

Selection-coordination theory: viewing phonological structure as a projection over developmental time

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Many phonological theories analyze speech as a hierarchical structure of segments, moras, and syllables, and this sort of structure is useful for describing cross-linguistic variation in phonological patterns. But does a hierarchical organization govern the production of speech? In this talk I will describe the Selection-coordination theory of speech production, which holds that articulation is not governed by a fixed hierarchical structure, but rather by flexibly assembled sets of articulatory gestures. The theory holds that selection and coordination mechanisms give rise to two prototypical control regimes: competitive control and coordinative control. Over the course of development, children acquire coordinative control over movements that were previously competitively controlled, this process being mediated by the internalization of sensory feedback. In this framework, segments, moras, and syllables are viewed as differently-sized instantiations of a more general motor planning unit, the organization of control in any given utterance is task/context-specific, and hierarchical structure is the byproduct of a developmental progression. Evidence for the theory is drawn from research in motor control, speech development, and phonological and phonetic patterns.