

Phonetics

SPAU 3343

Chap. 10 – Grasping the melody of language

Chap. 11 – Marking melody in your
transcription

Concepts from Chap. 10

- Juncture
- Syllable structure
- Stress
- Intonation
- Linguistic vs. affective prosody
- Sonority and prominence

Juncture

- How phonemes and syllables join together in speech
- Usually represented via **close juncture**, e.g.

“Have a nice day” → / hævə naɪs 'de /

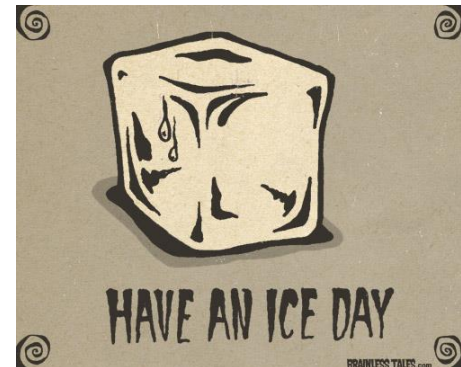
(proximity shows degree of joining)

For trickier cases...

- Open juncture (= plus juncture) can show gaps:

“Have a nice day!” /^hævə + naɪs ^ɪdeɪ/

“Have an ice day!” /^hævən + aɪs deɪ/



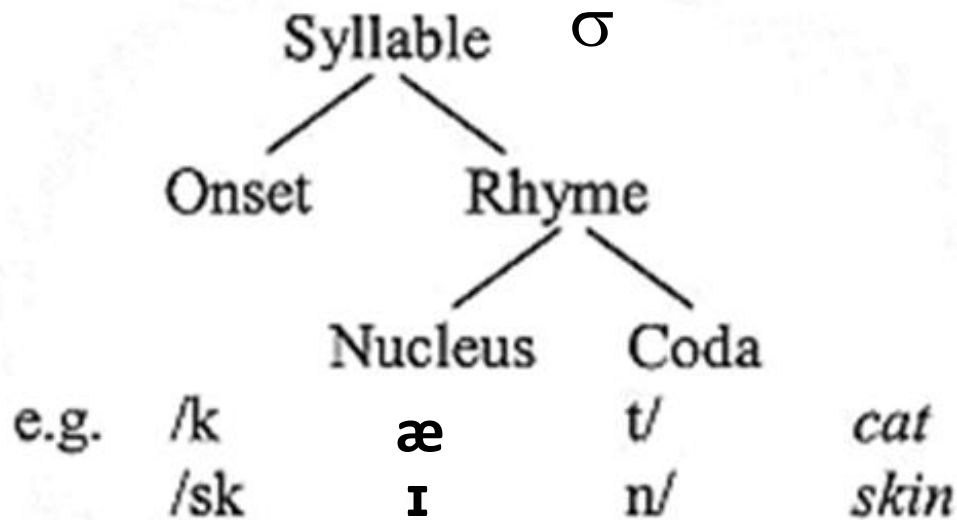
Metrical phonology symbols can also be used

