LECTURE NOTES

Chapter 1

1. Introduction

Linguistic phonetics: "study of speech sounds"

- What do you know about a language when you speak without an accent?
- What do you know when you understand a language with the ease of a native speaker?

We'll focus on healthy adult/child native speakers; and healthy adult non-native speakers.

Phonetic alphabets: "IPA"

- Each symbol has a consistent meaning.
- Symbol-to-sound correspondence never changes.

Trouble with English spelling:

- Silent letters: e.g. *hat* vs. *hate*
- Different sounds for one letter: e.g. *use, fusion, sale*
- Different sounds for the same letter combination: e.g. *thin, then*
- Different letters for the same sound: e.g. *seen, scene, machine, read/ clean, either, lovely*
- Dialectal differences: e.g. *coffee, water, caught, Peter, vase, either, …*

1.1. International Phonetic Alphabet: IPA

Phonetic alphabet:

- How sounds are made.
- Acoustic structure of sounds
- How sounds pattern in languages

Exercise 1: Number of sounds (phonemes)?

e.g.	bracelet _____	sheet _____	echo _____
	suit _____	you _____	oh _____
	number _____	about _____	thanks _____

Exercise 2: English consonants? (cf. Consonant vs. Vowel)

- Consonant letters of English: b, c, d, f, g, h, j, k, l, m, n, p, q, r, s, t, v, w, x, y, z
- Consonant symbols of IPA used for English: all in the above, except for c, q, x, y
- Consonant symbols of IPA used for other languages: c, q, x, y

What are the symbols that need to be transcribed?

Minimal pairs

e.g.	dye vs. bye	rubber vs. runner	hi vs. lie	pack vs. pat	my vs. pie
	sigh vs. why	tube vs. tooth	bait vs. bathe	see vs. she	
	shun vs. shin	pat vs. pet	boat vs. boot	mate vs. mat	
	know vs. knee	cook vs. kick	soak vs. seek	bound vs. bind	

2. Sound production

Articulator: part of oral tract used to make sound (cf. **Figure**: human vocal tract)

- Alveolar ridge
- Palate
- Velum (soft palate)
- Tongue:
    - tip (apex) – the point
    - blade – freely moving part of tongue
    - front – section behind blade, opposite front arch (rising) arch of palate
    - back – section opposite the velum
    - root – section opposite the pharynx wall, lowest part of tongue
- Vocal folds: the structures that vibrate to produce voicing
- Glottis: space between vocal folds

Terms for describing sounds: "consonants"

Adj.	Adj.	Adj.	Adj.	Noun
voicing	**place**	**centrality**	**nasality**	**manner** (degree of constriction)
- voiced - voiceless	- bilabial - labiodental - interdental - alveolar - palato-alveolar - palatal - velar - glottal	- central - lateral	- nasal - oral	- stop - fricative - affricate - approximant

Voicing: existence/ non-existence of vibration of the vocal folds

Place of articulation:

noun	adj.	sounds
lips	(bi)labial	b, p, m
teeth	dental	
	labio-dental	f, v
	inter-dental	θ, ð
tongue	lingual	
alveolar ridge	alveolar	t, d, n, s, z, ɹ, l
palate	palatal	j
	palato-alveolar	ʃ, ʒ, ʧ, ʤ
velum	velar	k, g, ŋ
glottis	glottal	ʔ, h

Degree of constriction:

- Stop: complete blockage of air through mouth
- Fricative: articulators are very close, leaving a small space for air, producing turbulent air flow, i.e. frication
- Affricate: a complex sound consisting of a stop followed by a fricative, e.g. church [ʧ], judge [ʤ]
- Approximant: air flow minimally obstructed, not enough to produce frication (approximants in English: [j, w, l, ɹ])

Exercise 3: Consonant description

[b] voiced bilabial (central) (oral) stop

[m] voiced _____

[d] voiced alveolar _____

[n] voiced _____

[l] voiced alveolar _____

[z] _____

[t] _____

Exercise 4: Consonant transcription – Underline letters for Cs, and give IPAs for them.
"BEWARE of spellings!"

fusion	[f ʒ n]
sketch	[ ]
conic	[ ]
voice	[ ]
occasion	[ ]
music	[ ]
night	[ ]

Chapter 2

3. More on transcription

3.1. Consonants

Exercise 1: Describe the following consonants.

