

CAN VISUAL INFORMATION ON LIP GESTURE INFLUENCE LEXICAL PROCESSING IN SPEECH PERCEPTION? A PHONOLOGICAL PRIMING STUDY

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ABSTRACT

Seeing the speaker's articulatory gestures enhances phoneme identification in noisy environments, or when visual and auditory information are in conflict. This study investigates the role of visual information in lexical access. Previous research showed that the auditory presentation of a monosyllabic prime facilitated the subsequent processing of a written disyllabic target word. These findings suggest that the presentation of an auditory prime activated the lexical representation of the subsequent target word.

The goal of our study was to determine whether visual speech may also activate lexical representations. In a phonological priming paradigm, the participants had to perform a lexical decision task on auditory disyllabic target words / pseudowords. The target was always preceded by a monosyllabic prime which could be displayed in audio-visual (AV), auditory (A), or visual only (V) modalities. The prime could overlap with the two initial phonemes of the target word / pseudoword (Related condition) or not (Non Related condition). The analyses on target words indicated shorter latencies for the Related compared with the Non Related condition. Interestingly, the facilitatory priming effect was present for the AV, A and also for the V primes. However, no facilitatory priming effect was observed for pseudowords. Data relative to word latencies indicate that seeing the articulatory movements of a speaker facilitates the subsequent processing of an auditory word. It suggests that visual speech influences word recognition process even if the acoustic is clear and congruent with the visual information. To determine the locus (pre-lexical or lexical) of this facilitatory priming effect, another study -using a phonological priming paradigm with a shadowing task- is in progress.