

SWE-CLARIN RESEARCH COLLABORATIONS AT THE HUMANITIES LAB, LUND UNIVERSITY

Johan Frid
Humanities Laboratory, Lund University, Sweden
johan.frid@ling.lu.se

This is a survey of some of the Swe-Clarín collaborations at the Humanities lab in Lund.

In the first project we assist a group of neurolinguists (Pelle Söderström, Mikael Roll and Merle Horne) by developing a method for calculation of a lexical competition score. The method consists of constructing a database with word initial fragments (WIFs) and syllables extracted from the Swedish NST lexicon and then frequency weighting this with word frequencies from the Swedish PAROLE corpus. Their study investigates a proposed ERP effect, the pre-activation negativity (PrAN). It was found that the PrAN is sensitive to lexical competition, in particular to the number of continuations which can complete a given word-initial fragment, lending support to the idea that it reflects a within-word pre-activation mechanism. The study is published in Söderström et al (2016).

In the second project we collaborate with the MEPAC project run by Anna W Gustafsson and Charlotte Hommerberg. This project investigates the use of metaphor in the experience of end-of-life care. It involves a systematic analysis of the metaphors used by different stakeholder groups (patients, unpaid family carers and healthcare professionals) in a corpus consisting of interviews and contributions to online fora. One goal of the project is to develop a Swedish version of the UCREL semantic analysis system which will aid the detection of metaphors. The group has also applied for, and received, additional funding from the Crafoord foundation.

A third collaboration is with the MUMOP project led by Gilbert Ambrazaitis. This project investigates levels of multimodal prosodic prominence, as resulting from an interplay of verbal prosody (pitch accents) and visual prosody (head and eyebrow beats). One challenge is the annotation of head and eyebrow movements based on video data, which is commonly achieved by means of manual labelling by human annotators. To this end, we are developing a system for training a classifier to recognise head movements in video data. The research has been presented at MMSYM 2016 and at the Swe-Clarín inauguration event.

The fourth collaboration is with an eSENCE-funded project run by Jonas Björk at the Division of occupational and environmental medicine. This project focuses on information extraction from scientific articles. We use NLP methods to extract information such as the hypothesis, the data set, the statistical method used etc.

References

Söderström P, Horne M, Frid J and Roll M (2016) Pre-Activation Negativity (PrAN) in Brain Potentials to Unfolding Words. *Front. Hum. Neurosci.* 10:512.