[ð] _____
[j] _____
[ʤ] _____
[ʔ] _____
[k] _____
[w] _____

Exercise 2: Transcription – Give the number of consonants for each word and their IPAs.

holy	(	)	[	]
singer	(	)	[	]
university	(	)	[	]
magic	(	)	[	]
speech	(	)	[	]
tongue	(	)	[	]
quiet	(	)	[	]
cycle	(	)	[	]

3.2. Vowels

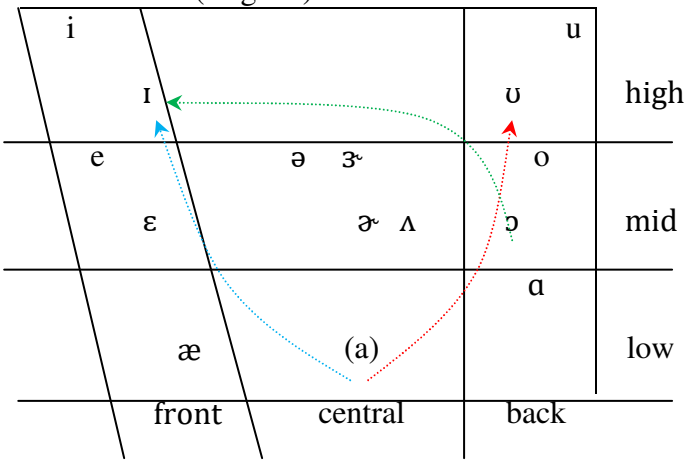
Vowels: phonemes that are produced without any appreciable constriction or blockage of
air flow in the vocal tract.

Terms for describing “vowels”:

- Height: height of tongue, usually correlates with jaw height.
- (Lip) Rounding: whether the lips are rounded in the production of vowels.
- Backness: how far backward (or forward) in the mouth the tongue is when producing a vowel.
- Tense/Lax: Tense vowels are generally longer in duration and require more muscular effort than lax vowels.

tense/lax	height	backness	rounding
tense	high	front	round(ed)
lax	mid	central	unrounded
	low	back	

Vowel chart: (English)



Examples:
[i] beet
[ɪ] bit
[e] bait
[ɛ] bet
[æ̱] cab, bad, bag (➔ the NY [æ])
[æ] cap, bat, back
[u] boot
[ʊ] book
[o] boat
[ɔ] bought
[ɑ] pot

Tense vs. Lax vowels:
tense = [i, e, o, u, ɑ, ɝ, æ̱]
lax = [ɪ, ɛ, ɔ, ʊ, æ, ə, ʌ, ɚ]

Exercise 3: Vowel description

[o] tense mid back round
[ɛ] _____
[u] _____
[æ] _____

Exercise 4: Give IPAs corresponding to the following descriptions.
lax mid central unrounded vowel [ ]
tense high front unrounded vowel [ ]

Notes on Vs:

- Tense vowels tend to be diphthongized, tend to be longer, tend to be more peripheral, and appear (more frequently) word-finally: [e → eɪ], [o → oɪ], [u]

- Diphthongs will be described with 2 vowel symbols; for the 2nd half of a diphthong in English, we use lax vowel symbols.
  eɪ, oʊ : nondiphthongal in some dialects
  aɪ : *buy, by, eye, I*
  aʊ : *out, about*
  {oɪ, ɔɪ} : *boy, toy, soy*
  } "true diphthongs"

- Central vowels: "uh" vowels [ʌ] *c<u>u</u>t, m<u>u</u>d* ("stressed")
  [ə] *<u>a</u>bove, sof<u>a</u>* ("unstressed")

- Unstressed vowels in English are very short; especially, schwa [ə] is highly short and variable.

- More central vowels: "er" vowels [ɝ] *b<u>ir</u>d* ("stressed")
  [ɚ] *numb<u>er</u>* ("unstressed")
  - Is a central r-colored (rhoticized) vowel.
  - Is a monophthong.
  - Has stressed and unstressed versions.
  - Is similar in tongue shape to consonant [ɹ].

