Northern English [a] and Southern English [ɑː] in the BATH lexical set.

It is argued that the study findings underline the value of employing a dual processing framework, involving the use of implicit and explicit attitudinal measures, to help language scientists better understand the complex, and often compensatory, evaluations which individuals hold towards language variation. The results also demonstrate how analysis of implicit-explicit attitudinal discrepancy (IED) can help identify any social groups leading language attitude change in progress (e.g., McKenzie et al., 2025) and better understand the relationship between attitude change and language change within the speech community under investigation.

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“Do you think they have Irish?”

Perception Study on County Galway English

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Abstract

County Galway, on the West coast of Ireland, comprises nearly 50% people asserting they “have” Irish (from the Irish expression “Tá Gaeilge agam”, or “Irish is on me”). One must not ignore the linguistic situation entwined with Ireland’s historical background when dealing with Irish English. Although Irish was declared the national and first official language in 1922 (Ó Riagáin, 2008), today’s daily users of Irish are mostly found in Irish-speaking regions (Gaeltacht) on the West coast of the isle (Smith-Christmas & Ó hIfearnáin, 2015). County Galway indeed shelters 5% of daily speakers of Irish (Central Statistics Office, 2022). The interaction between Irish and Irish English has been mostly studied on the segmental level (Kallen, 1997; Filppula, 2002; Hickey, 2004; Tallon, 2024), and few suprasegmental works have been achieved so far (Kalaldeh, 2011; Bongiorno, 2021; Théveniaut, 2023). Théveniaut (2023) recorded self-rated monolinguals (English) and bilinguals (Irish and English) from both Galway city and the nearby Gaeltacht. Prosodic analyses focused on the last accented syllable (e.g. the nucleus) of read declaratives. Results across 10 female speakers showed a regular (though not exclusive) use of simple falls (H*L_%) on nuclei for Gaeltacht daily speakers of Irish and late falls (H*_L%) for Galway monolinguals.

We ran an online perception study on Prolific among 50 participants. Each of them listened to 36 sentences read by the 10 forementioned females (14 sentences were played twice to evaluate random factors in the participants’ answer, Audibert et al., 2005). 25 participants had to determine the speakers’ location (Galway city or the Gaeltacht) while the 25 others were to guess the speakers’ proficiency in Irish (monolingual or bilingual). Sentences had been selected for their few segmental features likely to distinguish a Gaeltacht speaker from a Galway person (Tallon, 2024). Consequently, our hypothesis expected the participant to associate an audio sample to a sociolinguistic profile based on arguably suprasegmental features.

Results showed that participants matched the speakers’ profile up to 53%. Overall, the most recognized profile was that of Galway, while the bilingual profile was the least so (34%). While audio samples with late falls (H*_L%) were more often matched with Galway monolinguals, the reverse was not attested, simple falls being more often associated with a Gaeltacht bilingual profile. This study partially confirms Théveniaut’s results and tends to imply that suprasegmental and segmental can hardly be studied apart.

We intended to run further segmental analyses on these sentences to test if other segmental features than those mentioned in literature could have influenced the perception of listeners. For this purpose, we have identified some frequently uttered sounds which may be relevant (Wells 1982), namely all instances of the TRAP and GOOSE vowels, as well as liquids. Those phones have already been segmented and acoustic analysis is currently under way in order to contrast the speakers’ acoustic measurements and the participants’ profile matching.

Key words: Irish English, Prosody, Gaeltacht, Controlled Speech, Sociolinguistics

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Representing Canadianness: Canadian Raising and the "Canadian" Shift

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Abstract

The present study focuses on a comparative approach of two phonetic features that are considered to be typically Canadian, Canadian Raising and the Canadian Shift. The former consists in the centralization of the nuclei of /aɪ/ and /aʊ/ diphthongs before voiceless obstruents (Boberg 2010). The latter corresponds to the lowering and retraction of the front short vowels /ɪ/, /e/ and /æ/, a chain shift apparently triggered by the low-back merger (Clark, Elms & Youssef 1995).

But how and to what extent are these phonetic features representative of the "Canadianness" of a variety of English spoken in Canada, Montreal English, from a production as well as a perception points of view?

Canadian Raising and the "Canadian" Shift, have been extracted from the word lists of the PAC[Montreal] corpus and have been analyzed following a similar methodology as the one used in the *Atlas of North American English* (Labov et al. 2006), in terms of excluded contexts, formant extraction and method of normalization. This allows a certain degree of comparability. As far as perception of these two phonetic phenomena is concerned, I rely on different sources of information, such as the sociolinguistic (formal) interviews of my corpus, studies on Canadian English and the construction of Canadian identity (Boberg 2010; Walker 2012) or perceptual experiments (Willis 1972).

The acoustic analyses through Praat, combined with the aforementioned sources of information show that both phenomena are accounted for in PAC[Montreal] to various degrees. However, while Canadian Raising still constitutes a stable, well-entrenched and well-known marker of Canadianness, the "Canadian" Shift is an innovation that turns out to be not as Canadian as it seemed, but is in reality a North American feature (Boberg 2019; Becker 2019). Furthermore, it seems to be less perceived as a marker of Canadian identity, by the general public, than Canadian Raising.

Key words: Canadianness, Canadian Shift, Canadian Raising, Montreal English

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A multidimensional study of *like* in the PAC Dunedin corpus: functions, syntactic position, and phonetic and prosodic features

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Abstract

Like and its different functions as a discourse marker (DM) have received much scientific attention, especially in standard North American and British varieties of English, usually from a syntactic and pragmatic perspective (Romaine & Lange 1991, Andersen 2001, Tagliamonte 2005, D'Arcy 2007). However, its uses in New Zealand English have been much less extensively investigated (Miller 2009, Schweinberger 2014), and *like* has most often been studied from the "written" angle, drawing from the conversational analysis framework, which seldom integrates the phonetic and prosodic dimensions.

We therefore propose to adopt a variationist and multidimensional approach to investigate the use of *like* in the PAC Dunedin corpus (Viollain 2014) from a syntactic, phonetic, prosodic, and functional perspective by analyzing the correlations between the syntactic position of the marker, its phonetic and prosodic features, and its different discourse functions, in both the formal and informal conversations (approximately 44,000 words) from the corpus. In doing so, we reflect on the PAC protocol from a methodological point of view. First, we revisit the extent to which the two conversations actually reflect two different speech styles on the formality continuum (Labov 1972) by observing whether *like* behaves differently in these tasks. Indeed, several studies based on PAC surveys (Navarro 2013, Viollain 2014) have confirmed the significant difference between reading tasks (wordlists, text) and conversations as far as segmental or suprasegmental phonetic and phonological phenomena are concerned, but they have often failed to show any significant discrepancy between the formal conversation on the one hand and the informal conversation on the other. Secondly, the data from the fieldworker is consistently excluded from further investigation in PAC surveys so as to primarily focus on the native speakers' productions. In our study, we include the fieldworker and therefore take into account several factors beyond age and gender, such as conversational role and potential accommodation between the fieldworker and the interviewee in the formal conversations and between the two speakers in the informal conversations (Fuller 2003a, 2003b).

For each of the 302 tokens of *like* in our data, we isolated the marker to measure its length and neighboring pauses (equal or superior to 250 milliseconds (Kendall, 2023: 58)), and to identify intonational contours. We coded its position within the Maximal Syntactic Unit — initial, final, medial at subordinate clause boundary, other medial position — as well as its DM function in context (focus, elaboration, exemplification, hedging, monitoring, quote, or other).

Preliminary results suggest that there is a difference between the two conversations, notably due to the input from the fieldworker given her conversational role, as *like* has a normalized frequency of 5.39/1000 words in the informal conversations but of 6.92 in the formal conversations (normalized frequency of 10.33 for the fieldworker, 5.80 for all informants). This study also allows us to verify the correlations between syntactic position and DM function put forward in the literature, with the addition of the role of pauses and prosody. It suggests that there is still much to discover from systematically looking at syntax and prosody combined, even for well-known DMs such as *like*. It also proves the value of revisiting the PAC research protocol by making the most of some of its understudied aspects.

Key words: Discourse Markers, *like*, New Zealand English, Syntax, Prosody

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VAP-G (Spoken): Variation, Acceptability and Perception of *gonna* and its variants in a spoken corpus

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Abstract

This presentation aims at studying the perception US and UK native speakers may have of certain verbal forms surrounding the *BE going to/gonna* paradigm. It comprises forms such as *going to*, *gonna, gon, ima,* etc. We shall present the VAP-G protocol (Variation, Acceptability and Perception of *gonna* and its variants), an online study created in order to question native representations of contracted forms, using *BE going to/gonna* as a case-study. The questionnaire established is based on spoken and written corpora, but only the spoken data will be presented at PAC. The extracts are taken from the Santa Barbara Corpus of Spoken American English (SBC, Du Bois et al. 2000-2005). Our analyses have shown that the acoustic realizations of *gonna* and *BE going to* are very heterogeneous in the corpus.

To investigate the perception of the different realizations by native speakers, VAP-G has been designed and 200 native speakers (100 from the US and 100 from the UK) took the test. The goal is to help us answer several questions:

- Is there a difference of perception of *gonna* and its variants between US and UK natives?
- Is there a difference of perception due to other social factors such as age, gender or ethnicity?
- How grammatical do these variants seem for the respondents?

This presentation will detail the protocol and its goals, before focusing on the spoken task in particular. The questionnaire is made up of 3 tasks: a sociolinguistic questionnaire, acceptability judgement tasks and socio-cultural perception tasks, as well as a small questionnaire on the participants' linguistic awareness.

