

Do gestures compensate for speakers' expressive difficulties?

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Some theoretical proposals concerning the gesture-speech relationship suggest that gestures mainly have a compensatory function (Krauss et al., 2000; Alibali et al., 2000; Kita, 2000). This notion can also be found in many developmental studies of both first and second language learning. These assumptions predict that gestures should be more frequent during disfluent stretches of speech. However, little is known about the relationship between gestures and fluent vs. disfluent speech, and whether it varies across languages, or between competent and developing language users.

The aim of study is therefore to investigate the putative compensatory role of gestures by examining the gesture production in adult speakers of two different languages (Italian and Dutch) and in two types of language learners (child and adult second language learners). We aim to explore the following research questions: (1) do speakers of different languages or linguistic competence predominantly produce gestures with fluent or with disfluent speech? (2) what articulatory features do gestures have during disfluent speech? (3) what functions do gestures completed during disfluencies have?

Analyses were conducted on narrative retellings produced by 11 adult Italian and 11 adult Dutch native speakers; 33 Italian children in three age groups (4-5; 6-7; 8-10 years), each containing 11 subjects, and 11 Dutch adult learners of L2 French at low to intermediate levels of proficiency. We grouped filled and unfilled pauses, interruptions and lengthening into disfluencies and examined the presence vs. absence of gestures during these phases. Gestures were coded for structural properties (complete vs. interrupted stroke), and for function (referential vs. pragmatic gestures). The results show no crosslinguistic and no developmental effects. All groups, child and adult learners and adult native speakers of Italian and Dutch alike, predominantly produce gestures during fluent speech and only rarely produce gestures during disfluencies. However, L2 learners are significantly more likely to do so than the other groups. In all groups gestures during disfluencies tend to be suspended. In all groups the small number of gestures completed in disfluencies are both lexically related (referential gestures) and metalinguistic comments on communication breakdowns (pragmatic gestures). Overall, the data strongly suggest that when speech stops, so does gesture in adult speakers of different languages as well as in developing language users, whether they are children or adults. The findings constitute an important challenge to both gesture and language acquisition theories assuming a mainly (lexical) compensatory role for (referential) gestures, and provide strong support for the notion that speech and gestures form an integrated system.