- Therefore, the central vowels:

	uh	er
stressed	ʌ	ɝ
unstressed	ə	ɚ

- Stress: relative prominence
  - Stressed vowels are (usually) louder, (often) longer, and (sometimes) higher pitched.
  - Many unstressed vowels of English are schwa.

Remarks on [ɹ], with regard to vowels:

- "New York" r-dropping: *sugar* [ʃʊgɚ] ("standard") vs. [ʃʊgə] (→ for unstressed "er" syllables)

- [ɹ] is maintained:
  - e.g. *bird* [bɝd] (no "r-loss")
  - When a vowel follows: <u>sugar is</u> on the floor.
    [ʃʊgəɹɪz]

Dialectal difference	**NY**	**Massachusetts**
Sugar	[ʃʊgə]	[ʃʊgə]
Sugar and …	[ʃʊgəɹæn]	[ʃʊgəɹæn]
Lisa	[lisə]	[lisəˠ]
Lisa is …	[lisəɪz]	[lisəɹɪz]

- [ɹ] has a strong effect on the quality of a preceding vowel.
  (Why?) [ɹ] involves a tongue shape much like a vowel.
  (Effect?) Harder to hear vowel differences before [ɹ].
  e.g. beer [iəˠ] or [ɪəˠ]
  tour [uəˠ] or [ʊəˠ]
  Diphthongs [eɪ] and [oʊ] lose their offglide before [ɹ]: *[eɪɹ], *[oʊɹ]

	Text	**Long Island**	**California**
Mary	[meɹi]	[mæ̟ɹi]	[mɛ̟ɹi]
merry	[mɛɹi]	[mɛɹi]	[mɛ̟ɹi]
marry	[mæɹi]	[mæɹi]	[mɛ̟ɹi]

Remarks on [ŋ], with regard to vowles:

- Before [ŋ] we also have fewer vowel distinctions.
  e.g. sing [siŋ] or [sɪŋ]
  length [lɛŋθ] or [leŋθ]
  song [sɔŋ] or [sɑŋ]

Exercise 5: Transcription (Vowels) – Underline a vowel letter and give an IPA to it.

cream [ ]	baby [ ]	front [ ]	sister [ ]
thread [ ]	sporty [ ]	pride [ ]	every [ ]
farmer [ ]	hood [ ]	aloof [ ]	doily [ ]

Exercise 6: Transcription (Cs and Vs)