- ‘Pipe’ | short pause
- ‘Double-bar’ || long pause

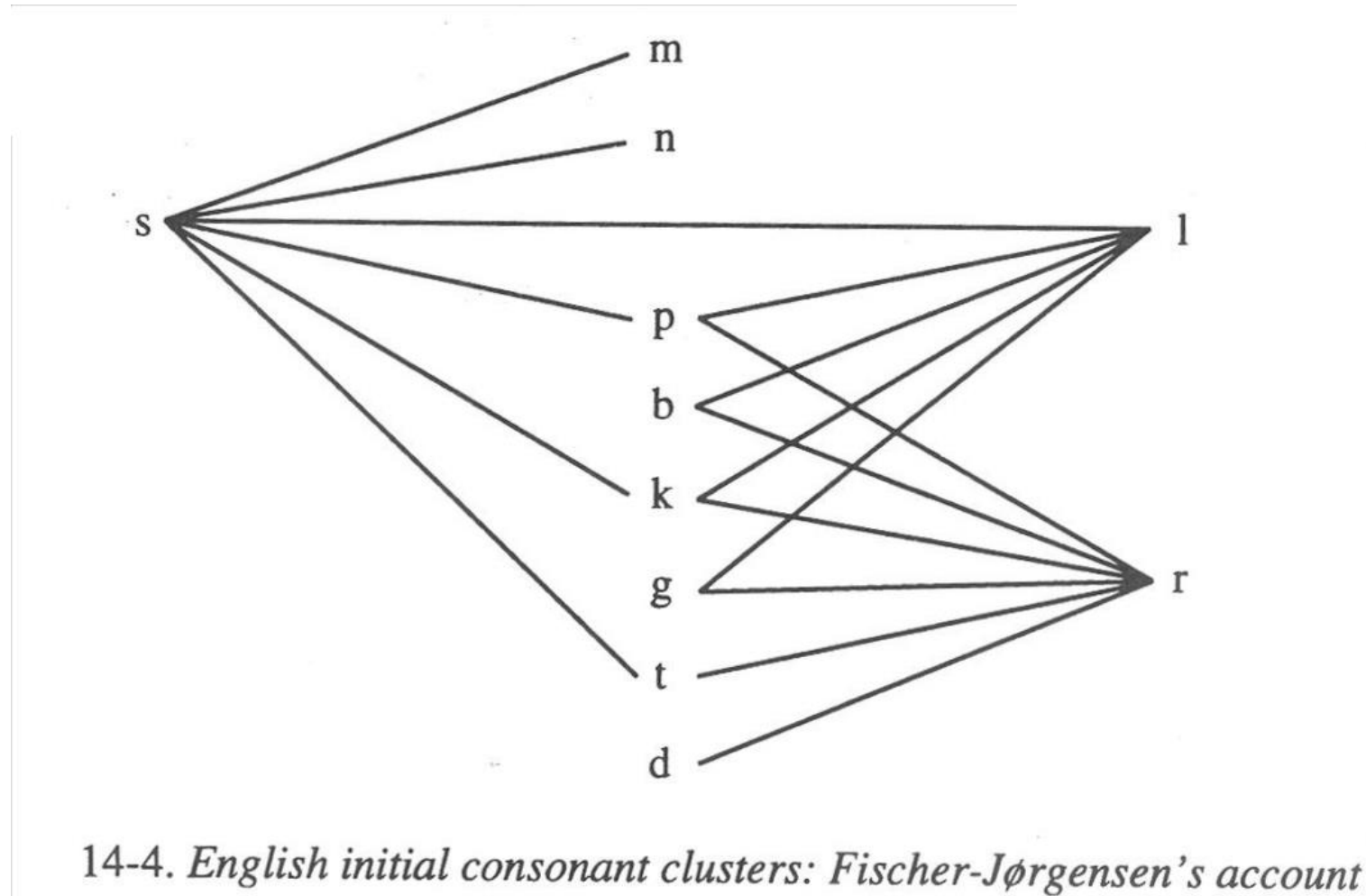
/aɪ | wɛn tə ðə stɔɪ |||/

/aɪ wɛnt | tə ðə stɔɪ |||/

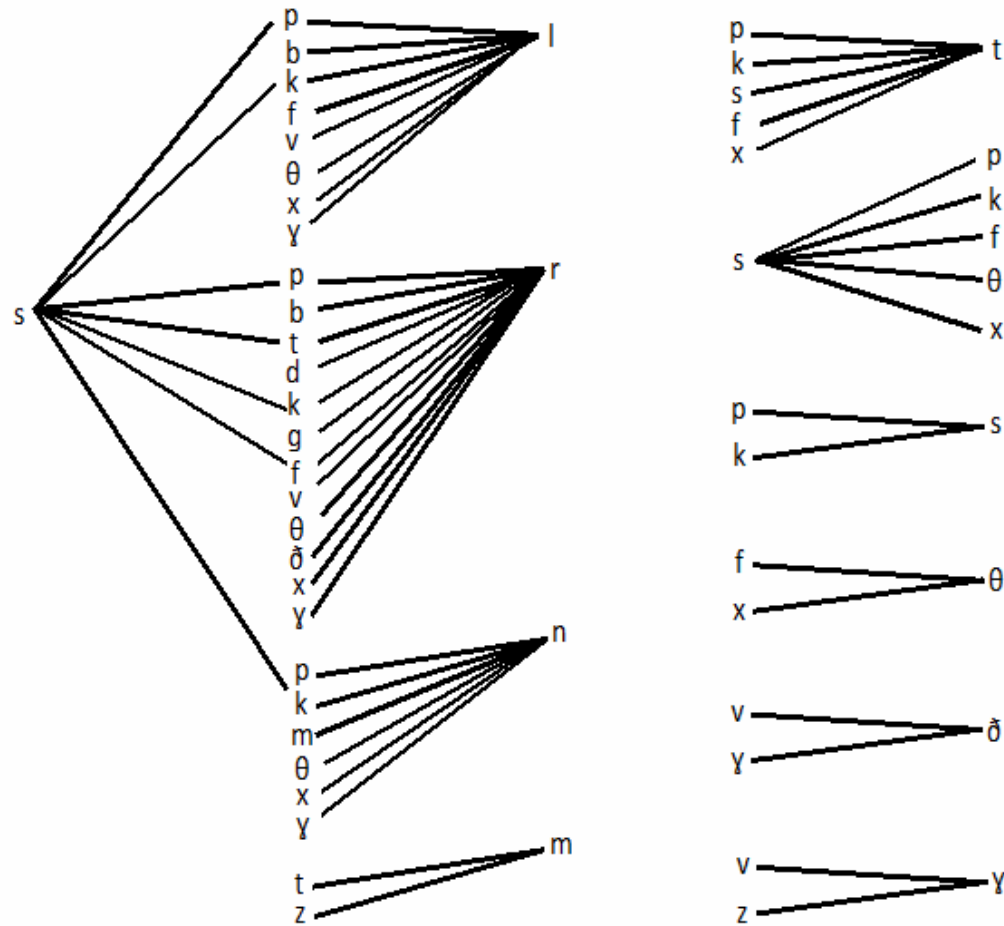
English syllable structure



English (initial) consonant cluster rules



Just for fun...



Greek initial consonant clusters

Stress

- Perceptual: “*Louder, longer, higher*”
- Acoustic: Amplitude, duration, F_0
- ROLE: Linguistic vs. affective (emotional)
prosody

Stress – linguistic prosody

✓ Language-specific

TYPES:

- Lexical /'sɪləbət/, not /sɪ'lɪbət/
Noun/verb pairs (e.g., “rebel”)
- Compounding “blackboard” = /'blækbɔ:ɪd/
- Emphatic (“SHE plays piano” vs. “She PLAYS piano”)

Stress shift

- Alteration of stress patterns in different phrase or sentence contexts
