



**Syddansk Universitet**

## **INSPECT: Innovating Speech Elicitation Techniques**

Niebuhr, Oliver

*Publication date:*  
2015

*Citation for polished version (APA):*

Niebuhr, O. (2015). INSPECT: Innovating Speech Elicitation Techniques. Paper presented at 14th International Pragmatics Conference, Antwerpen, Belgium.

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal ?

### **Take down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

# INSPECT: Innovating Speech Elicitation Techniques

Oliver Niebuhr

Institute of Design and Communication, Innovation Research Cluster Alision, University of Southern Denmark, Sønderborg, Denmark

olni@sdu.dk

Corpora of spontaneous monologues and dialogues are of increasing importance in phonetic research. However, the task of describing and understanding speech communication also places certain requirements on the acoustic quality and experimental control of speech signals and moreover involves a number of instrumental approaches. Thus, as Xu (2010:329) puts it, "lab speech is indispensable in our quest to understand the underlying mechanisms of human language [...] although spontaneous speech is rich in various patterns, and so is useful for many purposes, the difficulty in recognizing and controlling the contributing factors makes it less likely than lab speech to lead to true insights about the nature of human speech".

Despite this inevitable fact, we know surprisingly little about the social, environmental, and task-specific factors that shape speech production inside the laboratory, apart from the fact that read speech differs in many respects from spontaneous speech (e.g., Mixdorff & Pfitzinger, 2005; Dellwo et al., 2015). In the recent words of Wagner et al. (2015:1): "we need a much better understanding of the extent to which our methods and our ways of collecting speech data influence our results". INSPECT is a research initiative that was started in 2013 and takes up the long neglected challenge of investigating if and how all the various aspects and elements of recordings inside the laboratory affect speech production in general and prosodic constructions in particular. On this basis, INSPECT pursues three long-term goals: First, to *understand* the differences between lab speech and everyday conversations outside the laboratory so that we can better evaluate to what extent and in which respects lab-speech findings should or should not be generalized to everyday conversations; second, to gain *control* over the factors that shape speech production inside the laboratory in order to keep these factors constant and allow more accurate comparisons between the results of different studies; and third, in an effort to bridge the gap between lab speech and everyday conversations, to *exploit* the factors that shape speech production inside the laboratory in order to trigger or support certain speaking styles. In this context, one crucial question is how emotions and/or expressive speech can be enforced inside the laboratory without using actors or explicit instructions.

So far, the INSPECT initiative dealt with effects of reading lists, elicitation tasks, day time, font type, text type, text highlighting, musical/voice training, and the simulation of noisy everyday environments, see Niebuhr & Michaud (2015) for a summary. Factors to be investigated in future studies include, amongst other things, light color and light intensity inside the laboratory, eye contact with the dialogue partner, the type of dialogue partner, and the communication channel.

The presentation will give an overview of prosodic findings within INSPECT and other related findings in the literature, with special emphasis on the effects of elicitation tasks on pitch-accent (focus) production, fluency, expressive functions, laughter, breathing, and changes of prosodic patterns over time.

## References

- Dellwo, V., A. Leemann, M.-J. Kolly (2015). The recognition of read and spontaneous speech in local vernacular: The case of Zurich German. *J. of Phonetics* 48, 13-28
- Mixdorff, H., H.R. Pfitzinger (2005). Analysing Fundamental Frequency Contours and Speech Rate in Map Task Dialogs. *Speech Communication* 46, 310-325.
- Niebuhr, O., A. Michaud (2015). Speech data acquisition - The underestimated challenge. *Kalipho* 3, 1-42.
- Wagner, P., J. Trouvain, F. Zimmerer (2015). In defense of stylistic diversity in speech research. *J. of Phonetics* 48, 1-12.
- Xu, Y. (2010). In defense of lab speech. *Journal of Phonetics* 38, 329-336.