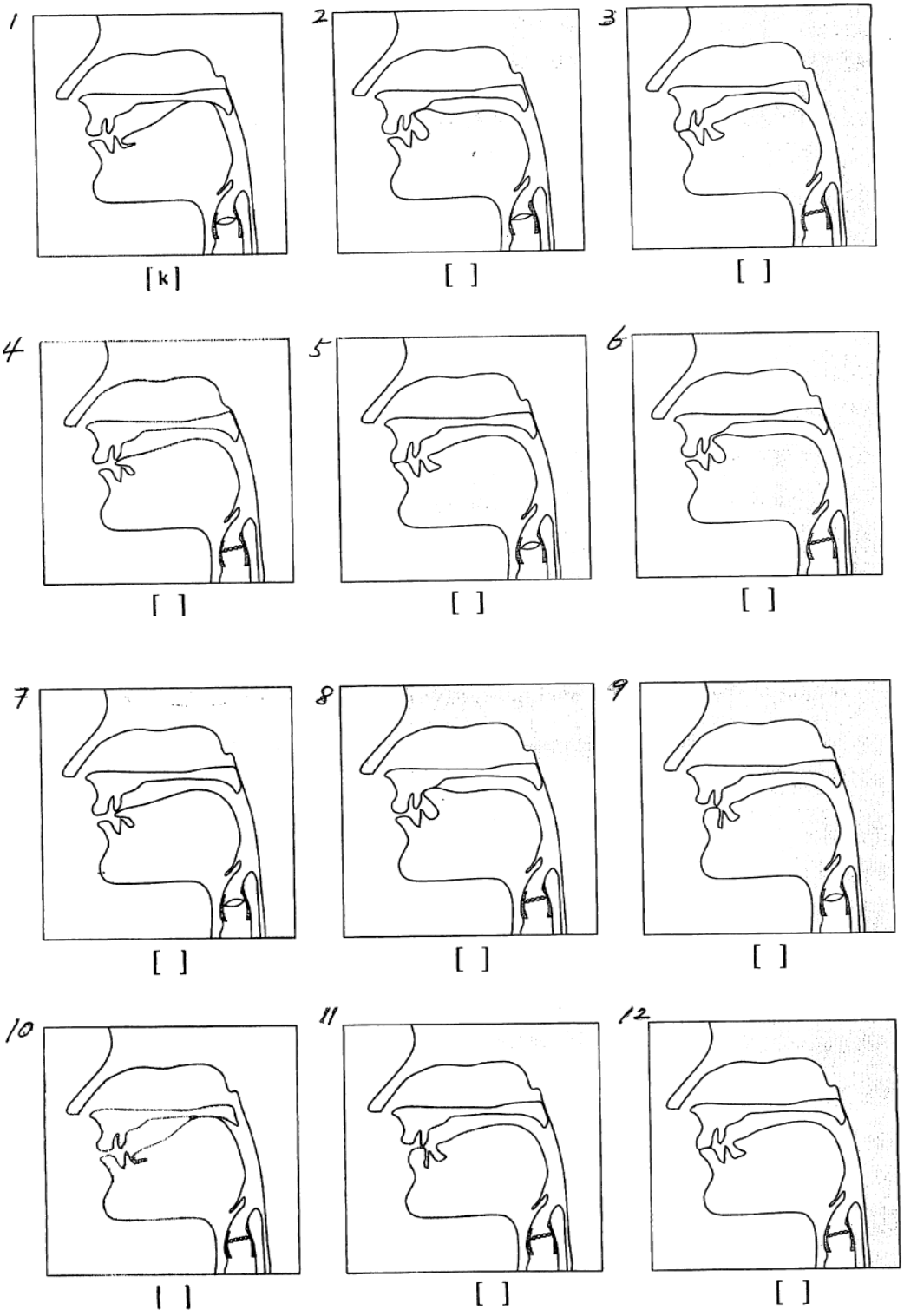
horrid [ ]	watch [ ]	perhaps[ ]	central [ ]
ketchup[ ]	crumb [ ]	random[ ]	walker [ ]

4. More on articulation

4.1. Identifying sounds

What to look for when you identify sounds by looking at the movements of articulators?

Exercise 7: (Language Files 2004: 62) Which sounds do these pictures demonstrate?



Chapter 3

4.2. Articulation in transition

We can describe the way articulators move in making sounds in transition.

Examples:

(1) [k] → [f] in "breakfast"

[k]	voiceless	velar	central	oral	stop
[f]	voiceless	labio-dental	central	oral	fricative

- Back of tongue moves away from velum (releasing the [k]).
- Move lower lip close to the upper teeth leaving a space for air to pass through.

(2) [s] → [l] in "slow"

[s]	voiceless	alveolar	central	oral	fricative
[l]	voiced	alveolar	lateral	oral	approximant

- Vocal folds come together (to produce voicing).
- Tongue tip is raised to touch alveolar ridge.
- Sides of tongue are lowered.

Exercise 1: Describe how changes from one C to another occur for the underlined.

a. rust

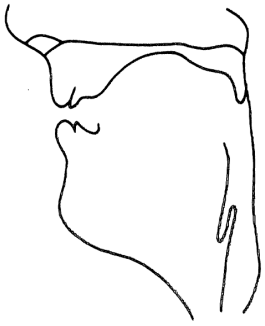
b. finger

c. glimpse

Exercise 2: (i) Transcribe the following words; (ii) Then draw movements of the articulators involved in making the sounds underlined.

a. transition [ ]
b. deceptive [ ]
c. planning [ ]
d. caption [ ]
e. fungus [ ]

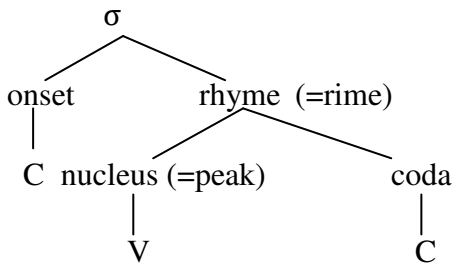
(*picture*: see the next page.)