- Might even be a biomechanical, articulatory effect, (especially at fast rates of speech)?

He had a 'clarinet 'solo.

He 'plays the clari'net.

'Vice-President 'Jones.

'Jones, the Vice-'President

'fourteen, 'fifteen, 'sixteen

She's 'only six'teen.

Sentence-level intonation

- ✓ Language particular
 - For English:
 - Simple declaratives: (*“the sky is blue”*) Falling
 - Y/N questions: (*“Are you going?”*) Rising
 - Wh-Questions: (*“When are you going?”*) Falling

Emotional (affective) prosody

- Arguably universal (?)
- HAPPY – rising intonation with much variability
- SAD – more monotonic intonation
- ANGRY – variable – rising for some cases (“hot”) monotonic (flat) for others (“cold”)

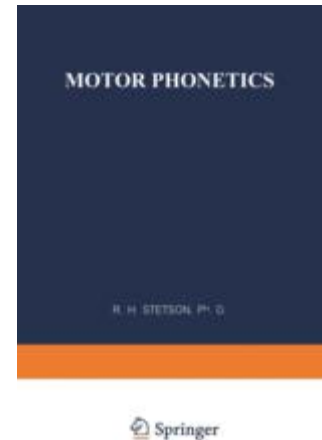
Mistaking affective prosody for linguistic prosody?



