

## **MSc project 1: Pitch Changes in Drunken Speech**

### **Supervisors:**

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**Department:** Department of Linguistics

**Title:** Pitch variability in intoxicated speech by tonal language speakers (particularly Mandarin Chinese/Yoruba)

### **Summary:**

Previously studies with intoxicated speech have consistently shown that pitch varies significantly more in intoxicated conditions than in sober conditions. (Johnson, Pisoni & Bernacki 1990)

A question that arises from this finding is whether this pitch variability with alcohol also applies to speakers of tonal languages, such as Mandarin Chinese and Yoruba. Given that in tonal languages, pitch is used primarily to encode lexical differences and therefore bears a high functional load, the hypothesis would be that the pitch variability due to alcohol would be smaller in tonal languages than non-tonal languages.

In this project, you will test whether the effect of alcohol on pitch variability in tonal languages differs from that in non-tonal languages.

You will conduct a production experiment, which involves reading a play/dialogue with participants in both sober and drunk conditions; administering alcohol to participants; measuring alcohol levels using a breath-analyser. You will subsequently analyse the results. (Training and guidance will be provided in nearly all of the stages).

[This project has UCL ethics approval.]

### **What the project will offer you:**

- Experience with a novel methodology of using alcohol, and applying it in linguistics and speech science
- Experience with talking with intoxicated participants, mixing basic cocktails and using a breathanalyser.
- Experience with recording speech materials in a professional recording environment;
- Experience with acoustic data analysis;
- Experience with conducting experiments in linguistics and speech science.

**Required skills:**

- Native speaker knowledge of a tonal language (particularly Mandarin Chinese or Yoruba);
- No known language-related impairments (e.g. speaking/listening/reading);
- Ability to think and work independently;
- Basic Statistics skills (SPSS / R / Excel);
- Some knowledge of Praat (training and guidance will be provided).

**Required commitment:**

The project will require ~30 hours of data collection. Tasks include preparing the production experiment (stimulus material, consent forms, experimental instructions, and running sheets), recruiting the participants, preparing the recordings for analysis, conducting the production experiment, participating in data analysis).

**Recommended Reading:**

Johnson, K., Pisoni, D. B., & Bernacki, R. H. (1990). Do voice recordings reveal whether a person is intoxicated? A case study. *Phonetica*, 47(3-4), 215-237.

Chin, S. B., & Pisoni, D. B. (1997). *Alcohol and speech*. Academic Press.