

# **Movement goals and feedback and feedforward control mechanisms in speech production**

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Studies of speech motor control are described that support a theoretical framework in which fundamental control variables for phonemic movements are multidimensional regions in auditory and somatosensory spaces. Auditory feedback is used to acquire and maintain auditory goals and in the development and function of feedback and feedforward control mechanisms. Several lines of evidence support the idea that speakers with more acute sensory discrimination acquire more distinct goal regions and therefore produce speech sounds with greater contrast. Feedback modification findings indicate that fluently produced sound sequences are encoded as feedforward commands, and feedback control serves to correct mismatches between expected and produced sensory consequences.