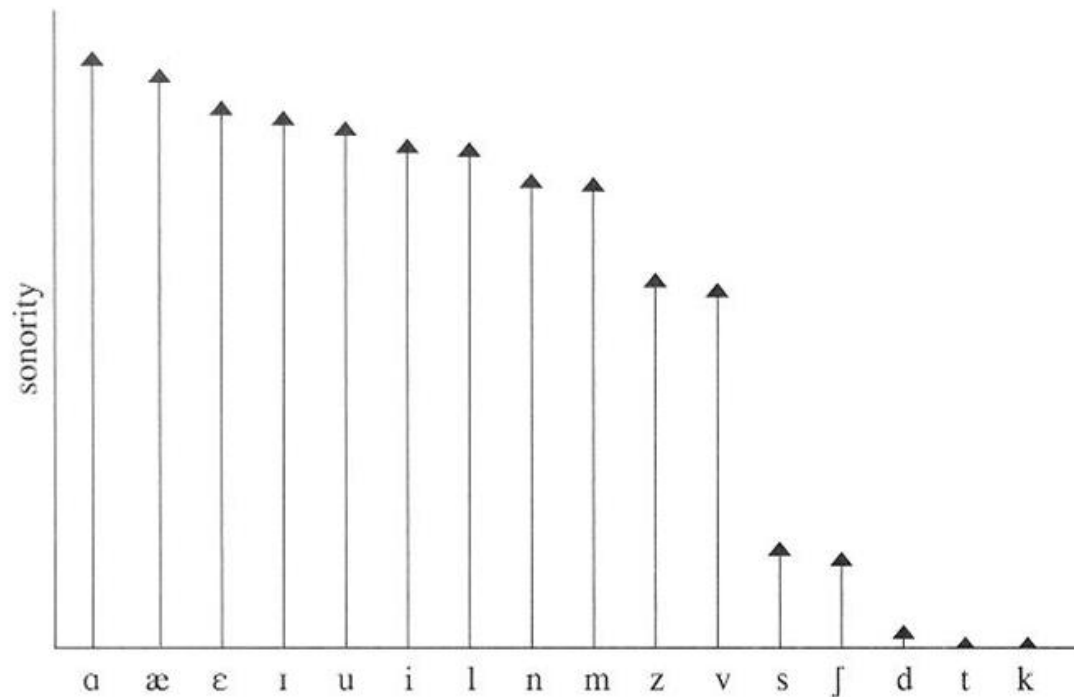
Defining the syllable: chest pulses or sonority?

CHEST PULSES (R.H. Stetson, 1928)

- (?) unlikely...e.g., what about “*going*” (= 2 syllables, but one pulse)
- ✓ SONORITY:
 - Comparable loudness of a sound
 - Relative to other sounds with same length, stress, and pitch



Relative sonority of sounds in English



Ladefoged & Johnson, 2011

Syllable – role in prominence?

x

x

x

x

x

x

She wrote all her novels with a blue pen that she inherited from her aunt

- It could be that “prominence peaks” are heard to define salient syllables for speech rhythm
- These are auditory judgments
- Most important cues are arguably duration, pitch movement, vowel quality, and loudness
- This theory is controversial in phonology

Chapter 11

- Marking Melody in Your Transcription



Chapter 11 - Concepts

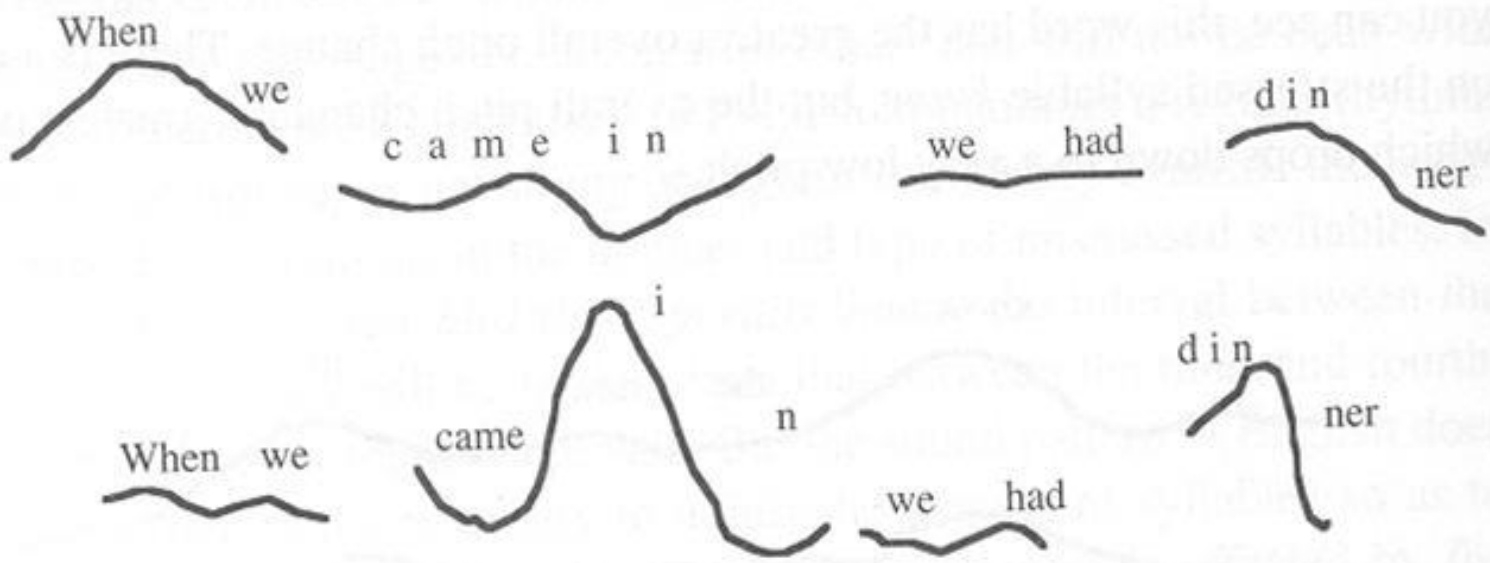
- Stress
 - Breath groups
- Tonic syllable and phrase
 - ToBI

