

How do language and culture shape the use of gestures and words by toddlers?

What this research was about and why it is important

Gesture use is a key predictor of progress in early development of language in children. Gestures are also believed to help early language development. Previous studies targeting the development of language and gesture included crosscultural comparisons that involved both cultural and linguistic differences between groups, which made it difficult to determine the roles played by language and culture. In this study, the researchers attempted to tease apart cultural and linguistic factors contributing to the development of vocabulary (e.g., in terms of understanding and producing words) and to the development of gestures (e.g., in terms of the incidence of pointing gestures). In particular, the researchers used a picture naming task to compare the performance of two groups of children who shared the same language but were culturally distinct (Australian and British children) to the performance of Italian children, who differ both linguistically and culturally from Australian and British children.

What the researchers did

- The researchers tested 35 British English-speaking children, 30 Australian English-speaking children, and 22 Italian-speaking children, all aged 24–30 months.
- The children performed a picture naming task measuring word learning in their language. The task, which is validated for Italian and for British English-speaking toddlers, focused on the comprehension and production of nouns and predicates (i.e., verbs or adjectives).
- The researchers also investigated the use of spontaneous gestures, including pointing gestures (usually expressed with the extension of the index finger) and representational gestures (e.g., flapping the hands for bird).
- Gesture use was also measured when gestures were produced in combination with a word (bimodal gesture expressions) or alone (unimodal gesture expressions).

What the researchers found

- For language (vocabulary) comprehension and production, Italian children outperformed both Australian and British English-speaking children, who performed similarly.
- For gesture production, children generally produced more gestures in combination with speech than gestures alone.
- Italian children produced more representational gestures than Australian and British children, who did not differ from each other.
- Australian and Italian children produced overall more pointing gestures than British children.

Things to consider

- Because Australian and British children performed similarly but differed from Italian children in their language performance, language learning patterned in this study along linguistic lines.
- A combination of language and culture, however, shaped the frequency and the type of gestures produced by children.
 - The Italian children, who grew up in a gesture-rich culture, produced significantly more representational gestures than British and Australian children.
 - However, British and Australian children differed in their use of pointing gestures, with Australian children pointing more often (as frequently as the Italian children) compared to British children.
 - The reasons why Australian children used as many pointing gestures as the Italian children are unclear and should be explored in future research.

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