For the spoken task, participants answered the same 10 questions for 16 different audio extracts in which they had to grade diverse criteria on a Likert scale. Among other criteria, they graded degrees of pleasantness, education, formality, grammaticality, etc. Here is one example (here written) of the sentences they had to rate:

(1) And I'm gonna (Realization variant: [*amə*]) *start dancing with those Brazilian women*

Our hypothesis is that some forms are socially codified and associated to certain people (rich/poor, educated/uneducated, White/Black, etc.). These associations between a linguistic form and a group of individuals influence the stereotypes attached to these forms, as well as their acceptability and grammaticality in society. Some forms in particular in our paradigm (*gonna, gon*) seem to be attached to the African-American community in the US (Mufwene et al. 1998; Poplack et Tagliamonte 1999). VAP-G thus aims at showing how social meaning or perception (Preston's "language regard" (2013)) can guide the choice of one variant over another, whether consciously or not. Drawing from variationist sociolinguistics (Tagliamonte 2011) and folk linguistics (Preston 1996; 2017; Niedzielski et Preston 2000), this study analyses this social aspect of language in contracted forms and realization variants.

From our questionnaire, the preliminary results show that diverse factors may influence someone's acceptance and perception of a variant of *gonna* :

- Their ethnicity
- Their (geographical) localization
- Their closeness with languages
- Their age
- The setting in which they live

We will give more detailed results during the presentation, questioning whether the results from our participants confirm our hypothesis.

Key words:

Gonna, variation, perception, sociolinguistic questionnaire, folk linguistics

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Are L2 phonetic reductions encoded in the mental lexicon? A perceptual study on French learners of English

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Abstract

One of the key challenges for second language learners is the significant variability present in native speech. Studies indicate that native speakers easily understand and use phonetic reductions (e.g., *police* /pəˈliːs/ produced [pˈliːs]), often remaining unconscious of such phenomena. Although phonetic reductions have been extensively studied in native speech, they remain underexplored in second language acquisition. However, recent research (Mulder et al., 2015; Brand et al., 2018) suggests that L2 learners may encounter difficulties perceiving these reductions. The present study seeks to expand this field of research by examining L2 learners' challenges in perceiving phonetic reductions.

This research may be particularly relevant for learners with L1s and L2s having different rhythmic typologies such as stress-timed vs syllable-timed languages (Pike, 1945; Abercrombie, 1967), as it is the case with French learners of English. Drawing on the Markedness Differential Hypothesis (Eckman, 1977), this work predicts that phonetic reductions, resulting from the deletion of unstressed syllables, may be challenging for speakers of syllable-timed languages.

The aims of this study are twofold: (a) to assess whether French learners of English can discriminate between full and reduced forms and (b) to examine whether these forms are stored in the mental lexicon or whether reduced forms are computed via the full forms (McClelland & Elman, 1986; Norris & McQueen, 2008). We predict that proficiency level and exposure may significantly impact their ability to discriminate and store reduced forms. To investigate this, we conducted an ABX discrimination task in which L1 French learners of L2 English with different proficiency levels were presented with three acoustic stimuli spoken by three different speakers: A (e.g., reduced form), B (e.g., full form), and X (e.g., reduced form). Listeners were asked to determine whether X was more similar to A or B. A prior study (Mouquet, 2024) involving 48 British listeners revealed that perceived reduction frequency varied depending on stress position, sonority scale and syllable count. These criteria were used to ensure a balanced selection of stimuli. The results of the experimental group and of a control group of British native speakers are currently being analysed and will be presented at the conference.

This research will provide further evidence on whether language exposure and word-specific characteristics influence learners' perception of reductions and could ultimately contribute to a greater understanding of phonetic processing for L2 phonological models and L2 teaching practice.

Key words: second language acquisition, perception, mental lexicon, phonetic reductions, L2 French learners of English

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PAC in the Indian Ocean's French territories: Students' Attitudinal Perceptions of Five English Varieties

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Abstract

This study investigates language attitudes and perceptions towards English varieties by students living in French Overseas Territories in the Indian Ocean, specifically Reunion and Mayotte islands. It specifically looks at the dominant British and American dialects (Davies, 2009). Studying language attitudes toward these varieties in islands like Mayotte and Réunion is fascinating due to their geographical isolation from the United States and the United Kingdom. This isolation creates a unique sociolinguistic environment where any perceptions of American and British accents are probably shaped by media exposure, rather than firsthand contact with English speakers, such as teachers.

In addition, it is important to consider other English varieties, such as Indian English, particularly for those on Reunion Island, with its South Asian diaspora (Bhattacharjee, 2018). Exploring attitudes toward Indian accents can reveal how regional influences and cultural connections intersect with global hierarchies of English varieties and how global prestige, stereotypes, and the soft power of these dominant varieties resonate in regions distanced from their cultural and geopolitical centers. It is unclear to what extent students identify certain varieties with overt and covert prestige (Labov, 2006). Additionally, there is a paucity of research on the extent of the students' ability to differentiate between these English varieties.

To address these questions regarding attitudes and recognition, we will conduct a study using Verbal Guise Test methods (Dragojevic & Goatley-Soan, 2022), using audio from the PAC. Specifically one speaker from each of the following five varieties were sampled: Received Pronunciation, Manchester, Boston, California, and India. Students from the universities on the island will be solicited, both those who are studying to obtain an English degree and those who are studying it as required for their degree that is not English (such as Economics or Modern Literature and Languages). Various measures will be used to address affect, prestige, and intelligibility with careful attention paid to specific phonetic and prosodic elements such as rhotics. Quantitative analyses will look at correlation between responses and various demographic information, such as gender and island of residency (Mayotte or Reunion).

We predict that the British dialects will be easier Results will be discussed in relation to similar studies on attitudes towards English in other regions such as Malaysia (Ahmed, Abdullah, & Heng, 2014) and Sweden (Vesterlund & Bohn, 2022), as well as in Mainland France (Walsh, 2015). The presentation will end with implications for teaching (Ferragne et al., 2024) and research regarding the phonetics and phonology of World Englishes, including oral comprehension of varieties (Edensor, 2008; Janssoone, 2013).

Key words: representations, language attitudes, verbal-guise test, Indian Ocean, accent

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Effects of exposure to different prosodic models of English on perception accuracy in L2 learners

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Abstract

This paper focuses on a well-known difficulty for learners of L2 English: the perception of intonation patterns (1, 2). This obstacle can result from different factors, one of which is the complex process of attuning to the prosodic contrasts of the target language (3). We will describe a pilot experiment carried out in 2023 which included a pre-test, training sessions and a post-test. Its purpose was to test whether exposure to varieties of English that they were unfamiliar with and that showcased a frequent use of rising intonation patterns, known as 'uptalk' (4), could improve the accuracy of the perception of intonation patterns for learners.

The experiment involved 11 French learners of English aged 17 to 20 in the first cycle of their engineering studies[1]. Their command of the language overall ranged from 'threshold' level to 'advanced' level. All had received a 1-hour, basic introduction to the notion of intonation in class either 2 months prior or the year before, aimed at explaining what the use of rhythm, pitch or loudness could add to their English. None were taught specifically about the case of uptalk in English. The PAC protocol was used in its entirety before the beginning of the experiment to assess their overall mastery of English (5).

Our original hypothesis was that by being exposed almost daily to a wide variety of native voices which they couldn't relate to, or sometimes didn't understand well, they may naturally dissociate from some of the prosodic patterns exhibited by these voices, including the rising intonation patterns.

The participants were asked to listen to 20 excerpts of native speech taken from various online platforms and to determine key elements about them, including their discursive function (such as politeness, reliability, affection…), the potential emotion displayed by the speaker, and their perceived age and nationality. The pre-test mirrored the post-test in that it used excerpts of a similar grammatical nature, and when possible, post-test recordings came from the same native speaker. By adding some more complex utterances, we also attempted to observe if access to meaning (or lack thereof) could impact the learners' ability to discern intonation patterns.

This experiment led us to two main conclusions. First, the lack of theoretical explanations and framework made it difficult for participants to understand what a rising intonation pattern actually is, and the training sessions based purely on listening did not naturally build that awareness. From there, it seems to us that a second tool, such as the visualization of the intonation patterns, could remedy that issue.

Keywords: intonation, L2 learners, exposure, corpus analysis

[1] The participants were taken from the CPES 'prépa' school in Torcy, and from the ENSG school in Noisy.

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PAC 2025 : Spoken English Varieties

Perception and Representations

18-20 June 2025, Aix-en-Provence (France)

Thursday, June 19th

- **3:30-5:00 - Poster session *and coffee***

Maëlle Amand (University of Limoges), **Takeki Kamiyama** (Paris Saint Denis University), **Susan Moore** (University of Limoges), *Word stress representation and auditory perception of stress amongst advanced French-speaking learners of English.*

Caroline Bouzon (University of Lille), **Paolo Mairano** (University of Lille), **Anne Tortel** (Aix-Marseille University), **Gabor Turcsan** (Aix-Marseille University), *Extending the IPAC perception test beyond segments: lexical stress.*

Alexis Bruynooghe (University of Picardie Jules Verne), *Variation between you know and ye ken in Scottish English: perception and representation.*

Elora Campana, Sophie Herment (Aix-Marseille University), *A perception study of Standard Southern British English and Standard Scottish English: explicit and implicit attitudes.*

Christopher Chassagneux (University of Toulouse Jean Jaurès), *"People judge, so I put on a Korean accent and koreanize my pronunciation", the perception of English proficiency in Japan and South Korea.*

Marie Gabillet (University of Clermont Auvergne), *An analysis of stress patterns in monomorphemic English nouns using sublexica.*

Malgorzata Kul, Kamil Kazmierski (Adam Mickiewicz University), *Palatalization in Midland American English: implications for speech production.*

Erwanne Mas (University of Toulouse Jean Jaurès), *A Dynamic Approach to Regional Variation in Australian English Diphthongs.*

Antoine Régis, Sophie Dufour, Sophie Herment, Amandine Michelas (Aix Marseille University), *On the difficulties of French speakers to perceive the English falling-rising contour.*

Artev Saloev, Nicolas Ballier (Paris Cité University), *AI-generated Representations of American speech in Google's NotebookLM, a pilot study.*

Word stress representation and auditory perception of stress amongst advanced French-speaking learners of English

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Abstract

French listeners are said to be 'stress deaf' (Dupoux et al. 1997 for Spanish; Tremblay 2009 for French Canadian learners of English) and this stress deafness is potentially resistant to explicit training (Peperkamp & Brazeal 2023 for nonce words in Spanish). Here, we investigated how three cohorts of upper intermediate to advanced learners of English auditorily identify stress in real English words containing stress-imposing endings (auditory perception test) and place primary stress on the same words printed as a list on a piece of paper, based on their mental representation of word stress (paper test). This paper focuses on the analysis of word endings with a diphthong (-*ate*, -*ise*, and -*ify*), especially when combined with the neutral ending -*ing*. The first two cohorts of second-year French university students did the paper test first (English majors: n = 26, Applied languages majors: n = 27, henceforth Eng1 and ApL1 respectively). Two weeks later, they were invited to identify the stress of the last word in a carrier sentence (*do I wanna say "celebrating"?*) read by a native speaker of English (man in his 20s, General American). 30 target words were all presented with three different tones (fall, rise and fall-rise: see Wells, 2006) in two different semi-random orders (n = 180). This enabled us to check whether variation in tone affects accuracy. The target word appeared on the screen in the form of segmented written syllables. The third cohort (English major only, n=13, Eng2) is part of ongoing work investigating the impact of the order in which the two tasks were performed. Eng2 did the auditory identification task two weeks before the paper test. At the time of the experiment, English majors had only received explicit training on word stress of disyllabic words. Applied languages majors receive 30% less training on English than English majors and had not received any explicit training on English pronunciation before the present experiment.