(From Chapter 10)

- Stress and intonation are complex
- In any given utterance, there is linguistic and affective prosody
- May be further complicated by pragmatics (e.g., expressing irony) or sociolinguistic factors (“Valley Girl speak, “Upspeak”)...
- **So – how should we mark stress and intonation in our IPA transcriptions?**

Sketching intonation contours

- By ear....



Remember – In our transcriptions we sketch intonation contours ABOVE the gloss and IPA characters

Finding intonational phrases

Example words:

Intonational phrases:

'Yep!	1
The 'dog.	1
Although he ignored the 'cat, the boy fed the 'dog.	2
The boy fed the 'dog, but ignored the 'cat.	2
The boy fed the 'dog, gave it a 'meatball, but ignored the 'cat.	3

Marking tonic stress

- Tonic syllable – stands out because it carries the major pitch change
- Tone group – a portion of speech that contains one tonic syllable

Thus, we continue to mark lexical stress in polysyllabic words (as before), but...

... the tonic stressed syllable is marked above and all other primary stressed syllables are marked below...

Examples

“The yellow refrigerator is NICE”

/ ðə ˌjɛlɒ rɪˌfɪdʒəreɪtɪz ɪz ˈnaɪs /

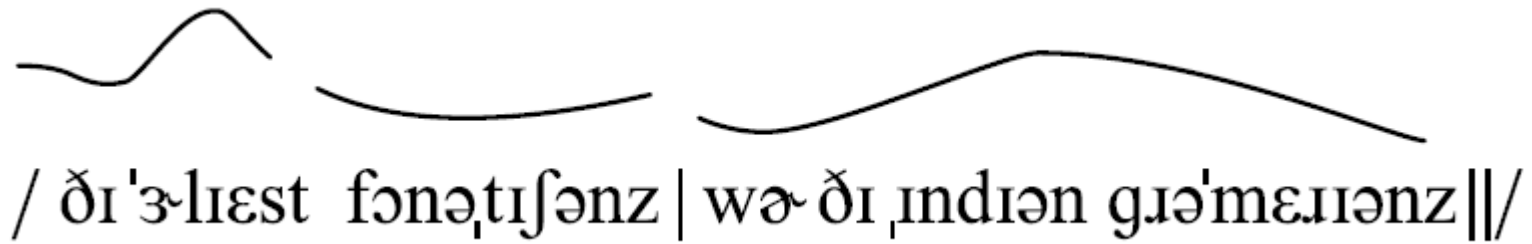
(↑ tonic syllable)

“The YELLOW refrigerator is nice”

/ ðə ˈjɛlɒ rɪˌfɪdʒəreɪtɪz ɪz ˌnaɪs /

(↑ tonic syllable)

