

Introduction

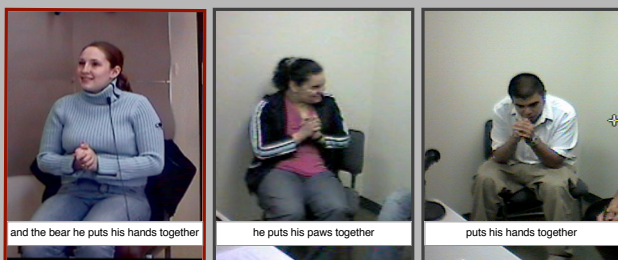
Speakers in dialogue have been shown to converge over time on the use of specific verbal expressions. This repeated use of expressions has been called lexical entrainment (Brennan & Clark, 1996; Garrod & Anderson, 1987).

Studies suggest that there might be a comparable phenomenon in gesture. Interlocutors show a higher rate of similar gestures when they can see each other (Kimbara, 2006). Also, watching mimicked speech and gesture leads to higher production of mimicked speech and gesture (Parrill & Kimbara, 2006).

However, speakers in previous studies had multiple exposures to features of target gestures or the mimicked gestures were produced when speakers co-narrated an event with a friend. The question arises whether speakers take up specific gesture forms when they only see it once and even if they are not conversational partners.

Methods

- 27 students from the University of California, Riverside watched one of five video clips in which a speaker describes a series of narrative events.
- Video clips varied whether speakers used gestures and if so, what gesture form they used.
- Subsequently, participants had to relate those same events to an addressee.
- Participants' gestures were coded for one narrative target event (praying) by classifying them as one of four different gesture forms.
- The probability of producing a certain gesture form after seeing it in the stimulus clip was compared to the baseline probability.



Original gesture Repeated gesture Repeated gesture

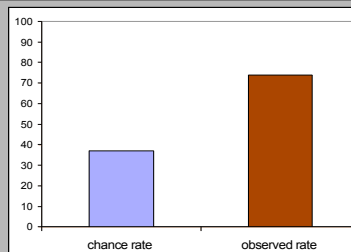
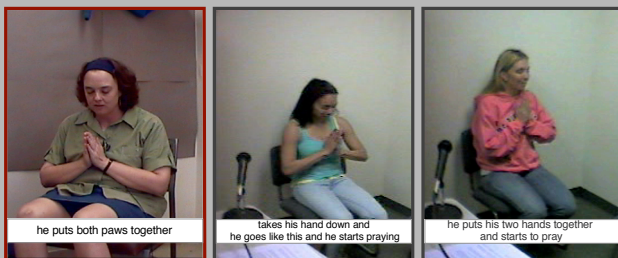


Figure 1. Chance probability of a gestural match between a participant and a randomly chosen speaker versus observed rate.

Results

Of the 27 praying gestures produced by the retellers 74% matched the gesture produced in the stimulus (Figure 1).

To test for significance we used a resampling test, in which 10,000 pseudo experiments were generated by randomly pairing each speaker with a video clip other than the one they originally viewed.

The results showed that the 74% matching rate was well beyond the cut-off value of 37% in the distribution of the pseudo experiments ($p < .001$).

Conclusions

The results suggest that speakers do take up specific forms even if they see it only once from a speaker who is not a conversational partner.

This type of gestural uptake indicates that gesture is processed in a comparable way to how speech is processed and that the two build a fully integrated system in the mind of the speaker.

However, there are many questions this project raises:

- Would we find (even) stronger gestural uptake if participants actually were conversational partners?
- Current analysis is based on emblematic gestures. Can results be extended to non-conventionalized gestures?
- Is gestural uptake based on a basic priming mechanism or on a high level social reasoning?

References

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