We analyzed the influence of tonal patterns and word endings on binary response accuracy using a generalized linear mixed model with a binomial family and logit link. The model included fixed effects of tone type, presence of -*ing* in the suffixed words, university major, along with their interaction. Random intercepts for subjects and words were used to account for individual variability. Results indicate that, overall, ApL1 showed lower accuracy ($\beta = -0.60$, $p = 0.061$) than the two cohorts of Eng, even though the difference did not reach conventional significance due to high individual variation across cohorts and between Eng1 & Eng2. Many learners placed stress on stress-imposing endings containing a diphthong (-*ate*, -*ise*, and -*ify*), especially when followed by the neutral ending -*ing*, i.e. **identiˈfying* **decoˈrating*, **simuˈlating* ($\beta = -1.13$, $p < 0.001$). The presence of -*ing* led to even lower accuracy amongst ApL1 students ($\beta = 0.32$, $p = 0.001$). The overall effect of -*ing* was enhanced in the paper test condition (paper test: $\beta = -2.39$, $p < 2e\text{-}15$, perception task: $\beta = -1.13$, $p = 4e\text{-}05$). Eng2 had listened to the sentences two weeks before the paper test. It turned out

that they marked the primary stress significantly better than the other two cohorts (correct responses in paper test: Eng1: 39%, ApL1: 37%, Eng2: 55%; $\beta = 1.22$, SE = 0.38, $p = .001$), which implies that a simple repeated auditory exposure accompanied by an active selection of stress on the part of the participants may help to improve stress identification. Finally, a rising tone decreased the likelihood of correct responses compared to falling tone ($\beta = -0.22$, $p < 0.001$), unlike the fall-rise condition ($p = 0.42$). Such results highlight the multiplicity of factors impacting the treatment of stress in suffixed words amongst L2 learners of English and call for the use of a combination of teaching approaches to mitigate stress deafness in long suffixed words.

Key words: word stress, representation, L2 auditory perception, advanced learners, French-speaking learners of English.

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Extending the IPAC perception test beyond segments: lexical stress

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Abstract

Motivation. In this contribution, we present an extension of the IPAC protocol to test learners' perception of lexical stress. Presently, the IPAC perception module (Mairano & Bouzon 2024) includes two tests focusing respectively on the perception of English vowels and consonants. They are implemented via minimal pair identification tasks targeting all vocalic and consonantal contrasts that may potentially be challenging for L2 English learners of any L1. Presently, it has been tested with L1 French, L1 Spanish, L1 Italian and L1 Arabic learners. This test can also be used as a global L2 English perception evaluation module or diagnostic tool to identify learners' specific weaknesses. With the same goals, therefore keeping the same use cases in mind, we intend to extend this module to test the perception of L2 English prosody. At present, we have developed a third component, focusing on the perception of lexical stress, while further components may be developed in the future to test the perception of other prosodic variables, such as tones.

Format. The present component tests the perception of lexical stress via a word pair identification test, similar to what has been done at the segmental level: participants see two visual stimuli (representing words with left vs. right prominence, i.e. trochee or iamb) on the screen, hear an audio stimulus, and have to pick the visual that matched the audio. The experiment has been developed in *PsychoPy* (Peirce et al. 2022) and is administered to students online via the *Pavlovia.org* platform. It collects participants' responses and response times for every trial.

Stimuli. The stimuli include 80 disyllabic word pairs, pertaining to different parts of speech (N, V, Adj). For each category, we included both regular English words and rare / slang / obsolete / scientific words, in the attempt to force listeners to respond on the basis of purely acoustic and distributional cues, rather than metalinguistic knowledge for known words. The set of stimuli has been constructed to display different phonological environments corresponding to rhyme complexity translating into (L)ight and (H)eavy syllables, as well as reduction of unstressed vowels (*sal**a**d* / *tass**e**l*) or absence thereof (*caf**e*** / *s**a**shay*). In English, H syllables typically attract stress in HL (***pa**per* / ***sha**mus*) or LH structures (***apply*** / *ka**zoo***), while reduced vowels do not bear lexical stress. Our prediction is that, within LL (*salad* / *tassel*) or HH (*disco* / *schizo*) structures, (i) the absence of reduced vowels or (ii) rare / slang words should constitute stimuli with depleted cues for prominence, resulting in difficult perception and consequent high error rates.

Results. The pilot test has been run with 98 undergraduate students specializing in English from the universities of Aix and Lille. The analysis of the responses has been run on R. The results indicate:

- Stress discrimination is significantly more problematic than phonemes: higher error rates and longer reaction times
- Trochees are easier to perceive
- HH structures are the most difficult
- Unexpectedly small difference between common and rare lexicon

Key words: L2 English perception, second language acquisition, lexical stress, prosody, IPAC.

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Variation between *you know* and *ye ken* in Scottish English: perception and representation

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Abstract

During the last decades, linguistic research on discourse markers has been focusing on *you know*, one of the most studied discourse markers. Despite the researchers' difficulty to agree on a clear definition of discourse markers, the discursive functions of *you know* have been investigated. It plays an important role as social monitor in the organisation of discourse (Erman B., 2001) but can also reveal a form of impoliteness (Gaudy-Campbell, I., 2021) based on an ego-centred attitude in an oral conversation.

In Scotland, some speakers use both *you know* and *ye ken* (the translation of *you know* in Scots). It is interesting to analyse these two markers from a variationist point of view, focusing on the complex diglossic situation of language in Scotland, which has been called a 'bipolar Scots-English continuum' (Stuart-Smith, J., 2004). Sociolinguistic questions arise as one can wonder to what extent the notion of "Scottishness" (Unger, J.W., 2013) and how Scots is perceived influence the use of one, the other or both markers. This is the core of our PhD project, a part of which we present in this paper.

We will first deal with the status of Scots and how it is perceived. Scots has always been quite difficult to define. The aforementioned "continuum" accurately represents that challenging task: some scholars define Scots as a "poor dialect of English", some others define it as a language of its own. Given the historical, cultural and political background of Scotland, we assume that the representation of the Scots language within the Scottish discourse is closely linked to the notion of "Scottishness" (Brown, I., 2020) and identity. *Ye ken* being a discourse marker in Scots, we may wonder to what extent it represents, consciously or not, a feeling of belonging to the Scottish nation.

We will then present the corpus we will use (The Scottish Corpus of Texts and Speech, available for free on www.scottishcorpus.ac.uk) and the perception experiment we aim to run. The latter will deal with the representation of the Scots marker *ye ken* and with the degree of "Scottishness" it represents to native Scottish speakers.We will set up a test combining the explicit approach (using a questionnaire containing Likert scales) and the implicit approach using an implicit association test (McKenzie & Carrie, 2018). The purpose of the experiment will also help determine in what context *ye ken* is more likely to appear than *you know*, its English counterpart, based on the participants' perception of the markers.

Key words: discourse markers, variation, diglossy, perception, representation.

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A perception study of Standard Southern British English and Standard Scottish English: explicit and implicit attitudes

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Abstract

In a previous study (Campana, 2024), we tested how British accents are perceived by British people. The results showed that the Received Pronunciation (RP) and Standard Scottish English (SSE) are the two most appreciated accents, perceived as more pleasant than other British varieties. In the present study, we wish to test the representation of those two varieties via a perception test using both explicit and implicit methods. Indeed, social psychology has shown that humans have two types of reasoning. One which is controlled and slow, explicit, and can be tested through surveys using Likert scales. The other which is automatic, fast and unconscious, implicit, and which will be tested thanks to an implicit association test (Campbell-Kibler, 2012).

We propose to duplicate on Standard Southern British English (SSBE) and Standard Scottish English (SSE) a previous study by Mauchand & Pell (2022) in which they tested implicit and explicit attitudes about Parisian French and Quebec French. We will present the test in detail and expose the results.

The test will be run on 40 participants (20 SSBE speakers and 20 SSE speakers). The first part of the test will be explicit: the participants will answer questions like "On a 5-point scale, how [pleasant/friendly/educated, etc.] do you think the [English accent / Scottish accent] is?". The second part of the test will consist in the implicit association test. The participants will first see written words on a computer with positive or negative valences and will have to click on a left button for "pleasant" or a right button for "unpleasant" (block 1). During the whole test, left will thus always be associated to "pleasant" and right to "unpleasant". Then the participants will be divided into 2 balanced groups (10 SSBE and 10 SSE speakers). The first group will first listen to 3 simple sentences (*He's wearing a coat / She's riding a bike / They have two horses*) produced by 4 SSBE and 4 SSE speakers (n = 24 sentences) and will have to click on the left button if they recognize SSE and on the right button for SSBE (block 2a). The second group will have to click on the left button for SSBE and on the right for SSE (block 2b). Then in a 3rd and 4th block the groups will be presented with both the written words and the audio sentences: the left button for a "pleasant" word or an "SSE" sentence and the right button for an "unpleasant" word or an "SSBE" sentence in the first group (blocks 3a and 4a); and the left button for a "pleasant" word or an "SSBE" sentence and the right button for an "unpleasant" word or an "SSE" sentence in the second group (blocks 3b and 4b), see table 1. The reaction times will be measured. Only the 4th block (a & b) will be analysed, the 3rd block being a trial.