← Refer to this picture when drawing articulator movements.

5. Syllable

Structure of syllable (σ):



- Vowel is a central component of a syllable.
- All C's before V are in the onset.
- All C's after V are in the coda.

Syllabification:

- Each V gets a σ.
- Group a single C into an onset.
- Group a single C into a coda.
- Deal with other C's.

Exercise 3: How many syllables per word?

solo	(	)	merry	(	)	guitar	(	)
propensity	(	)	skate	(	)	mundane	(	)
nucleus	(	)	linguistics	(	)	curtain	(	)
abstract	(	)	wonderful	(	)	mistrial	(	)

In transcription, all syllables must be represented with a symbol that represents a syllable, i.e., a vowel or a syllabic nasal (or syllabic [l]).

e.g.	reason	[ɹizən]	or	[ɹizn̩]
	hassle	[hæsəl]	or	[hæsl̩]
	gosling	[gɑsliŋ]		
	generation	[ʤɛnəɹeɪʃən]	or	[ʤɛnəɹeɪʃn̩]
	button	[bʌʔtn̩]		

6. Stress

90% of the English words with 2 σ's have the stress on the 1st σ; 10% have it on the 2nd σ.
Rhythm of speech matters:

Noun	Verb
ínsult	insúlt
pérvert	pervért

English prefers alternation in stress: - within words
- within phrases: e.g. "Welcome to today's lecture."

Word has a lexical stress.

- Word stress phonetically involves increased loudness, increased duration, sometimes increased pitch. (It is a relative prominence.)
- Word stress in English is not predictable.
- There are some strong patterns or generalizations.
  - Some affixes seem to "attract" stress:

    contríbute vs. contribútion

    phótograph vs. photográphic

    régular vs. regulárity

  cf. Affixes like "-able, -ful, -ness, -ment" do not change stress patterns.
  - There is a strong tendency for penultimate stress (= stress 2nd from the end):

    [σ´ σ] [σ σ´ σ]
  - Many two σ-words with final stress have what looks like a prefix:

    e.g. displáy, excéed, belíef, intént, mistáke, conténd, combíne, forgét,…

Compound (= a word composed of 2 independent words)

- Its meaning is not strictly compositional.
- Stress is on the 1st element.

  e.g. gréenhouse vs. green hóuse

  Whíte House vs. white hóuse

  wálkout vs. walk óut

  bláckboard vs. black board

  ⇨ Noun phrases (= adjective + noun): stress is on the noun.

  Verb phrases (= verb + preposition): stress is on the preposition.
- 2-σ compounds: 2nd element of a compound may have a secondary stress: e.g. téacùp
- 3-σ compounds: -Some have only a primary stress.

  -Some have one primary, one secondary stress.
- 4-σ compounds (& beyond): Primary and secondary stress.

7. Consonant allophones

Some notions

- Phonemes: basic sounds; substituting one for another changes meaning.

  e.g. leave lease heave

  [liv] [lis] [hiv]

- Allophones: variants of a phoneme occurring in a specific contexts (➔ The pattern is consistent.)

- Citation forms: words said fairly carefully in isolation (not in a phrase).

The major consonant allophones of American English

Informal definitions:

Tap: Very brief voiced alveolar sound, produced with an up and down movement of the tongue tip. Contact of tip of tongue with alveolar ridge is very light. Marked with rotated J symbol; sometimes the base stroke is missing: [ɾ]

Examples: Tapping is consistent in American English.

Tapping	No Tapping
fricative	Thomas
city	attack
butter	late
latter	tonight

"Phonetic description of a tap": voiced alveolar central oral tap

Velarization: Articulation of a sound with an added movement of body of tongue into higher back region of the mouth near but not touching the velum, roughly in between the positions for [o] and [u]. In English, it occurs only on [l] and only in some contexts (see below). When velarization is strong, tongue tip contact for /l/ is optional. Marked with tilde through middle of symbol. [ɫ]

Examples:

Non-velarized	Velarized
leaf	feel
lend	ball
sleep	felt
play	film
plot	melting
eclipse	filter

Aspiration: Period of noisy voicelessness after the release of the consonant constriction (after articulators separate). In English, appears only on voiceless stops. Makes first part of a following vowel voiceless. Marked with superscript h.

