Does mouthing influence the comprehension of lexical signs in French Sign Language? Evidence from a priming experiment

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(347 words)

Sign languages are gestural languages but linguistic informations can also be conveyed by vocal componants as mouthings. Mouthing usually tend to reproduce the more relevant phonetic part of the equivalent vocal word matching with the manual sign. One crucial issue in sign language processing is to understand what function may have mouthing, i.e. to which extent they contribute to the construction of the signs at a phonological or semantic lexical level. The present pilot study aimed to investigate the role of mouthing on the processing of French Sign Language (LSF). In particular, our goal was to examine whether mouthings combined with manual signs does influence in a way the comprehension of these signs. For this purpose, we designed a repetition priming experiment with 5 Deaf individuals who had learned LSF at different ages. We created five experimental conditions in which the combination of both the manual sign and the mouthing was systematically manipulated (*Condition 1*: both manual signs and mouthing matched; *Condition 2*: the signs were combined with the mouthing of a pseudo-word; *Condition 3*: the signs were associated with the mouthing of a sign belonging to the same lexical category; *Condition 4*: signs without mouthing; *Condition 5*: mouthing alone, i.e. without manual sign). Participants performed a lexical decision, i.e., they had to decide as fast as possible whether a picture matched with the sign presented. Descriptive data showed that while signs combined with the appropriate mouthing were processed the most rapidly, the slowest decision times were observed for signs presented with the mouthing of a pseudo-word (interference effect). Interestingly, the processing of signs without mouthing as well as mouthing without signs were lengthened, but to a lesser extent than conditions in which a mismatch were present between the signs and the mouthings. Taken together, the data of the present pilot study lend support to the hypothesis that mouthing might constitute one unity with the manual sign, and might be integrated into it. Further investigation should be conducted for consolidating the present preliminary data using a larger sample of Deaf individuals with different learning trajectory of LSF.