We hypothesize that a difference will appear between the explicit and the implicit tests. In Mauchand & Pell (2022)'s study, Canadian participants showed no preference while French participants preferred their own accent. Quebec French was judged more friendly by the French participants. In our study, we expect participants to judge SSE more friendly and SSBE more educated (Moore, 2015) in the explicit test, but we think SSBE might emerge positively in the implicit test.

This study will shed light on language attitude (see Mckenzie & Carrie, 2018) and will enable us to better understand how people perceive accents consciously and unconsciously.

Key-words: Received Pronunciation; Standard Scottish English; representation; explicit perception test; implicit association test.

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Table 1: Implicit association test

ALL PARTICIPANTS Block 1: written words Left = pleasant / Right = unpleasant	
GROUP 1	**GROUP 2**
Block 2a: spoken utterances Left = SSE / Right = SSBE	Block 2b: spoken utterances Left = SSBE / Right = SSE
locks 3a & 4a: words and utterances = pleasant or SSE / Right = unpleasant or SSBE	Blocks 3b & 4b: words and utterances = pleasant or SSBE / Right = unpleasant or SSE

“People judge, so I put on a Korean accent and koreanize my pronunciation”, the perception of English proficiency in Japan and South Korea.

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Abstract

The aim of our research project is to define the sociolinguistic status of English in contemporary Japan and South Korea, thus taking part in the debate on the possible existence of Japanese and Korean varieties of English in terms of features, status and function (Kachru, 1984, 1985, 1991, 1997, 2005 ; Quirk, 1985, 1991 ; McArthur, 1987 ; Bruthiaux, 2003 ; Stanlaw, 2004, 2010 ; Schneider, 2004, 2011 ; Song, 2016 ; Low & Pakir 2021). Crucially, we base our re-examination of this debate on the most recent data possible with a corpus of locally-based Japanese and Korean learners and speakers of English.

In this paper, we choose to investigate two aspects: i) the appropriation of English by the populations of these countries, and ii) their perception of English. As far as the appropriation dimension is concerned, we rely on a sociolinguistic survey conducted in the framework of the PAC programme, so as to identify the linguistic features of Japanese and Korean learners in their spoken productions. The perceptual dimension of our research relies on an online survey of the perception of English by Japanese and Korean learners and speakers. After providing the theoretical and methodological frameworks of this research project, we provide a step-by-step exploration of our twofold PAC survey. The first component of the survey (speech production) is based on the standard PAC-LVTI protocol (Durand & Przewozny 2012; Przewozny, Navarro & Viollain 2020) and amended tasks corresponding to the sociophonological specificities of Japanese and Korean non-native learners of English. The second component of our survey (speech perception) consists in sets of tasks which are incorporated in an online perception test that we describe thoroughly. Finally we discuss three issues which will eventually be documented by our PAC-JP and PAC-SK subcorpora: i) Japanese and South Korean peoples’ perception of the English language as an international language/as institutionalised in the curriculum, ii) their awareness of World Englishes within and outside Asia, and ii) their locally-based representations of native and non-native speakers of English, hence reconsidering the classical definitions of Japanese and Korean Englishes in the scientific literature.

Key words: Language perception, language representations, World Englishes, Japanese English, Korean English

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Stress patterns analysis of monomorphemic English nouns using sublexica

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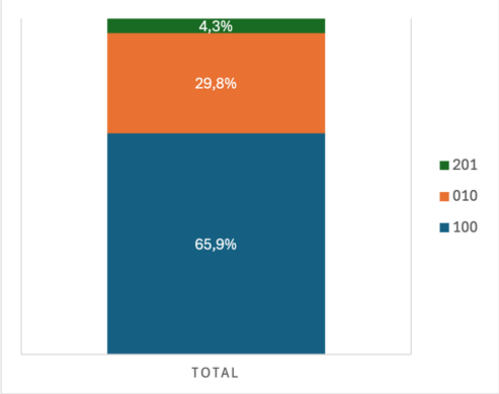
Abstract

Introduction. The phonological system of English is complex and displays variation regarding primary stress assignment notably. It has been stated that there are languages which, for the same type of words, apply different phonological rules for different subparts of the lexicon. The distinction mainly concerns native words vs. borrowings (e.g. in Japanese, Itô & Mester, 1999).In English, since *SPE* (Chomsky & Halle, 1968) researchers have generally differentiated between 'Latinate' and 'Native' vocabulary, as it helps to explain phonological or morphological processes which do not apply to the whole lexicon (e.g. velar softening, or why some affixes only attach to latinate bases). In this communication, we explore the effects of sublexica (Dabouis & Fournier, 2022), among other factors, on stress assignment in trisyllabic, monomorphemic nouns.

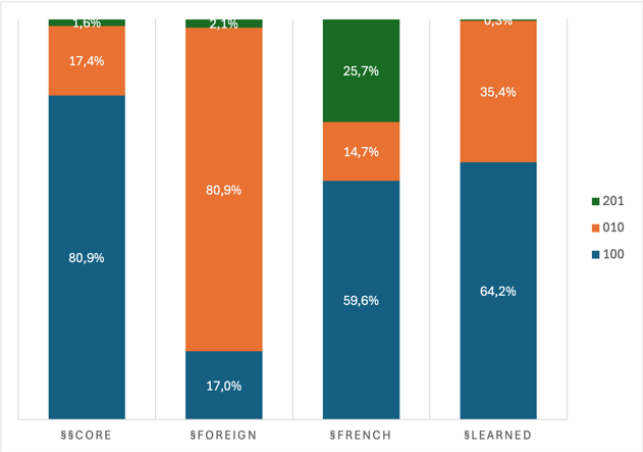
Sublexica. Dabouis & Fournier (2022) propose an analysis of the English lexicon as a dynamic system, divided into different strata of phonological subsystems (§CORE, §FOREIGN, §FRENCH and §LEARNED). Each one has individual phonological, graphophonological, morphological and semantic characteristics (including different stress properties).

Corpus. The data was extracted from the *Longman Pronunciation Dictionary* (Wells, 2008), nouns only. It was coded for: number of syllables, morphology (to distinguish monomorphemic nouns from the rest), etymology (from the *Oxford English Dictionary6/17/2025 10:50:00 PM*) and sublexica. The coding of morphology includes bound roots (i.e. roots which do not exist as a stand-alone) and excludes strong endings (i.e. stress-affecting suffixes and word endings). The dataset holds 2,123 trisyllabic nouns. The coding of sublexica is based on the characteristics described in Dabouis & Fournier (2022). For instance, the §FOREIGN sublexicon, which contains most of the borrowings, displays graphophonological correspondences (e.g. <a> - /ɑː/; <e> - /eɪ; <i> - /iː/, referred to as "foreign free vowels" in Fournier, 2010). On the contrary, the §CORE sublexicon presents regular correspondences and none of the foreign vowels. **Hypothesis.** Dividing the English lexicon into four main sublexica can explain most of the primary stress diversities in long monomorphemic nouns.

Preliminary results. Figure 1 shows the distribution of primary stress in the whole dataset, with a vast majority of antepenultimate stress (which is expected considering the Normal Stress Rule for long nouns). In Figure 2, we observe that antepenultimate stress seems relatively well distributed among the sublexica, except for §FOREIGN which presents most of the penultimate stress, according to the most favoured stress pattern in §FOREIGN words. We also note that final stress mostly appears in §FRENCH.



Next steps. To explore the other factors at stake within each sublexicon, we add a coding for syllabic weight (closed vs. open syllables). Traditional takes on syllabic weight only refer to the penultimate syllable, however recent studies have demonstrated the role of weight in other positions (Domahs et al., 2014; Garcia & Goad, 2024). A more detailed coding of syllabic weight has been added (including onset and rime weight).



Key words: phonology, stress, lexicon, borrowings, sublexica

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Palatalization in Midland American English: implications for speech production

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Abstract

The study examines palatalization in American English (the Buckeye corpus) to test the predictions of the Production Planning Hypothesis: its prediction is that the rate of palatalization is positively correlated with smoothed conditional probability of the palatalizing context. We controlled for target segment, height of the vowel, grammar, speech rate, gender and age by including them as covariates in the mixed effects binomial logistic regression model. The statistically significant effect of probability is in line with our prediction. This substantiates the claim that the size of the planning window increases the likelihood of reduction processes. Our findings provide further evidence for Production Planning Hypothesis from a non-reductory process.

Key words: palatalization, Production Planning Hypothesis, Smoothed Conditional Probability, Buckeye, yod coalescence

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A Dynamic Approach to Regional Variation in Australian English Diphthongs

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Abstract

This study examines regional variation in Australian English (AusE) vowels, analyzing spontaneous speech data from Queensland and New South Wales speakers from the PAC- Australia corpus (Mas & Przewozny, 2023). This study highlights how dynamic techniques of formant analysis, such as the Discrete Cosine Transform (DCT), which captures the full trajectory of diphthongs (Watson & Harrington, 1999), reveal more pronounced regional variation in AusE diphthongs compared to static, target-based approaches (Cox & Palethorpe, 2019; Docherty et al. 2015, 2018; Docherty & Cox, 2024). This is due to the inherently dynamic nature of diphthongs (Watson & Harrington, 1999). Building upon previous contrastive sociophonetic research on AusE (Docherty et al. 2015, 2018 ; Cox & Palethorpe, 2019), the study presented here tested three hypotheses: that Queensland speakers would show greater diphthongization in the GOAT /əʉ/ vowel compared to New Souh Wales speakers, that Queensland speakers would display stronger tendencies towards monophthongization in GOOSE /ʉː/ and NEAR /ɪə/ vowels (particularly among female speakers), and that Queensland females would produce more dynamic offglides in THOUGHT /oː/ than their New South Wales counterparts.

