

Aphasia and Gesture: Perception of Co-Speech Gestures in Aphasic Patients

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Healthy subjects communicate in general both verbally (speech) and non-verbally (gestures, facial expressions, body postures). Aphasia is a common consequence of left hemispheric brain damage such as stroke and leads to an impaired speech comprehension and / or production. The impact of aphasia on non-verbal communication, such as the perception of co-speech gestures is indistinct on current research. In addition, the role of oftentimes concomitant apraxia (a higher cognitive deficiency of motor control and conduction of movements) in aphasic patients has not been clearly examined until today. The reciprocal implications and relations of gestures, aphasia and apraxia have therefore been controversially discussed in previous studies.

In the present study, the perception and comprehension of co-speech gestures in aphasic patients is assessed by means of infra-red based eye tracking. Extending previous studies, a gesture comprehension test will be administered to patients to control confounding language problems. Furthermore, concurrent apraxia will systematically be assessed and correlated with results as well as with lesion syndrome mapping.

Both verbal information and simultaneous gesturing is presented in short video sequences. The videos differ in their level of congruity between speech and accompanying gesture and thus in their level of difficulty. Aphasic patients are expected to display a different visual exploration behaviour compared to healthy controls. It will be examined whether they can benefit from additional information (in congruent conditions) or whether they are distracted by multimodal input (especially in incongruent conditions, resulting e.g. in longer fixations compared to healthy controls).

6 aphasic patients have been tested so far in this ongoing study.

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