Examples:

Non-aspirated	Aspirated
stew	coat
echo	two
school	put
rapid	attack
sick	cicada
paper	paper

Approximant devoicing: Period of voicelessness overlapping with oral articulation of an approximant that follows a voiceless stop; all or most of approximant is voiceless. Applies to any approximant following a voiceless stop that is in the context for aspiration (see #3 below). Marked with unfilled circle under the consonant symbol.

Examples:

Non-devoiced	Devoiced
ti̲l̲e	p̲l̲ay
samp̲l̲e	c̲u̲te
w̲i̲l̲d	q̲u̲ite
s̲w̲eet	c̲r̲eam
m̲u̲te	rep̲l̲y
sq̲u̲irrel	dec̲r̲ee

We have learned the following contexts for these variants; some will be modified *in the future* as we explore additional segmental and phrasal contexts.

Formal definitions you should know:

1. Tapping of t (happens for /t/ always, in citation forms, except for highly exaggerated speech; /d/ taps only in very casual/fast speech).

Context: Between vowels before an unstressed vowel
(= between vowels when the 2nd vowel is unstressed)

2**. l velarization** (always happens, in citation forms)

Context: Coda /l/'s are velarized.

3. **Aspiration** of voiceless stops (always happens, in citation forms)

Context: -(absolute) Beginning of word
-In onset of a stressed syllable **(but not after s)**

4. **Approximant devoicing** (always happens, in citation forms)

Context: Special case of aspiration, in which the period of voicelessness after stop release affects an approximant following the voiceless stop.

It is marked as voicelessness on the approximant, since this is how it sounds. **No ^{h} symbol appears on the stop**. Rather, voiceless diacritic is added below the approximant symbol; e.g., "pride" [p̥ɹaɪd].

8. Broad vs. narrow transcriptions

Broad transcription: phonemic transcription (with not diacritics)
Narrow transcription: uses diacritics; covers the 4 major allophones.

Exercise 4: Transcribe the following with the 4 major allophones included.

		Broad		Narrow	
a.	similar	[	]	[	]
b.	floor	[	]	[	]
c.	tablet	[	]	[	]
d.	label	[	]	[	]
e.	furnace	[	]	[	]
f.	container	[	]	[	]
g.	train	[	]	[	]
h.	twilight	[	]	[	]
i.	street	[	]	[	]
j.	lateral	[	]	[	]
k.	potato	[	]	[	]

Chapter 4

9. More on articulation and narrow transcription

Aerodynamics of a stop:

1. Speech is overlaid on a continuous stream of air from lungs.
2. If we block airflow out of the mouth and nose, air pressure builds up.
3. When block is removed, air rushes out producing an audible sound.
4. Release: When articulators separate, air pressure is released.

Stop (non-)release:

e.g.	stew	(released t)
	echo	(released k)
	school	(released k)
	rapid	(released p, unreleased d)
	sick day	(unreleased k, released d)
	coat	(released k, unreleased t)
	back pack	(released b, released p, unreleased k)
	map room	(released p)
	stop light	(released p)
	coat rack	(released t)

⇨ Stops can unreleased:

- at the end of word, before pause;
- within a word before stop, nasal, or affricate.

[pˀ, tˀ, kˀ, bˀ, dˀ, gˀ]: coat [k^{h}oʊtˀ]

[tˀ] unreleased voiceless alveolar (central) (oral) stop
[dˀ] unreleased voiced alveolar (central) (oral) stop

Requirement for voicing:

1. Vocal folds close together.
2. Vocal folds appropriately tensed: If too tensed, no movement; If too loose, no popping back into position.
3. Air flowing between vocal folds.

Examples "voicing"	t^{h}	u	st	u
tongue tip (=apex) & alveolar ridge	closed	open for V	closed	open for V
vocal folds	apart	together for V	apart	close to each other (together) for V

Glottal stops: not a phoneme (∴ not contrastive)

- How it's produced: press vocal folds tightly together.
  e.g. uh-oh [ʔʌʔoʊ]
- Often inserted at the beginning of V-initial word.
  e.g. the apple [ði ʔæpəɬ] or [ði æpəɬ]
  ➔ Glottal stop is optional is English.