Results confirm these hypotheses, revealing significant regional and gender-based variation in diphthong realization in AusE. Queensland speakers exhibit more diphthongization, with female speakers exhibiting more dynamic offglides, underscoring the importance of analyzing dynamicity in vowels to capture regional variation. These findings therefore suggest that a dynamic analysis can provide a more nuanced representation of vowel variation, which may influence perceptions of regional accents, shaping social attitudes and speaker identity (Docherty et al. 2015; Cox & Palethorpe, 2019; Cox & Docherty, 2024). The present study contributes to the ongoing research in sociophonetics, showing that accent variation is shaped not only by regional and gendered factors but also by the fluid, evolving identities of speakers (Trudgill, 1986; Docherty et al. 2018). The dynamic approach to vowel analysis presented here offers new insights into the relationship between phonetic variation, social context, and identity in AusE, with implications for both linguistic theory and the study of language perception across different social settings.

Key words: regional variation, dynamic analysis, diphthongs, sociophonetics

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On the difficulties of French speakers to perceive the English falling-rising contour

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Abstract

While the influence of the native language on the perception of segments is well established, the influence of the native language on the perception of suprasegmental features such as intonation contours is less known. Previous studies have suggested that the processing of intonation would be less sensitive to native language experience than segmental processing because it would be based mostly on general auditory mechanisms (Grabe et al., 2003). Grabe and colleagues (2003) compared the ability of English, Spanish and Chinese listeners to discriminate between several types of falling and rising English intonation contours. While all groups of listeners were able to distinguish between falls and rises, no differences were observable between different rises. By contrast, a more recent study (Schmidt et al., 2016) showed that listeners can discriminate between different types of rises provided that these rises have a linguistic function in their native language. The perception of intonation would thus be more influenced by the existing inventory of contours in the native language than on general auditory mechanisms.

In this study, we provided a more in-depth examination of the hypothesis according to which the existing inventory of intonation contours in the native language influences the perception of intonation. To do so, we investigated how French and English speakers discriminate two types of rising contours: a simple rise (L*H-H%) and a fall-rise (H*L-H%, see Silverman et al., 1992; Pierrehumbert, 1980; Grice et al., 2000). While the simple rise exists both in English and in French, the fall-rise contour (also called tone 2 in Halliday's (1970) system) is common in both British and American English to indicate doubt or disapproval (Halliday, 1970) but it does not exist in the French inventory of contours.

Two groups of participants, a group of native speakers of American English and a group of French native speakers performed an ABX task. In this task, participants heard nonwords created by a concatenation of two English words (ex. the nonword *maridy* coming from *mariner* and *melody*) produced by three different American English speakers and had to indicate whether X was identical to A or B. The A and B stimuli varied in their intonation contour and were produced as either a simple rise (L*H-H%) or a fall-rise contour (H*L-H%).

The results showed that French listeners had significantly more difficulties than American English listeners to perform the ABX discrimination task based on intonation contours. Because the fall-rise contour exists in the American English inventory of contours but not in the French inventory, the difficulties observed for the French listeners argue in favour of the claim that the existing inventory of intonation contours in the native language influences the perception of intonation. In a more general way, our results constitute a further demonstration that the inventory of contours in the native language shapes the way listeners perceive intonation contours (Schmidt et al., 2016) just as the inventory of phonemes shapes the perception of phonemes (Best et al., 2001).

Key words: Speech perception, nonword discrimination, intonation, fall-rise contour, English, French

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AI-generated Representations of American speech in Google's NotebookLM, a pilot study

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Abstract

This paper investigates the prosodic and conversational persona of the DeepDive functionality of NotebookLM, the new Gemini-powered writing and research tool from Google Labs (Wang, 2024). This Google experimental tool, so far only discussed in blog posts (Johnson, 2023; Etim, 2023 and Furze, 2024), is based on the Gemini 1.5 Large Language Model (Google team et al, 2023). It takes as input PDF or text files and generates a .wav file corresponding to a podcast dialogue discussing the input paper. The main goal of our study is to develop a method for detecting AI-generated speech and differentiating it from human speech using speech rate characteristics and language identification probabilities. Our hypothesis is that these AI-generated recordings are more realistic than state-of-the-art text-to-speech recordings but can still be distinguished from human productions and reflect on the phonostyle of the persona patterns used to generate AI speech. As a contrastive data sample, we used an episode from the "Mystery AI Hype Theater 3000" blog discussing a paper (Phuong et al. 2024) between a male and a female speaker (Kaye & Alkhatib, 2024). This 1-hour scientific conversation is used as a contrastive corpus to the podcast generated, by the NotebookLM with the same paper as input. We analyzed the spectrograms to observe the artefacts of the AI-generated speech.

Three characteristics are strikingly different. First, very abrupt spectral transitions can be observed, completely white spaces alternate with almost vertical blocks of spectrograms. Then, "breathing groups" are unrealistic: pitch curves do follow a (very) linear declination pattern but regularly span over more than six seconds. Breathing in is simulated on the spectrogram with very similar minor perturbations but inspirations are never clearly audible. Our qualitative analysis of the phonetic and discourse features shows that it is still possible to distinguish human and AI-generated speech. The insertion of gap fillers, discourse markers, interactions does distinguish this AI-generated speech from advanced TTS models (as a comparison with a female voice (Cyan) and a male voice (African American, Lime) indicates. Nevertheless, the systematicity of recurrent patterns (short pauses - (the mean pause rate is 0.082 pauses per second), the absence of hesitations, unnatural emotionality which conveyed through overexpression, abrupt emotional transitions and illogical replies to the partner's replica) gives the AI-generated speech away. Using a Praat script to measure speech rate automatically (De Jong & Wempe, 2009), we compared the variability of the speech rates of artificial and contrastive recordings, suggesting lesser variability for the artificial speech. The results are: the AI speech displays less variability (SD = 0.04) in the speech rate compared to the human recording (SD = 0.07) and AI (M = 0.995, SD= 0.04).

Finally, we also tested Whisper's language detection features (Radford et al., 2023) to assess nativeness. Whisper associates a probability to its prediction, and we assumed that recordings of humans would get a higher probability of being predicted as English, since they were more similar

to the data used to train Whisper models. We used the large Whisper model to predict the language spoken. The probabilities assigned to the English prediction show very little variance (0.0013), but the AI speech was recognised as being English with the higher probability. Welch's t-test showed that the means of the two predictions were statistically significant ($p<.001$).

Key words: AI speech, American English, language detection, speech rate, discourse analysis.

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PAC 2025 : Spoken English Varieties

Perception and Representations

18-20 June 2025, Aix-en-Provence (France)

Thursday, June 19th

- **5:00-6:30 - Session 6 - Production Analysis L1**

Coline Caillol, Emmanuel Ferragne (Paris Cité University), *The effect of pitch, intensity, and vowel quality on lip aperture in the singing voice.*

Céline Horgues, Sylwia Scheuer Samson (Sorbonne Nouvelle University), *Producing and perceiving Foreigner-Directed Speech: temporal and melodic effects.*

Quentin Dabouis (University of Clermont Auvergne), *Suffix classes go beyond stress.*

7:30 Dinner downtown

The effect of pitch, intensity, and vowel quality on lip aperture in the singing voice

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Abstract

It is a known fact in phonetic studies that loudness (or intensity) and pitch (or fundamental frequency) are typically interdependent (Sundberg, 1987). A telling example is the act of screaming, where an individual will tend to increase their fundamental frequency as they increase the loudness of their scream, and this in turn may necessitate a bigger buccal aperture (Schwartz et al., 2020). The aim of this work is to study the influence of loudness and pitch on mouth opening in another specific vocal use: singing. From a practical or musicological perspective to the scientific study of singing voice processes, most of the literature agrees that there is an undeniable link between pitch and intensity (Kayes, 2019), which tends to impact buccal aperture as well (Cornut 2002, Scotto di Carlo, 2005). Though it is an essential parameter to take into account when singing, no study has actually attempted to test the effect of loudness and pitch on mouth opening, which we propose to do here. Additionally, we looked at the role of vowel quality and if any effect of close vs. open vowels on mouth aperture (as those found in speaking) could be identified in singing. Considering the limited data available, this approach remains at a more descriptive and exploratory stage.

Three professional male British contemporary singers were recorded singing a total of 21 10-second sentences created for the purpose of the experiment. The sentences were divided up into 3 different 80's rock-inspired melodies. The 21 sentences were sung twice, once at a high pitch and once at a lower pitch. The pitches were individually determined beforehand, on the basis of the highest note the singer could produce comfortably – this note was selected to be the highest possible one in the three melodies for the high pitch category, and was transposed one octave below for the low pitch category. They were also filmed. Fundamental frequency (Hz) and intensity (dB) data was extracted through Praat (Boersma and Weenink, 2024). For mouth opening, a post-hoc AI-based face landmark detection video treatment (Google AI, 2024) was applied (see Figure 1), and the Euclidean distance in pixels between the upper-most middle point of the upper lip and the lower-most middle point of the lower lip was calculated and converted to cm. A linear mixed-effects regression model was fitted in R, with lip opening as the dependent variable, and fundamental frequency and intensity as predictors, and their interaction. Random intercepts were included for sentence tokens and participants. Both fundamental frequency and intensity showed significant positive effects ($\beta = 0.301$, $SE = 0.036$, $t = 8.403$, $p < 0.001$ and $\beta = 0.139$, $SE = 0.017$, $t = 8.147$, $p < 0.001$ respectively) on buccal aperture. The interaction between the two factors was also statistically significant. Figure 2 shows the partial dependency of the results as a heatmap: the lighter the color, the higher the predicted lip aperture based on the combination of pitch and intensity. As such, the predicted effect of fundamental frequency and intensity on mouth aperture appears to be corroborated by the data. For the second step of the analysis, looking more closely at vowel quality, 2 × 5 words with open vowels /ɑː/ and /æ/ and 2 × 5 words with close vowels /iː/ and /ɪ/ were identified in the lyrics, the vowels segmented in Praat and their corresponding fundamental frequency, intensity and mouth aperture measures extracted. Figure 3 shows that there seems to be a greater possible range of mouth aperture for open vowels as opposed to close vowels, and the data for s03 quite tellingly reveals a strong difference in average aperture. These findings serve as a basis for further research on articulation

and pronunciation in the singing voice, where certain sounds may be favored over others in certain conditions, such as in higher-pitched passages.

