Using corpus linguistic methods to uncover verbal cues to deception — Mathew Gillings

Research from the field of psychology has shown that there are significant differences between the behaviours of a truth teller and a liar; investigating these differences in more detail may point towards cues to deception. These cues can be divided into three categories: physiological cues (such as heart rate and sweat); behavioural cues (such as body language and eye movement); and verbal cues (such as speech rhythm or grammatical differences).

This work-in-progress talk will focus purely on verbal cues, outlining how I am using corpus linguistic methods to investigate the language of deception. Drawing upon previous research and methods from psychology, I will outline my experiment which was designed to extract truthful and deceptive language in a range of scenarios, and from a range of participants from different social backgrounds (i.e. differences in region, gender, age, and socioeconomic status). The focus of this talk will be on how corpus methods can be used to analyse this language.

The bulk of this talk will comment on the relatively uncharted territory which lies between corpus linguistics and forensic psychology. Research from the field of psychology in automated deception detection has so far only been carried out using LIWC (Pennebaker et al, 2001). However, in more recent years, Archer and Lansley (2015) and McQuaid et al (2015) have applied corpus linguistic methods to the field, using Wmatrix to investigate part-of-speech and semantic differences between truthful and deceptive corpora. It is clear to corpus and forensic linguists that we have a lot more to offer psychology and the field of deception detection than we have done already, and these methods have the potential to uncover deceptive cues that have so far remained unfound.

References

