

Towards the multimodal unit of meaning of recurrent gestures

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The theories and methods developed in corpus linguistics (CL) render a tremendous support to numerous areas in applied linguistics. However, the explorations of such synergy between corpus linguistics and multimodal, speech-gesture studies are still rare. The challenges of doing such research is multifaceted, and one of the fundamental questions remains whether it is possible, and even appropriate, to apply the theories and paradigms established based on textual data to multimodal data. To address such issues, our research explores how CL can assist investigating the lexico-grammatical patterns of speech co-occurring with a recurrent gesture, the circular gesture. For the first time, Sinclair's (2004) unit of meaning model (i.e. collocation, colligation, semantic preference, semantic prosody) is used to describe the co-gestural speech patterns.

We drew on eight videos from the Nottingham Multimodal Corpus (250,000 words) and identified 570 instances. The 570 instances of the circular gestures tend to have clockwise rotations (448 out of 570, 78.60%), predominantly performed by one hand (456 out of 570, 80.00%) remaining in the same position or space (490 out of 570, 85.96%). All the circular gestures and their co-occurring speech were annotated in the ELAN software and in speech transcripts. The annotated speech transcripts are then ready to be processed in software (e.g., AntConc). To explore the lexico-grammatical speech patterns, we first ran a pilot study by selecting one instance from each of the eight videos for 5 times, generating a preliminary framework, which was then refined based on results of concordance and clusters analyses.

The results show the frequencies of 15 emerging speech patterns co-occurring with the circular gestures, with the five grammatical categories (i.e. colligation) on the top, including *clause* (150 instances), *verb phrase* (+ _____) (116), *noun phrase* (+ _____) (75), *modification* (+ *noun phrase*) (55) and *dysfluent speech* (53). Our research demonstrates that multimodal corpus-based research on speech and gesture can help attest and further the existing studies on the meaning of recurrent gestures. It also makes meaningful theoretical and methodological implications for both CL, gesture studies, and applications such as gesture teaching and robotic design.

Speaker Bio

Yaoyao Chen is Assistant Professor of Applied Linguistics at the Macau University of Science and Technology. Her research mainly explores multimodal corpus approaches for investigating the speech-gesture relationship. Her research interests include multimodal corpus linguistics, language and gesture, multimodal corpus pragmatics and multimodal spoken discourse analysis.