

Prosodic structure in speech and body gestures

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Prosodic structure marks phrasing and prominence, highlighting important or new information and grouping words into cognitive units for processing by the listener and the speaker. A set of acoustic and articulatory studies has established that at boundaries and under prominence acoustic segments and articulatory speech gestures lengthen. A second line of research has shown that body gestures are coordinated with prosodic structure, but the details of this coordination are not well understood. A third line of research has been addressing the question of planning processes taking place at prosodic boundaries. In this talk I present work combining these three lines of research. After a brief introduction to prosodic structure within the Articulatory Phonology framework, I will present two studies examining how prosodic structure is manifested in speech and body gestures. The hypothesis guiding these studies is that if prosodic structure controls both speech and body gestures, these two types of gestures will pattern similarly. The first study compares lengthening of speech and body gestures at prosodic boundaries, the second examines speech and body gesture coordination in prosodic prominence. A third study examines articulation during pauses, as an angle towards examining planning processes. The results of these studies inform us about the linguistic representation and cognitive function of prosodic structure.