Exercise 1: Transcriptions

a. together [ ]

b. fell [ ]

c. pool [ ]

d. computer [ ]

e. discovery [ ]

f. comparable [ ]

g. compare [ ]

h. kitten [ ]

10. Stress and Intonation

Phrasal Stress:

"The bíg brown béar ate tén white mĭce." vs. "The bíg brown béar sat on the white mĭce."

- Function words: articles/determiners, conjunctions, prepositions, (adverbs)
- Content words: verbs, nouns, adjectives, demonstratives, (adverbs)
  - Function words usually not given a phrasal stress.
  - In neutral utterances, the strongest phrasal stress is the "rightmost content word."

e.g. Máry's younger bróther wanted fífty chocolate pĕanuts.

Máry's younger bróther wanted chocolate pĕanuts.

- Emphatic stress puts "strongest phrasal stress" on (any) word to be emphasized.
- Verbs tend not to be given phrasal stress.

Notation: Simple phrase stresses ˈ
Strongest phrasal stresses ˈˈ

Phrasal stresses go on the "primary" stressed syllable of a word.

e.g. fiftý [peanuts] (wrong) vs. fífty [peanuts] (correct)

However, check this out:	àfternóon	→	áfternoon téa	(correct!)
	abóve Máui	→	ábove Máui	(wrong!)

Stress clash: 2 strong syllables "too close" together.

➔ Stress shift: first clashing stress "moves" leftward if it can (= if there is a stressable syllable early in the word).

e.g.	sixtéen cándles	→	síxteen cándles	(fixed!)
	Massachúsetts législature	→	Mássachusetts législature	(fixed!)

Exercise 2: Phrasal stress assignments; Any stress clash and shift?

a. Swallows feasted under bushes.

b. Johnny's elbow needed treatment.

c. Jenny's dirty window needed proper cleaning.

d. Lily resents peaches around lizards.

e. Mother purchased fourteen antique dishes.

Chapter 5

11. Review on phrasal stress

11.1 Principles in phrase-level stress assignment

(1) English speakers prefer alternation in stress.

➔ Within a phrase, some lexically stressed syllables will be additionally strengthened to achieve alternation in stress:

- The big brown bear ate ten white mice. (even stress on all words sounds odd)
- Mary's younger brother wanted fifty chocolate peanuts. (better, but monotonous if every word is stressed)

(2) Content words can be given extra prominence within a phrase (phrasal stress), but function words cannot. In fact, function words are usually unstressed in phrases, thus contributing to alternation in stress.

- The dog has buried his bone again.

✓ Content words: nouns, verbs, adjectives, demonstratives (this, that), interrogatives (who, why), most adverbs.
✓ Function words: articles/determiners, prepositions, personal pronouns, modal verbs, etc.

(3) Sentence level stresses tend to occur at regular intervals – unstressed function words between stresses fit into the time allowed.

- Dogs eat bones.
- The dogs eat bones.
- The dogs will eat bones.
- The dogs will eat the bones.
- The dogs will have eaten the bones.

(4) The rightmost content word gets the strongest phrasal stress within non-emphatic utterances.

(5) Verbs tend not to be given phrasal stress if an alternating pattern can be achieved without them.

(6) Rhythmic regularity may also be produced by shifting stress to avoid "stress clash" (strong stresses too close together).

- She's only sixteen but there are sixteen candles on her birthday cake.

11.2 More examples of principles of phrasal stress

Data set A. Evidence that we avoid long stretches without stress

1. Jóhn saw an ówl — fine
2. Jóhn adopted an ówl — okay but not as good as 1
3. Jónathan adopted an ówl — worse than 2
4. Jónathan adópted an ówl — better than 3

Data set B. Evidence that the rightmost *content* word is usually stressed (not the rightmost word).

