

PhD POSITION

Employer: University of Warsaw, Institute of Applied Linguistics

Role: PhD student, research assistant/scholarship grantee

Duties: active participation in the research project referred to below, work on the PhD project

Discipline: general linguistics, phonology, sociophonetics, psycholinguistics

We are looking forward to receiving applications for a **PhD position** funded from the project entitled “Acoustic, perceptual and gestural correlates of (sub)phonemic distinctions: aperture in obstruents” (see project description below), funded by the Polish National Science Foundation (grant NCN SONATA no. 2017/26/D/HS2/00574).

The selected candidate will join the PhD programme of the Department of Applied Linguistics at the University of Warsaw under the supervision of Karolina Broś (Institute of Applied Linguistics, University of Warsaw), in cooperation with Marzena Żygis from the Leibniz-Centre General Linguistics and Humboldt University (Berlin).

The programme will begin on October 1, 2018.

After admission to the programme, the PhD student will receive a monthly scholarship amounting to PLN 3,500 (net) during the period of 24 months (with a possibility to extend the funding). The student will also be able to apply for additional funding throughout the PhD programme.

Requirements:

The candidate’s PhD project should be closely related to the SONATA project. In particular, it should involve the subject of language change (lenition processes) in the context of production and perception and/or investigate the interrelations of acoustics, prosody and body movements in the process of communication.

Due to the nature of the SONATA project and the tasks involved, the candidate must have:

- a very good knowledge of phonetics and phonology
- very good analytical and organisational skills
- a very good command of English.

The following skills will be treated as an additional advantage:

- ability to conduct basic acoustic analysis (Praat)
- statistical skills (R software)
- knowledge of Spanish and/or German
- programming skills (Matlab, Python)

Tasks to be performed in the project:

- data analysis and database preparation
- descriptive statistics and results visualisation
- script-based acoustic analysis
- perception experiments preparation and running
- help in preparing the *motion capture* study
- preparation of publications based on partial project results

Candidates should send the following documents to the principal investigator by e-mail (k.bros@uw.edu.pl):

- M.A. diploma (linguistics, language studies, psychology or related discipline), including the title of the thesis
- CV with information concerning the candidate's research experience, research interests and statements/confirmation of the fulfilment of the above requirements
- cover letter together with a short description of the research project the candidate wants to implement as a part of the PhD programme

The submission deadline is July 30, 2018 r.

For more information concerning the SONATA project and the advertised role, please contact dr Karolina Broś (k.bros@uw.edu.pl).

SONATA project description:

Acoustic, perceptual and gestural correlates of (sub)phonemic distinctions:

aperture in obstruents

Objectives

The proposed project constitutes a comprehensive empirical study of both production and interpretation of obstruents that investigates the ways in which subphonemic features are accommodated in the sound systems of different languages. As a point of departure, it takes two weakening processes observed in Gran Canarian Spanish: approximantisation of voiced stops and postvocalic voicing of voiceless stops. Given the co-occurrence of these processes, the distribution of obstruents in the language has been altered, causing a shift in the feature contrasting them from voicing to continuancy (aperture). This feature, however, is not particularly salient in acoustic terms and may lead to confusion in speech perception when processing minimal pairs. Because the two

processes apply across word boundaries, the number of words and phrases that differ solely in continuancy (voiced stop – voiced approximant) significantly rises. Thus, the aim of the study is to see whether native speakers have difficulty in distinguishing sounds based on this feature, and whether the contrast this feature provides is recognised by speakers of other languages. A broader question concerns the universality of subphonemic differences and the role of body movement in priming speech.

Methods

The project consists of 3 experiments to be conducted in a lab setting: (i) an acoustic analysis of the empirical data gathered in the course of fieldwork focused on the phonetic variables involved in voicing and approximantisation, (ii) a series of perception tests to be conducted among the speakers of Gran Canarian Spanish, Peninsular Spanish, German and Polish for a comparison of the auditory distinctiveness of the analysed sound differences across dialects and languages, and (iii) a motion capture study focused on body movement accompanying speech, with a focus on Spanish stops in prominent positions, whose aim is to determine whether gestural priming takes place in speech production and perception. The combined results of these experiments will provide insight on the processing of small phonetic differences between sounds, on whether perception of such differences is successful in native (naturally trained) speakers only, or in speakers of other languages as well, and on the extent to which acoustics, prosody and body movements are involved in informing about sound properties.

Impact

The proposed experiments will constitute a significant contribution to Spanish linguistics, to the phonetics-phonology interface, studies in language typology and to multimodal approaches to speech perception. Most importantly, the project involves a large dataset gathered in the course of fieldwork recordings of several dozen representatives of the native population. Furthermore, controlled perception studies based on the planned acoustic analysis will be performed among 120 participants from different language backgrounds. Motion capture data will supplement the findings and provide insight on the relationship between bodily movement and speech. The three experiments combined constitute an unprecedented study of both Spanish sound structure and cross-linguistic principles of sound processing. Together, they allow for data triangulation and will produce more objective findings on the interrelations between the various linguistic cues influencing speech production and perception. Hopefully, a reliable methodology for similar studies on other (sub)phonemic contrasts and features will be established in the course of the project to ensure replicability and future advancements in linguistic research involving other language families.