Figure 1. Face landmark detection

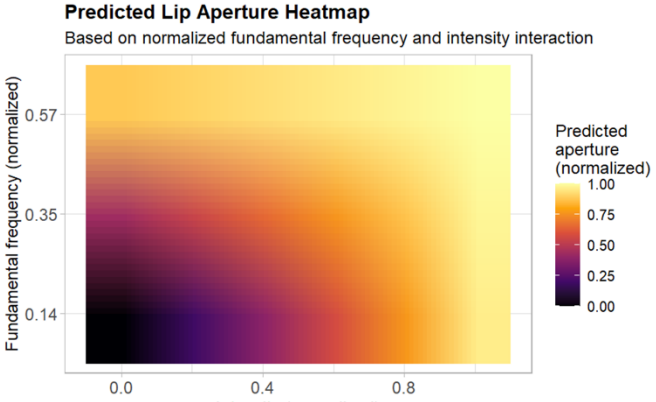

Figure 2. Partial dependency plot

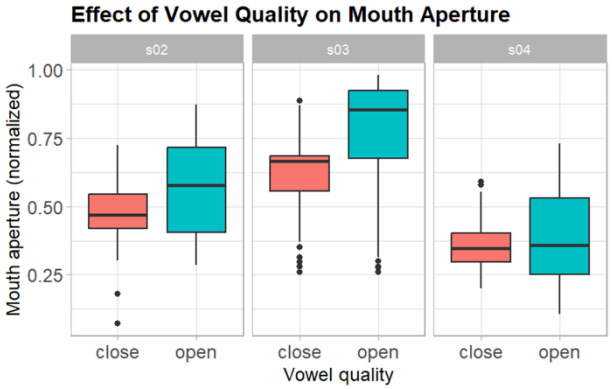

Figure 3. Mouth aperture according to vowel quality per participant

Key words: singing voice, fundamental frequency, intensity, vowel quality

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Producing and perceiving Foreigner-Directed Speech: temporal and melodic effects

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Abstract

Foreigner-directed speech (FDS) is regarded as one of the simplified registers resulting from accommodation (Giles & al., 1991), alongside speech to children and – more recently – speech to robots (Ferguson 1971, 1975; Freed 1981; Fischer 2016; Fedorova 2018; see Piazza et al. 2022 for a recent review). Previous research into phonetic modifications adopted in FDS fairly unanimously reported hyperarticulation phenomena (Sankowska et al. 2011; Kangatharan et al., 2012), slower speech rate (Hazan et al. 2015, Biersack et al 2005, Kühnert & Kocjančič 2015) but obtained mixed results regarding the role of melodic adjustments (Biersack et al. 2005; Smith 2007; Hazan et al. 2015; Knoll & Costall 2015; Kudera 2020).

The paper expands the analysis of FDS evident in the English portion of the SITAF corpus (Horgues & Scheuer, 2015) which consists of face-to-face interactions held by 21 pairs of French and English tandem participants, and includes control data of the same tasks performed by each participant in their L1 with a fellow NS. This specific NS-NNS interactional set-up strongly encourages the native speakers to modify their output when addressing their NNS partner, compared to fellow native-directed speech. We build on an earlier study (Horgues & Scheuer, 2017) where 11 Native-English listeners were able to perceptually identify FDS (correct identification rate: 58%) when presented with only short audio samples produced by the same Native-English speakers addressing either a NS or a French-speaking interlocutor.

The aim of the current study is to further investigate the acoustics of these samples. We hypothesize that i) some form of speech enhancement characterizes speech directed at French interlocutors compared to interactions with a NS, in line with the speech accommodation theory ii) those modifications play a significant role in listeners' perception of FDS.

Our method consists in analysing temporal and melodic phenomena in short declarative audio samples (mean length: 16 seconds) produced by 21 Native-English speakers in two conditions: i) when interacting in English with a NS to perform an interactive debating game (i.e. the control, NS-NS condition) ii) when interacting in English with their French-speaking tandem partner on the same task (i.e. the tandem condition). Temporal aspects cover calculations of articulation rate and pausing patterns, while melodic aspects concern pitch range, pitch maxima, mean & median pitch, as well as pitch standard deviation throughout these samples.

Our preliminary results point to the prime relevance of temporal aspects: speech directed at French-speaking tandem partners indeed has a slower articulation rate (number of syllables, disregarding pauses: 4.58 vs 4.82; significantly correlated with the listeners' perceptions of FDS) than speech produced in the control condition. Melodic adjustments seem to be more limited since none of the pitch measures quoted above vary significantly between the two conditions.

Our study opens future perspectives on the analysis of the *interaction* between different phonetic aspects involved in speech enhancement in FDS and the importance of speaker attuning profiles (interactional experience with NNS, perception of their interlocutor's L2 proficiency level and needs).

Key words: foreign-directed speech, NS-NNS interaction, accommodation, articulation rate, prosodic enhancement

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Suffix classes go beyond stress

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Abstract

It is well established that English suffixes do not all affect the stress pattern of their base in the same way: some may change it (e.g. *kítchen* ◆ *kìtchenétte*), some never do (e.g. *advénturous* ◆ *advénturousness*) and some have a variable behaviour (e.g. *compáre* ◆ *cómparable* ~ *compárable*). In the Guierrian literature, stress is often the only aspect of suffix classes that is analysed (one exception being Fournier (1998), who discusses stressed vowels). The aim of this paper is to synthesize the diversity of analyses that have been made on suffix classes, to show that their phonological behaviour goes beyond stress and to call for further investigation of those other correlates throughout varieties of English.

If we review the literature on the issue, we find that the analyses of the phonological differences found between different types of suffixes essentially make use of two tools:

- **Computation**: the stress patterns of different types of suffixed words are different because the words that contain them undergo different phonological grammars (strata; e.g. Bermúdez-Otero 2018; Kiparsky 1982), or cophonologies (e.g. Benua 1997);
- **Representation**: different suffixes have different effects on stress because some integrate with the phonological domain of their base and some do not (e.g. Hammond 1999: 322-329; Raffelsiefen 2005).

Some combination of those two tools is necessary to account for the diversity of characteristics that accompanies different stress behaviours in suffixed words. There are important differences that have to do with morphology (the nature of the bases to which suffixes may attach, productivity, semantic uniformity and allomorphy), but I will here focus on the phonological behaviours of suffixes.

The existing literature reports a number of phonotactic differences and cases of misapplication of phonological processes found across different varieties of English that differentiate derivatives with "stress-neutral" suffixes from those with "stress-shifting" suffixes, which tend to pattern with monomorphemic words. Borowsky (1993) and Harris (1990) report several cases of misapplication, such as:

- thought/north Centralization (London Vernacular English) word-finally (e.g. *paw* [pɔə] cp. *pause* [pouz]) and before "neutral" suffixes (e.g. *paws* [pɔəz]);
- æ-tensing (New York City & Philadelphia) in closed syllables (e.g. *class* [klEs]), maintained before vowel-initial "neutral" suffixes (e.g. [klEsi]) but not stress-shifting suffixes (e.g. *classic* [klæsɪk]);
- Aitken's law (Scottish English): lengthening of word-final vowels (e.g. *brew* [brʉː] vs. *brood* [brʉd]), maintained before neutral suffixes (e.g. *brewed* [brʉːd]);
- Northern Irish Dentalization: /t, d, n, l/ are dentalized before /(ə)r/ (e.g. *ma*[t̪]*er*) but not if it belongs to a "neutral" suffix (e.g. *fa*[t]*er*)

Such cases are indicative of the fact that certain processes apply to units that exclude "neutral" suffixes. Other processes are triggered by certain syllabic conditions and varieties of English may differ in the size of the units in which the process applies. For example, Bermúdez-Otero (2011) shows that this is the case for /l/-darkening, which applies to smaller constituents in Received Pronunciation than it does for most North American varieties.

However, many processes that are useful to understand the divide between different types of suffixes have a quite restricted empirical basis (often a single study, sometimes just some selected examples). Thus, this paper will call for more detailed empirical investigation of those issues.

