

# ASRH

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## FORENSIC PHONETICS - PROBLEMS, LIMITATIONS AND PROMISES

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**Workshop/seminar  
September 17, 2010**

**Aarhus University.** Aarhus, Denmark  
Nobelparken,  
Jens Chr. Skous Vej 5  
Building 1461-516

Programme (abstracts next page):

- 09.15**      **Michael Jessen** (Bundeskriminalamt, Germany)  
*Forensic speaker identification: Methods, research and practice*
- 10.45**      **Paul Foulkes** (University of York, UK)  
*Language Analysis for the Determination of Origin*
- 12.15**      **LUNCH**
- 13.30**      **Dominic Watt** (University of York, UK)  
*Accuracy of earwitness reports: some current issues*
- 15.00**      **Jos Vermeulen** (Netherlands Forensic Institute, The Netherlands)  
*Is an evidence line up a remedy for confirmation bias?*

The workshop/seminar is funded by Sprogvidenskabelig Forskerskole Nord and is free of charge. However, to make sure we have enough chairs and coffee for all, please let us know if you intend to participate.

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## **Abstracts:**

### *Forensic speaker identification: Methods, research and practice*

#### **Michael Jessen, Bundeskriminalamt, Germany**

After providing a brief introduction to the tasks of forensic speaker identification in general, an overview will be given of forensic voice comparison (= speaker comparison). Some audio recordings will be presented to illustrate the voice comparison task under both matching conditions (same technical and behavioural conditions) and mismatching situations (different conditions), and different possible types of limitations on the quality and quantity of case material will be explained. The range of different methods and features used in voice comparison practice and research will be presented, while paying particular attention to the auditory-acoustic method. It is currently debated how conclusions about the speaker identity or non-identity of two speech samples should be expressed in forensic expert reports. The range of possible views on this issue will be addressed. Finally, some of the findings from a current research project on the correlation between acoustic-phonetic methods (long-term formant measurements) and automatic speaker recognition will be shown and discussed.

### *Language Analysis for the Determination of Origin*

#### **Paul Foulkes, University of York**

In this presentation I will address an emergent issue in forensic phonetics: language analysis for the determination of origins (LADO), as applied in asylum claim cases. LADO was developed in the 1990s as a response to the increase in asylum claims, and the assumption that a rising number of applicants were not from countries they claimed to be fleeing. Recently there has been considerable controversy about LADO in academic circles, government agencies, and in the media (e.g. Travis 2003). At present, methods of analysis differ across LADO agencies, with no standard testing methods yet established. There is also considerable dispute over who is most suitable to carry out this work. Debate surrounds the level and types of professional qualifications required, and the value of including native speakers in the process (e.g. Eriksson 2008). More generally there are calls for empirical investigation of both currently-practiced methods, and also more generally into aspects of speech perception and speaker/dialect analysis that underpin identification of linguistic features (e.g. Fraser 2009).



LADO has only recently been a subject discussed by forensic phoneticians, yet it is clear that phonetic and phonological analysis can make valuable contributions to the practice. I will present some empirical evidence from a recent study (Wilson 2009) which is a first attempt to assess the relative skills in dialect recognition of LADO analysts, native speaker-listeners, and phoneticians.

#### References

- Eriksson, A. (2008). Guidelines? What guidelines? Paper presented at IAFPA Conference, Lausanne, Switzerland
- Fraser, H (2009). The role of 'educated native speakers' in providing language analysis for the determination of the origin of asylum seekers. *International Journal of Speech, Language and the Law* 16: 113-138.
- Travis, A. (2003). Language tests to uncover bogus Iraqi asylum seekers. *The Guardian*, 12 March.
- Wilson, K. (2009) Language analysis for the determination of origin: native speakers vs. trained linguists. MSc dissertation, University of York.

### *Accuracy of earwitness reports: some current issues*

#### **Dominic Watt, University of York**

In this paper I consider some of the factors influencing the accuracy of reports made by phonetically untrained individuals who have been exposed to 'live' speech material (i.e. non-recorded material that is only heard once, for example when a bank robbery is taking place). The validity of the statements earwitnesses make about the utterances they have heard is contingent on, among other things, the acoustic environment, the witness's familiarity with the language(s), dialect(s) or accent(s) being spoken, whether the talker's face was visible while s/he was talking, the witness's ability to give a useful verbal description of the talker's voice, and the effects of time delay on the witness's recall of the overheard material. A review will be given of recent and current research projects in this area that are being carried out at the University of York, with a particular focus on the study described in Llamas *et al.* (2009).

#### References

- Llamas, C., Harrison, P., Donnelly, D. & Watt, D. (2009). Effects of different types of face covering on speech acoustics and intelligibility. *York Papers in Linguistics (Series 2)* 9: 80-104.

## *Is an evidence line up a remedy for confirmation bias?*

### **Jos Vermeulen, NFI Speech and Audio Group, The Netherlands**

In the Netherlands recently there has been a discussion about the use of evidence line up as a means to mitigate against confirmation bias. This has led to several publications in legal magazines.

NFI Speech and Audio Group use a procedure in speaker comparison cases such that the first examiner knows the details of the case and prepares edits and sound files for a second examiner. The second one does not have this background information. The examination is usually done by grouping speech fragments in an evidence line up. After this first step is done, the material is placed into the context of the case and a second examination is done.