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Amodal specification of talker-specific motor behavior

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There is substantial evidence that the speech perception function incorporates information for articulatory motor behavior. Research over the last 15 years has shown that speech perception also uses information for talker-specific motor behavior. Interestingly, this research reveals that talker information can facilitate speech perception whether it is apprehended through auditory or visual speech (lipread) means. The multimodal nature of these effects could mean that the talker-specific properties used by the system are amodal and motoric-or gestural-in nature. Evidence for this proposition-that talker-specific facilitation of speech is based on amodal specification of gestural style-will be discussed. This evidence includes findings that isolated talker-specific phonetic information, available both optically and acoustically, can be informative about talker identity to the degree that it supports cross-modal talker matching. Other evidence shows that the talker familiarity gained through one modality can facilitate perception of speech in the other. Finally, recent evidence reveals that speech perceivers will align to (inadvertently imitate) talker-specific properties of utterances they are asked to shadow, whether that speech is presented auditorily or visually. These results suggest that some of the 'motor knowledge' bearing on speech perception takes the form of talker-specific gestural properties, amodally specified.