

Essential understanding

★ *Infants have a natural ability to discriminate between phonemes, even for languages they are not exposed to. This ability is lost later, probably due to pruning.*

Aim

To compare the ability to differentiate between Hindi phonemes in infants, English-speaking adults and Hindi-speaking adults.

Participants

Hindi-speaking adults, infants of 6–7 months and English-speaking adults.

Method

Quasi-experimental comparison between groups.

Procedure

Pairs of stimuli were used, for example, /ta/ versus /Ta/ (Hindi). The critical difference in this pair of sounds is the place of articulation: the tongue is placed either on the alveolar ridge or on the back of the upper front teeth. This distinction between sounds is not used in English.

Participants were tested in a **discrimination paradigm**.

- For infants, this procedure involves first conditioning an infant to turn his or her head towards the loudspeaker

when there is a change in the auditory stimulus. For this the infant is reinforced with the presentation of an interesting electronically activated toy animal each time he or she turns correctly.

- Adults pressed a button when they thought they detected a change in stimulus.

Results

Infants were just as able to discriminate between Hindi phonemes as Hindi-speaking adults.

English-speaking adults were not able to discriminate between Hindi phonemes.

Conclusion

- Up to a certain age, infants have the ability to discriminate between natural language sounds without prior language experience.
- A decrease in speech perceptual abilities may be due to linguistic experience—learning one language causes people to lose the ability to discriminate between phonemes that are not used in this language.