Key words: suffix classes, morphology-phonology interface, stress

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PAC 2025 : Spoken English Varieties
Perception and Representations

18-20 June 2025, Aix-en-Provence (France)

Friday, June 20th

- **9:00-10:00 - Keynote Speaker:**

Carmen Llamas (University of York), *Perception of difference: sounds, places, meaning.*

- **10:00-11:00 - Session 7 - Production Analysis L2**

Takeki Kamiyama (Paris Saint Denis University), **Maëlle Amand** (University of Limoges), **Susan Moore** (University of Limoges), *Production of L2 English suffixed words by advanced French-speaking learners: perceptual assessment of word stress.*

Margaux Cecchini, Emmanuel Ferragne, Hannah King, Alice Léger, Coline Caillol, Sylvain Charron, Clément Debacker, Maliesse Lui, Catherine Oppenheim (Paris Cité University), *Same person, different voices: Articulatory settings and phonation in French learners of English.*

11:00-11:30 Coffee break

- **11:30-1:00 - Session 8 - Production analyses on PAC corpora**

Julia Bongiorno (Aix Marseille University), *Perception of High Rising Terminals in the Republic of Ireland: A Preliminary Study of Negative Associations with Stylistic Rises.*

Raphaël Domange (Côte d'Azur University), *Weak vowels in Delhi English: an acoustic and sociolinguistic study.*

Véronique Lacoste (University Lumière - Lyon 2), **Jeff Tennant** (University of Western Ontario), *The Canadian Vowel Shift in Toronto Haitian English.*

1:00 - End of the conference

- **2:30-6:30: Workshop "Depositing and sharing data".**

*Interventions by **Cyril Deniaud** (Aix Marseille University), and **Anne Przewozny-Desriaux** & **Erwanne Mas** (University of Toulouse Jean Jaurès).*

Keynote speaker

Perception of Difference: sounds, places, meaning

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Much research in sociolinguistics and perceptual dialectology examines people's perceptions of difference across dialect regions. Fewer studies investigate the fine-grained differences perceived by speakers within a region. Rather than considering pan-regional pronunciations which multiple localities may share, we focus here on the highly localised features which may differentiate speakers from localities in close proximity who can be said to come from the same region. Perceptual judgements of the association of geographical place with specific pronunciations allows insight into the social meaning carried by forms. We also examine differences in the perception of phonological contrasts among speakers across the region allowing further insight into the meaning carried by forms.

The region in question is the Northeast of England. The TUULS project (*The Use and Utility of Localised Speech Forms in Determining Identity: Forensic and Sociophonetic Perspectives*; UK ESRC ES/M010783/1) focused on phonological variation and change in three urban centres in the region: Newcastle, Sunderland and Middlesbrough. In the project, production data were taken from 120 informants (40 per locality) and perception tests were subsequently run on a subset of these (10 per locality).

This talk presents findings from two of the perception tasks used in the project. One investigates the geographical associations that listeners have with particular phonetic forms; the other investigates listeners' perceptions of vowel contrasts. In both tests we examine the differences that are apparent across the three localities. Findings show that for listeners within the region, systematic differences are perceived. Although the accents may be heard as the same by those from outside the region, findings here demonstrate the importance of fine-grained difference and the role of highly localised forms in carrying meaning.

Production of L2 English suffixed words by advanced French-speaking learners: perceptual assessment of word stress

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Abstract

French-speaking learners of second languages are said to be partially "stress deaf" (Tremblay, 2009, Frost, 2009 for English; Dupoux et al., 2008, Schwab et al., 2020, Peperkamp et al. 2023 for Spanish, among others), due to the absence of contrastive lexical stress in their L1 French. However, many studies on English word stress focus on the perception of nonce words or disyllabic word-pairs and little is known about the production of suffixed words (three syllables or more). Baptista (1989) examined 128 words in contextualized short sentences read by 32 advanced Brazilian students of English. Attribution of primary stress to the final syllable in "verbs with a tense vowel in the final syllable" (e.g. *economize*, *separate*) was amongst the strategies adopted by learners. The same tendency was found in an auditory identification task of suffixed words (with *-ate*, *-ize*, and *-ify*) by advanced learners of L1 French, and it was even more frequently observed when these suffixes were followed by *-ing* (*-ating*, *-izing*, *-ifying*) (Kamiyama & Amand, 2023). One wonders then whether this phenomenon is related to learners' lexical representation and/or to what they actually produce.

A production experiment was thus conducted to measure whether both perception and production exhibit symmetrical patterns. 20 advanced French-speaking learners of English, all second-year English-major students (LLCER) at a French university, read out 39 test words including word-endings *-ate*, *-ating*, *-ize*, *-izing*, *-ify*, *-ifying*, among others, embedded in the following sequence of carrier sentences: "*Do I wanna say ___? Yes, I wanna say ___*". The test words ranged from 3 to 5 syllables (mode = 4). The recordings were presented to 3 raters with more than 10 years of teaching experience of English phonetics at French universities. They were asked to select the syllable carrying primary stress after listening to the recording of the whole sentences. Out of the 1560 tokens (39 test words x 20 learners x 2 repetitions), all 3 raters agreed on the primary stress placement in 74.4%, and 2 of them did in 24.2% of the cases. In 64.2% of the assessments (308 out of 480: 4 words x 20 learners x 2 repetitions x 3 raters), test words ending in -ate (e.g. *decorate*) were judged as carrying primary stress on the syllable expected in SSB and GA (e.g. ˈ*decorate* vs **deco*ˈ*rate*: 140 out of 480, i.e. 29.2%). Conversely, in 26.9% of the cases (129 out of 480: 4 words x 20 learners x 2 repetitions x 3 raters), those ending in *-ating* (e.g. *decorating*) were judged as stressed on the expected syllable (e.g. ˈ*decorating* vs **deco*ˈ*rating*: 328 out of 480, i.e. 68.3%). Similar tendencies were observed with other word endings containing a diphthong on the last syllable, namely, *-ise* (expected 67.2% vs ˈ*ise* 31.7%: out of 360 = 3 words x 20 learners x 2 repetitions x 3 raters) and *-ising* (expected 30.6% vs ˈ*ising* 58.1%), as well as *-ify* (expected 76.7% vs ˈ*fy* 25.4%: out of 240 = 2 words x 20 learners x 2 repetitions x 3 raters) and *-ifying* (expected 42.5% vs ˈ*fying* 54.6%).

By contrast, adding *-ing* does not seem to have the same impact in other cases: *interpret* (expected stress placement 20%) vs *interpreting* (21.7%); *develop* (14.2%) vs *developing* (15%). These results show that stress-imposing endings with a diphthong (*-ate*, *-ise*, *-ify*), especially when combined with *-ing*, tend to attract stress to the syllable with a diphthong (/eɪ/ and /aɪ/) in these word endings produced by advanced French-speaking learners. They also pattern with a previous study on auditory perception, hinting at the representation of the stress pattern by learners (Kamiyama & Amand, 2023). In addition, this stress pattern coincides with those reported marginally in Celtic L1 varieties of English (Irish, Scottish: Wells, 1982), suggesting a possible similarity between some forms of L2 and "now established varieties with a language shift background" (Hickey, 2010) in L1. This calls for a re-evaluation of standards when assessing word stress in L2 speech.

Key words: Word stress, Suffixed words, Production, Perceptual assessment, French-speaking learners.

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Same person, different voices: Articulatory settings and phonation in French learners of English

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Abstract

The phenomenon whereby individuals perceive a change in their voice when switching languages is a documented but relatively under-explored area that implicates both articulatory and phonatory adjustments. This study addresses two central aspects of language switching: supralaryngeal articulatory settings and phonatory parameters, specifically in French learners of English. Through a combined analysis of articulatory real-time Magnetic Resonance Imaging (MRI) and acoustic measures of fundamental frequency (f0) and voice quality, this research aims to identify specific markers of language switching.

The first focus of the study is on supralaryngeal articulatory settings, which involve language-specific configurations in the vocal tract. Research suggests that each language imposes unique articulatory settings, or baseline configurations in the oral and pharyngeal cavities, that speakers adopt unconsciously, influencing sound production and perceived voice quality (Honkiman, 1964; Laver, 1978). Languages differ in their inter-speech postures (ISPs)- the resting positions of articulatory structures, when speakers are not actively producing speech but prepared to do so. Articulatory MRI studies by Gick et al. (2004), Wilson and Gick (2014), Benítez et al. (2014), and Badin et al. (2024) show that ISPs vary significantly across languages, suggesting that bilingual speakers adjust these postures by language.

The second focus examines phonatory adjustments, particularly changes in vocal fold vibration patterns and fundamental frequency (f0), which are critical to voice quality differences across languages (Bruyninckx et al, 1994; Wagner and Braun, 2003; Georgiou and Kaskampa, 2024). Schwab and Goldman (2016) found, for instance, that English-French bilinguals had lower f0 values in English than in French, likely due to language-specific prosodic requirements. Additional measures such as harmonic-to-noise ratio (HNR) and spectral tilt further illuminate these differences (Georgiou and Kaskampa, 2024). Such phonatory adjustments suggest that bilingual speakers may change these parameters depending on the language being spoken.

To empirically investigate these language-specific articulatory and phonatory changes, this study will analyse MRI data from four bilingual subjects as they read “The North Wind and the Sun” in both French and English, focusing on ISPs and supralaryngeal articulatory settings. Complementing this, an acoustic analysis, with recordings of over 400 English undergraduate students reading sentences in both languages, examining f0, harmonic-to-noise ratio, and spectral tilt to identify cross-linguistic patterns in voice quality will be performed. We hypothesize that distinct patterns in ISP and phonation will emerge, corresponding to each language’s phonetic requirements, thus offering predictive insights into the mechanisms of voice modulation in bilingual contexts.

A pilot analysis of the MRIs shows differences in articulation between French and English (see Figure 1). Preliminary results involving 164 speakers show a slight but significant difference in median f0 values between French and English, with French being higher by 1.6% (see Figure 2).

