

Nearly-decomposable hierarchies, symbolic grammars and pervasiveness of dynamics

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I present an argument for extending the dynamical approach from representations to principles in grammars. I highlight the key similarities and differences between dynamics in grammars and standard symbolic grammars. I then return to representations by presenting an extension of the dynamical approach to the assembly of phonological form using a task where participants listen to various stimuli as they utter simple syllables; this task zooms in on the assembly of phonological representations at Catford's microchronic time scale. Dynamical principles pervade across the different examples. Why then do grammars seem mostly symbolic? I argue that this fact follows as a consequence of two properties, the omnipresence of hierarchies in nature (and in cognition as emphasized in Smolensky 1988, 2006) and the allied notion of near-decomposability of time scales as promoted in work by Simon (1973) and Rosen (1969).