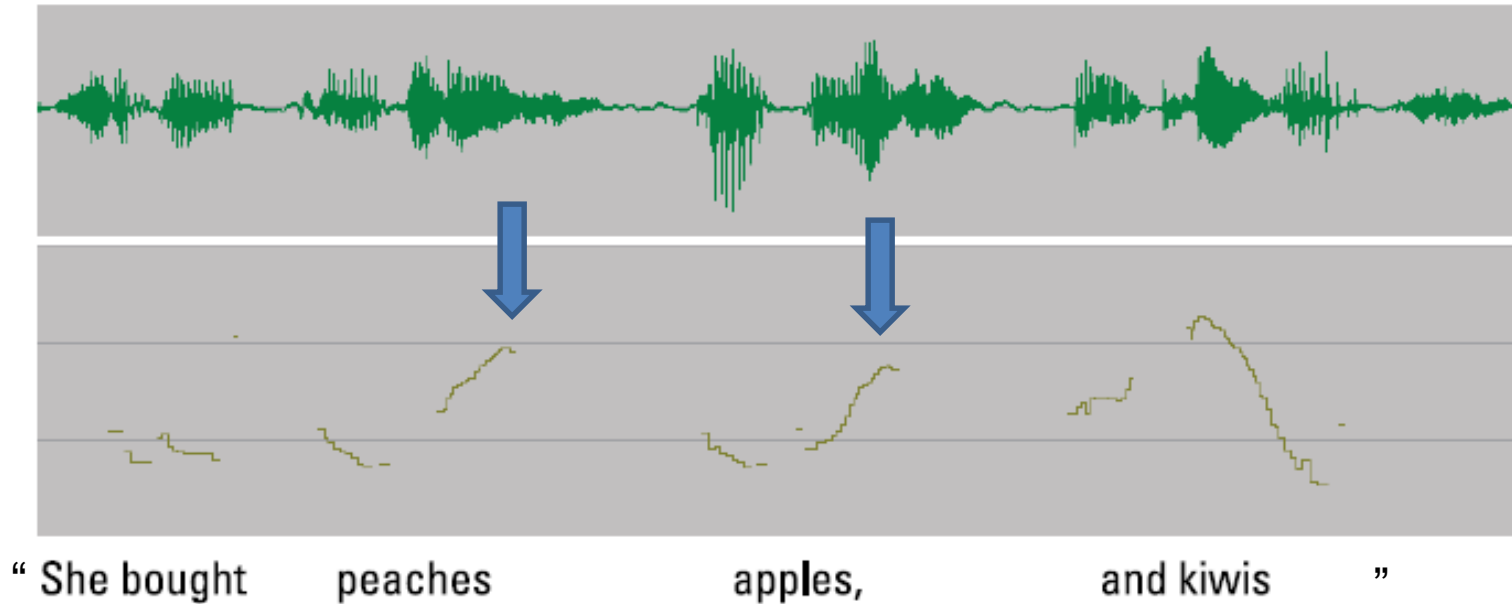
Using tonic stress, juncture, and sentence-level intonation



Phonetics for Dummies, pg. 163

Other intonation patterns

- Continuation rise



Tag questions

- It's a real Rolex, *isn't it?* (desperate!/ Rising)
- He sold me a fake, *didn't he?*
(emphasizing statement just made/ Falling)

ToBi – Tone and break indices

- System for transcribing intonation of utterances in terms of a series of pitch accents (*high, low, etc.*)
- Includes break indices indicating degree of connection between words (*i.e., juncture*)

The ToBI system for characterizing English intonation

Optional Pre-nuclear Pitch Accents on Stressed Syllables	Nuclear Pitch Accent	Phrase Accent	Boundary Tone
H*	H*		
L*	L*		
L + H*	L + H*	L-	H%
L* + H	L* + H		
H + !H*	H + !H*	H-	L%
(!H*)	(!H*)		

ToBI examples

(20) <i>A'melia.</i>	TONE TIER	[H* L- L%]
Simple statement in response to <i>What is her name?</i>	SEGMENTAL TIER	[ə m i : l i : ə]
(21) <i>A'melia?</i>	TONE TIER	[L* H- H%]
A question, equivalent to <i>Did you say Amelia?</i>	SEGMENTAL TIER	[ə m i : l i : ə]
(22) <i>A'melia—</i>	TONE TIER	[L* L- H%]
Addressing Amelia, indicating that it is her turn to speak.	SEGMENTAL TIER	[ə m i : l i : ə]
(23) <i>A'melia!?</i>	TONE TIER	[L + H* L- H%]
A question indicating surprise.	SEGMENTAL TIER	[ə m i : l i : ə]
(24) <i>A'melia!!</i>	TONE TIER	[L + H* L- L%]
A strong reaction, reprimanding Amelia.	SEGMENTAL TIER	[ə m i : l i : ə]

Another example

✓ ToBI analysis:

Break index [1 1 1 1 4]

Tone tier [H* H*L-L%]

Segmental tier [ðə bɔɪ fɛd ðə 'dɔg]

Phonetics for Dummies, pg. 166, 167