1. Shów them what you're máde of
2. She ásked him to push the wíndow up
3. He pátted the dog géntly
4. The wínd was blowing vígorously

Data set C. Evidence that we avoid stresses that are too close

1. Jóhn sáw an ówl — sound bad
2. Jóhn saw an ówl — better
3. Kélly sáw an ówl — slightly better than 1
4. Kélly saw an ówl — better than 3

Data set D. Evidence that the first word is NOT always stressed

1. Máry bought a cár — okay
2. He bóught a cár — okay
3. Mary's bróther bought a cár — okay
4. Máry's younger bróther bought a cár — okay

Exercise 1: Phrase stress assignment (' and ″)

a. The cat fell in the pool.

b. The girl's name was Chris.

c. Jared only forgot to get the toothpaste at the store.

d. Mark got a new blue bike for his birthday.

e. I want hot dogs, ice cream, and cotton candy.

f. We really have to study tonight for the phonetics test.

g. Bob can always finish his homework when he gets home.

h. My professor remembered to bring in the model of the larynx.

12. Intonation

Intonation:

- The tune or melody of an utterance. Pitch is a perceptual construct, determined primarily by rate of vocal fold vibration.
- Expresses the speaker's emotions, beliefs, expectations, etc. It also helps mark the ends of phrases or sentences, and provides cues to turn-taking in conversation.
- There are several possible intonational tunes for any utterance.
- We will focus on some common intonational tunes that are used at least some of the time by most native speakers.

Characterizing melodies/tunes with tone symbols:

- We use tones M, H and L to describe the sequence of (relative) pitch levels used, but not the exact timing involved. We need an additional set of principles to describe how pitch gets assigned to every syllable.
- Tones represent relative pitch levels; absolute pitch and pitch range used are determined by the individual's anatomy, emotional state, and other factors.
- Every syllable must have a pitch value.

Melody/Contour #1:
"Rising-falling": used for statements and WH-questions

Elena is studying linguistics

What is Elena eating?

Rising-falling: MHL
<u>MHL alignment</u>:

1. H goes on the nuclear accented syllable (syllable with strongest sentence/phrasal stress):

John is taking psycholinguistics.

Ruth is in the cafeteria.

Donna is the communications coordinator.

2. Where exactly does L go?

➔ Compare the three sentences above…The answer:

3. How do the rest of the syllables get pitch targets?
   (Remember: Every syllable must have pitch.)

Melody/Contour #2:
Rising: used for yes/no questions and tag questions reflecting doubt

Would you like some tea?

Are they going to stay?

We can't go tomorrow, can we?

MH alignment:

1. H goes at the end of the utterance
2. Where does the tonal turning point go?

Would you like some tea?

Would you like some coffee?

Would you like some boysenberries?

3. What happens between M and H? How do intervening syllables get a pitch value?

➔ Consider the sentences above……The answer:

- Tonal turning points occur on syllables bearing strong sentence stress.

- Pitch targets are assigned to other syllables according to a set of principles determined for each melody.

    - For MHL, M spreads from utterance beginning until right before the H.
    - For MH, M spreads until strongest phrasal stress, and then pitch starts rising for the H
    - If there are several syllables between the strongest phrasal stress and the end of the phrase, this rise can be quite gradual.

Melody/Contour #3:
Multiple tone groups: A sentence can be made up of more than one tone group (a chunk of words said with one intonational melody).

Tag questions

Lists

Embedded clauses

Additional definitions:

- ***Intonational melody*** = *intonation contour* = *intonation tune*: a sequence of pitch levels used together in certain types of utterances.
- ***Pitch*** perceived tonal level placed on a relative scale from higher to lower
- ***Fundamental Frequency*** primary physical property underlying pitch: rate of vocal fold vibration
- ***Hertz*** unit of measure for Fundamental Frequency; number of cycles (vibrations) per second.
- ***Tone group***: one or more syllables said as a unit, with a single intonation melody/tune. Also called **Intonation phrase**.

Exercise 2: Provide the right intonational contour for each of the following sentences.

a. Mary is taking notes.

b. Ted and Kathy are coming to dinner.

c. She was having a banana, potato, and oatmeal for breakfast.

d. Sarah went to New York, didn't she?

e. What are you going to do this weekend?

f. Donna is the communications coordinator.

g. We need paper plates, lunch meat, and tomatoes.

h. Mrs. Brown, who is a school master, is coming to dinner.

Acknowledgments: The notes for this course are from various sources, including various books as well as the textbooks, Professor Huffman's lectures, and Professor An's previous notes.