Key words: French learners of English, Articulatory settings, Phonation, Articulatory MRI, Fundamental frequency (f0)

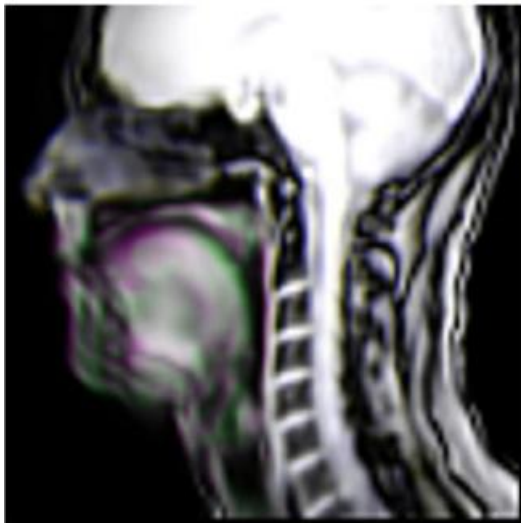

Figure 1: Coloured regions show mismatches between two (French vs English) overlaid mean MRI images while the speaker reads "The North Wind and the Sun" in each language (speech and pauses are included). Reg regions show articulator placement in French but not;

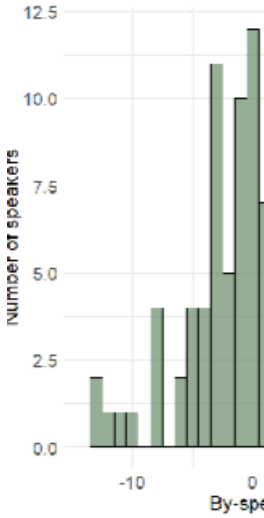

Figure 2: Within-speaker (Hz): median f0 in Englis

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Perception of High Rising Terminals in the Republic of Ireland: A Preliminary Study of Negative Associations with Stylistic Rises

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Abstract

High Rising Terminals (henceforth HRTs, also known as uptalk) are stylistic rising tones found at the end of declarative statements. These rises can be found in many varieties of English (see Ritchart & Arvaniti, 2014 for the USA for instance, Cruttenden, 1997 for England, or Sullivan, 2012 for Northern Ireland) as well as in other languages (Warren, 2016) as well. Despite the prevalence of research on HRTs in many varieties of English, little has been published on their use and perception in the Republic of Ireland. HRTs are particularly interesting, because their pragmatic functions and their phonetic and phonological characteristics vary significantly depending on the variety of English being studied. The way HRTs are perceived also varies widely. Indeed, the phenomenon is often associated with negative traits, such as uncertainty (Warren (2016: 51), unreliability or carelessness (Lakoff, 1973). Conversely, other studies suggest that HRTs can be used as a politeness device, and that they are used to take the interlocutor's perception and understanding of the conversation into account (House, 2006).

The aim of this qualitative and perceptual study is to determine whether speakers' intentions are perceived negatively due to HRTs in the Republic of Ireland. In order to get a first insight into this question, a perceptive study was conducted on Prolific, an online survey tool that allows for the selection of participants based on various sociological and linguistic characteristics. 60 participants (23 men and 37 women, all cisgender) from Ireland, who were born, still reside in the country and speak English as their first language, took part in the study.

Participants were asked to listen to 21 sentences: 7 statements with HRTs, 7 rising interrogative sentences, and 7 statements ending with a fall. For each stimulus, they were asked to answer the same set of questions, rating the speakers' confidence, reliability, care for their interlocutor, and certainty about what they were saying on a scale of one ("not at all") to five ("a lot"). Participants were also asked to estimate the speakers' age, as many studies (see for instance Fletcher & Harrington, 2001 or Ellingsæter, 2014) indicate that younger speakers tend to use HRTs more frequently than older ones. This age-related question will be addressed in future studies.

The data used in this study is from the PAC-Dublin corpus (Bongiorno, 2021a), that is composed of 30 speakers, and which was recorded in the south of the Irish capital city between 2016 and 2018. The data was collected using the PAC Prosody protocol (Bongiorno, 2021b; Bongiorno *et al*., forthcoming) alongside the original PAC-LVTI protocol. The sentences selected for this study were taken from the reading task, the Map-Task (Brown *et al.*, 1983) and the image description task of the PAC-Prosody protocol. A brief context was provided for some extracts so that participants could understand the context in which each sentence was uttered.

Preliminary results suggest that participants do not perceive speakers using HRTs as exhibiting negative traits. It will be interesting to explore these results further to support the

hypothesis that HRTs are so prevalent in Ireland that they no longer elicit any particular reaction from those who hear them.

Key words: High Rising Terminals, prosody, intonation, Ireland, phonology.

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Weak vowels in Delhi English: an acoustic and sociolinguistic study

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Abstract

Indian English, often characterized as a syllable-timed variety due to substrate influence, has traditionally been described as exhibiting full vowels in weak positions (e.g. CIEFL, 1972; Hickey, 2004; Trudgill & Hannah, 2002). While stress-timing and vowel reduction are traditionally considered closely related phenomena, in Indian English, they have largely been studied independently and to varying degrees. Speech rhythm, particularly from an acoustic phonetics perspective, has received the most attention in recent years. Experimental investigations into the syllable-timed rhythm of Indian English have explored both perception and production, focusing on parameters such as duration, sonority, loudness, intensity and pitch (e.g. Fuchs 2016; Sirsa & Redford 2013; Krivokapić 2013). These studies generally conclude that while Indian English tends toward syllable-timed rhythm compared to standardized varieties of British and American English, it also incorporates features characteristic of stress-timed rhythms, thereby offering a more nuanced depiction of its rhythmic structure. Despite the observed tendency toward syllable-timed patterns being frequently linked to the absence of weak or reduced vowels in connected speech, no instrumental study has systematically examined this parameter to date. The present study addresses this gap by adopting a sociolinguistic, speech-community-based approach.

The data for this study were collected from 22 lifelong South Delhi residents born between 1948 and 1992. All participants identify as upper-middle class and report using English daily, including in intimate domains of communication. The data were collected using the PAC protocol, which includes wordlists, a text passage, and guidelines for formal and informal conversations. This study focuses on weak vowels in lexical words from the text reading data. An average of 141 tokens per speaker were analyzed for acoustic and durational properties.

Preliminary results reveal several phenomena common to varieties of English worldwide. For instance, there is a clear tendency toward *happY*-tensing (Wells 1982), with the vowel often positioned closer to the FLEECE area than the KIT area. Additionally, non-final weak /ɪ/ frequently adopts a highly centralized quality, particularly when not flanked by a velar or in word-initial position, suggesting a partial merger with *schwa*. This phenomenon appears unaffected by morphosyntactic contexts (e.g., *-es*, *-ed*) and thus seems exclusively driven by coarticulatory effects. Where Standardized British English has a *schwa*, weak vowels in Indian English are scattered across various mid-central positions, reflecting a pattern commonly observed in other English varieties. One notable feature, however, is the significant lengthening of the *lettER* vowel, even though this vowel is typically not rhotacized among the speakers investigated. We surmise that this phenomenon (along with *happY* tensing) may contribute to the general perception of Indian English having full vowels in weak positions. Finally, this study also intends to examine sociolinguistic patterns of variation to determine whether factors such as age or gender significantly influence the quality of the weak vowels under study. The aim is to establish whether these features have remained stable or are shifting, potentially aligning with or diverging from international standards.

Key words: Indian English, weak vowels, vowel reduction, syllable/stress timing, speech rhythm.

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The Canadian Vowel Shift in Toronto Haitian English

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Abstract

The field of sociolinguistics has in recent years seen a growing interest in multicultural varieties of English spoken in urban centres (Cheshire et al. 2011, Cheshire & Kerswill, in press, and others). In Canada, studies have investigated ethnolinguistic variation in the highly multicultural city of Toronto, examining to what extent immigrant communities play a part in sociophonetic change (Baxter & Peters 2013, Hoffman & Walker 2010). Bigelow et al. (2020) and Denis et al. (2023) point out that the Greater Toronto Area (GTA) lends itself well to the study of such varieties and they offer initial explorations of what they term 'Multicultural Toronto English' (MTE) which represents an "alternative, non-normative way of doing language in Toronto that is not linked to middle class, urban whiteness" (Denis et al. 2023:31). We propose to contribute to this discussion by presenting a study of the Canadian Vowel Shift (CVS) in Toronto Haitian English (THE), inquiring into the extent to which Haitian Torontonians adopt this vowel pattern that characterizes what Denis et. al. 2023 term 'Normative Canadian English' (NCanE). The CVS, first documented by Clarke et al. (1995) and sometimes designated using other terms such as the 'Short Front Vowel Shift' (Boberg 2019), results from the low-back merger and involves lowering of the KIT vowel, lowering (and sometimes retraction) of the DRESS vowel, and retraction of the TRAP vowel (Boberg 2005, Roeder & Jarmasz 2010, Roeder et al. 2018, Dallinges 2023). If Haitian Torontonians do not participate in the CVS, do they orient towards a variety that might be called Black Toronto English (BTE) (Baxter & Peters 2013) or towards a general MTE model, drawing from the feature pool identified in Denis et al. (2023), or both?

We propose to analyse data from sociolinguistic interviews with English speakers of Haitian descent, grouped into two categories. Category 1 includes six speakers living in Toronto or in the GTA who were born in Haiti, both of whose parents are Haitian and whose native tongue is not English. Category 2, on the other hand, is made up of six speakers living in Toronto or in the GTA who were born in Toronto, both of whose parents are Haitian and whose native tongue or dominant language is English. Vowels are annotated on an interval tier in a Praat TextGrid (Boersma & Weenink 2024). Formant values are extracted using Fast Track (Barreda 2021) and normalized using NORM (Thomas & Kendall 2007). In preparation for this proposed analysis, we conducted an exploratory study based on non-normalized formant measurements for two Category 1 speakers and two Category 2 speakers, using Dallinges' (2023) benchmarks for determining presence of the CVS (lowering of KIT where F1>540 Hz, lowering of DRESS where F1>650, retraction of TRAP where F2<1825). Results show that none of the four speakers lowers the KIT vowel. In addition, Category 1 speakers do not lower DRESS at all, while Category 2 speakers lower this vowel only for a handful of tokens. All four speakers exhibit a retracted TRAP vowel. Could this latter finding be attributable to the influence of Haitian Creole for Category 1 speakers and to the CVS for Category 2 speakers? Or, given that findings for KIT and DRESS show a general lack of participation in the CVS, this generalized TRAP retraction may be unrelated to the CVS and rather be attributable to the influence of a back TRAP vowel characterizing the Jamaican-influenced BTE variety described by Baxter & Peters (2013).

Key words: Haitian English, Toronto, Vowels, Canadian Vowel Shift, Sociophonetics

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Workshop

- **2:30-6:30: Workshop "Depositing and sharing data".**
  *Interventions by **Cyril Deniaud** (Aix Marseille University), and **Anne Przewozny-Desriaux** & **Erwanne Mas** (University of Toulouse Jean Jaurès).*

*** THANK YOU FOR YOUR PARTICIPATION ***