MEETING 2 — OVERVIEW

- Levels of “stress”

- Pitch accents and prominence

- Prosodic structure and intonational tunes

- H*, L*, L+H* pitch accents

- Common contour types
WHAT IS “STRESS”? 

• Dictionary entry marks syllables with primary/secondary lexical “stress”.

  legislature

• In a sentence or discourse, some words are “stressed” more than others — many terms have been used to describe such “stress”: “important words”, “sentence stress”, “narrow focus”, etc. etc.

  The legislature makes the laws.
  What I SAID is that the legislature doesn’t DO anything.

• Increased segmental durations, increased amplitude (loudness), and PITCH ACCENTS mark such “stressed” words/syllables in discourse.
The prosodic structure of an utterance involves many levels of prominence: the rhythmic alternation of (strong/weak) syllables, higher-level prominence marked by pitch accents, and additional prominence of the nuclear accent as result of intonation phrasing.

SPOTTING PITCH ACCENTS

«spanish» and I had registered for Spanish simply because I’d taken it for five years in high school

«park3» it would be nice to be able to go right out the back door and into the park cause it’s actually right behind the house

- Labeler agreement on pitch accent location is 83-88% (Siverman et al. 1992).

- READ MORE about accent tagging reliability: Silverman et al. (1992) and Pitrelli et al. (1994).
VARIATION IN PROSODIC STRUCTURE

- The prosodic organization (defined by pitch accent placement and prosodic grouping) of a sentence can and does vary, in order to convey different pragmatic meanings.

Marianna made the marmalade.

1. ( * * ) e.g. standard declar

2. ( * ) e.g. narrow focus

3. ( * ) ( * * ) e.g. bkgrnd-answer
PROSODIC STRUCTURE vs. INTONATION PATTERN

- Pitch accent PLACEMENT (part of the prosodic structure of an utterance) is independent of pitch accent TYPE (part of the intonational pattern (or “tune”) of an utterance).

- The intonational tune also contributes to an utterance’s meaning.

Marianna made the marmalade.

1) H*    H*    L–L%
2) L+H*   L–L%
3) L+H*   !H*   L–L%
4) H*     L–L%
5) L*     L*    H–H%
6) L*     L*    H–H%
Figure 1: *Marianna made the marmalade*, utterances 1 and 2.
Figure 2: *Marianna made the marmalade*, utterances 3 and 4.
Figure 3: *Marianna made the marmalade*, utterances 5 and 6.
INTONATION TUNES as TONAL COMBINATIONS

- The tune of each intonation phrase can be described by a combination of one or more pitch accents, a phrase accent, and a boundary tone.
  - **Pitch accents** (*) Align locally with the (primary) stressed syllable of some words in the utterance.
  - **Phrase accent** (→) Fills the space between the last pitch accent in the phrase and the boundary tone.
  - **Boundary tone** (%) Aligns locally with the phrase edge.

- Some common tunes are:
  - (H*) H* L–L%  ⇒ DECLARATIVE “HAT PATTERN”
  - (L*) L* H–H%  ⇒ YES-NO QUESTION
  - ... H* L–H%  ⇒ CONTINUATION RISE
  - L* H* L–L%  ⇒ SURPRISE-REDUNDANCY
HIGH (H*) vs. LOW (L*) PITCH ACCENTS

- High vs. low distinction is relative within the *pitch range*, defined locally for each phrase. (Also, contrast is specific to phrasal position.)

- **H* (“high star”)**
  - Peak F0 within (or slightly after) accented syllable
  - Rise to peak from middle of speaker’s range
  - Height increases with expanded pitch range
  - **MEANING**: Cues addition to mutual belief space. (P&H 90)

- **L* (“low star”)**
  - F0 valley within accented syllable
  - Height decreases with expanded pitch range
  - **MEANING**: Information is prominent/salient (due to pitch accent), but is not added to mutual belief space. (P&H 90)
TWO PEAK ACCENTS: H* vs. L+H*

- **H* ("high star")**
  - Peak F0 within (or slightly after) accented syllable
  - Rise to peak from middle of speaker’s range
  - Height increases with expanded pitch range
  - **MEANING:** Cues addition to mutual belief space. (P&H 90)

- **L+H* ("low plus high star")**
  - Peak F0 within (or slightly after) accented syllable
  - Rapid rise to peak from low in speaker’s range
  - Peak F0 often higher than H*
  - **MEANING:** Contrastive. Cues that accented item (and not some alternative related item) should be mutually believed. (P&H 90)
Figure 4: $H^*$ vs. $L+H^*$
Figure 5: L+H* on initially-accented syllables can be tough to identify. When in doubt, use the H* label.