

Lecture 1. Speech Timing Capabilities: Timekeeping, abstract representations, motor control. Ways of measuring speech timing. Surface timing patterns and their linguistic uses. Can we tell what is being timed? Timing planning vs. timing consequences.

In this lecture, I introduce the capabilities we must have in order to 1) produce rhythmic speech, and 2) speed up or slow down the rhythm. These capabilities include timekeeping capabilities, the ability to form and use abstract representations, and the motor control of speech timing. I then discuss non-rhythmic speech timing patterns, how we can measure them, and what purposes they are used for. Ways of measuring speech timing raise questions about timing control: which units are timed, which aspects of speech timing are planned, and which aspects are consequences of other motor control priorities.

Lecture 2. Abstract representations that govern speech timing. Hierarchies of prosodic constituents and prominences, and their durational consequences. Word-based vs. rhythm-based constituents.

In this lecture, I review evidence and theories of prosodic representations, highlighting gaps in knowledge and areas of controversy. I focus on the representations that organize smaller constituents into larger constituents and signal their relative prominence (prosodic organization), and show how these constituents can be marked durationally using mechanisms such as final lengthening, initial lengthening, prominence related lengthening, and polysyllabic shortening. I discuss some preliminary evidence relating to the use of word-based vs. rhythm-based constituents.

Lecture 3. Implementation structures and mechanisms.

In this lecture, I discuss the representations that define the stretches of speech whose durations are affected by prosodic structure. Main candidates are the traditional sub-lexical constituents of the prosodic hierarchy and Byrd & Saltzman's Pi-gestures. Pi-gesture theory is discussed in the context of other possible mechanisms for timing control.

Lecture 4. The use of duration for multiple purposes. Duration in a cross-linguistic context.

In this lecture, I discuss how phonemic and prosodic uses of duration interact in two quantity languages, Finnish and Japanese. These examples lead to a discussion of cross-linguistic similarities and differences in the prosodic use of duration.

Lecture 5. Prosodic structure vs. predictability effects on duration. The Smooth Signal Redundancy Hypothesis. Remaining questions.

In this lecture, I discuss the Smooth Signal Redundancy hypothesis, which relates the effects of prosodic structure on duration to durational effects related to predictability.

