

**Rethinking the meaning of “anticipation” in long-distance coarticulation**  
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Speech production requires a speech plan that defines a sequence of movements that are achieved over time during speaking. These movements are associated with acoustics and vocal tract configurations, which are speech targets. Anticipatory coarticulation describes behavior where a future target influences the execution of a current target during execution. How does this happen? The explanation depends in part on the conception of speech motor goals and their associated targets, but it is generally assumed that long-distance effects reflect active planning in service of discrete future goals (e.g., feature spreading). I consider this assumption from a developmental perspective and conclude that a different explanation is possible. Children’s speech is slower than adults’ speech. Their speech targets are therefore more spread out in time. Our results add to the literature showing that children nonetheless “anticipate” their speech targets at the same rate as adults, and sometimes even across longer temporal windows than adults. Our data also indicate more segment-like effects in adults’ anticipatory behavior compared to children’s speech: there appears to be a stronger ramping up of cues to future target identity in adults’ coarticulated speech compared to children’s speech. We can explain both patterns to arise from changes in the degree to which already achieved targets influence future target attainment within the perceptual-motor map that governs speech movement. As these targets are activated and navigated with reference to a plan that consists of holistic motor and perceptual forms, anticipation is not considered to be part of the planning process. Instead, the effect of future targets on present execution is seen as emergent from the low-level processes that are required to move from one location in motor space to another in service of a perceptual trajectory that is the goal.