

LING 201: Introduction to Linguistics

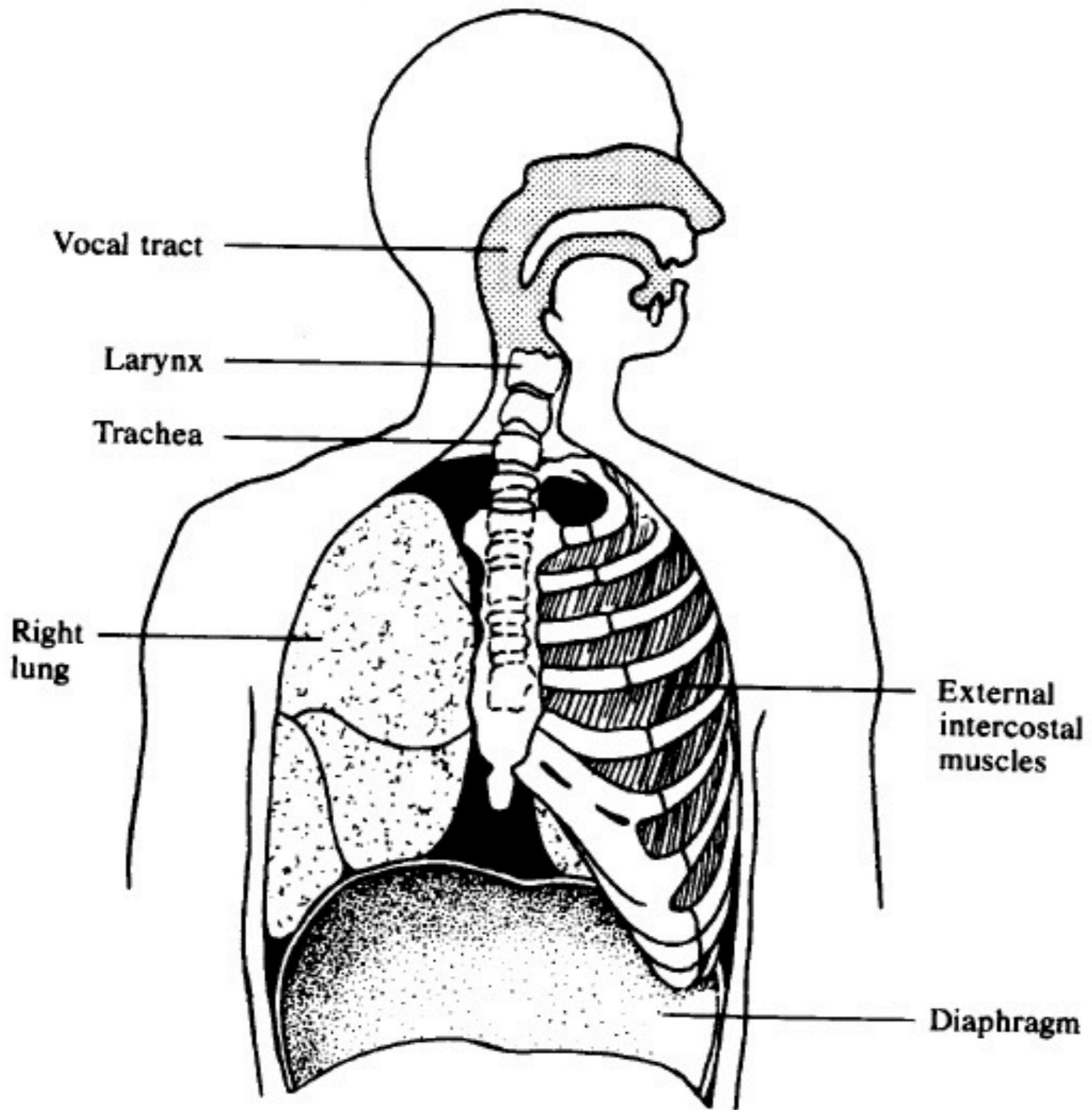
EMU
Fall 2011
D. Cavar

Agenda

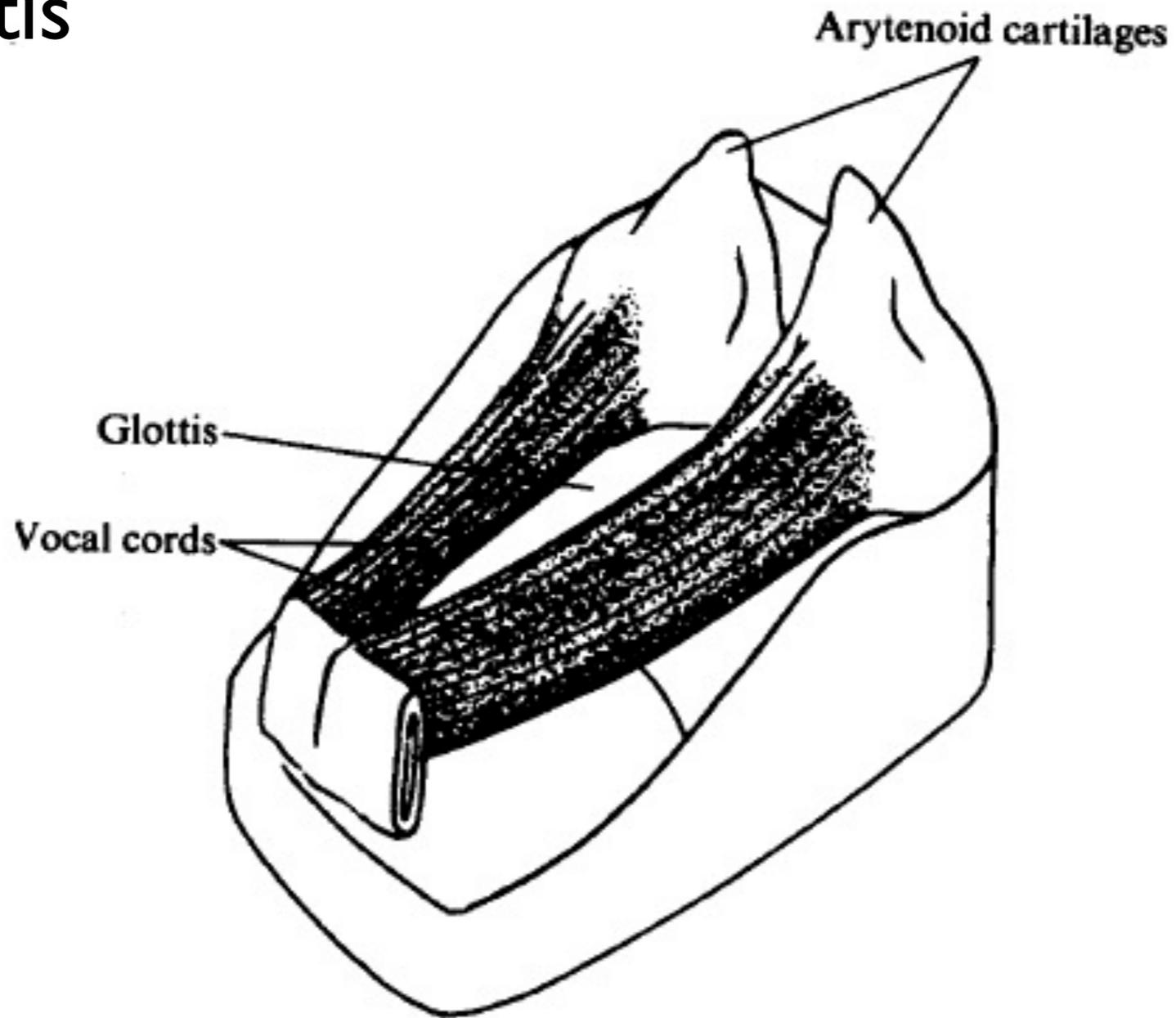
- Morphology assignment
- Phonetics II
- Phonetics assignment

Fonts for IPA transcription

- Summer Institute of Linguistics (SIL):
 - Doulos SIL IPA font
 - Newer OS fonts contain the Unicode IPA section
- OpenOffice
- Praat - Phonetics software



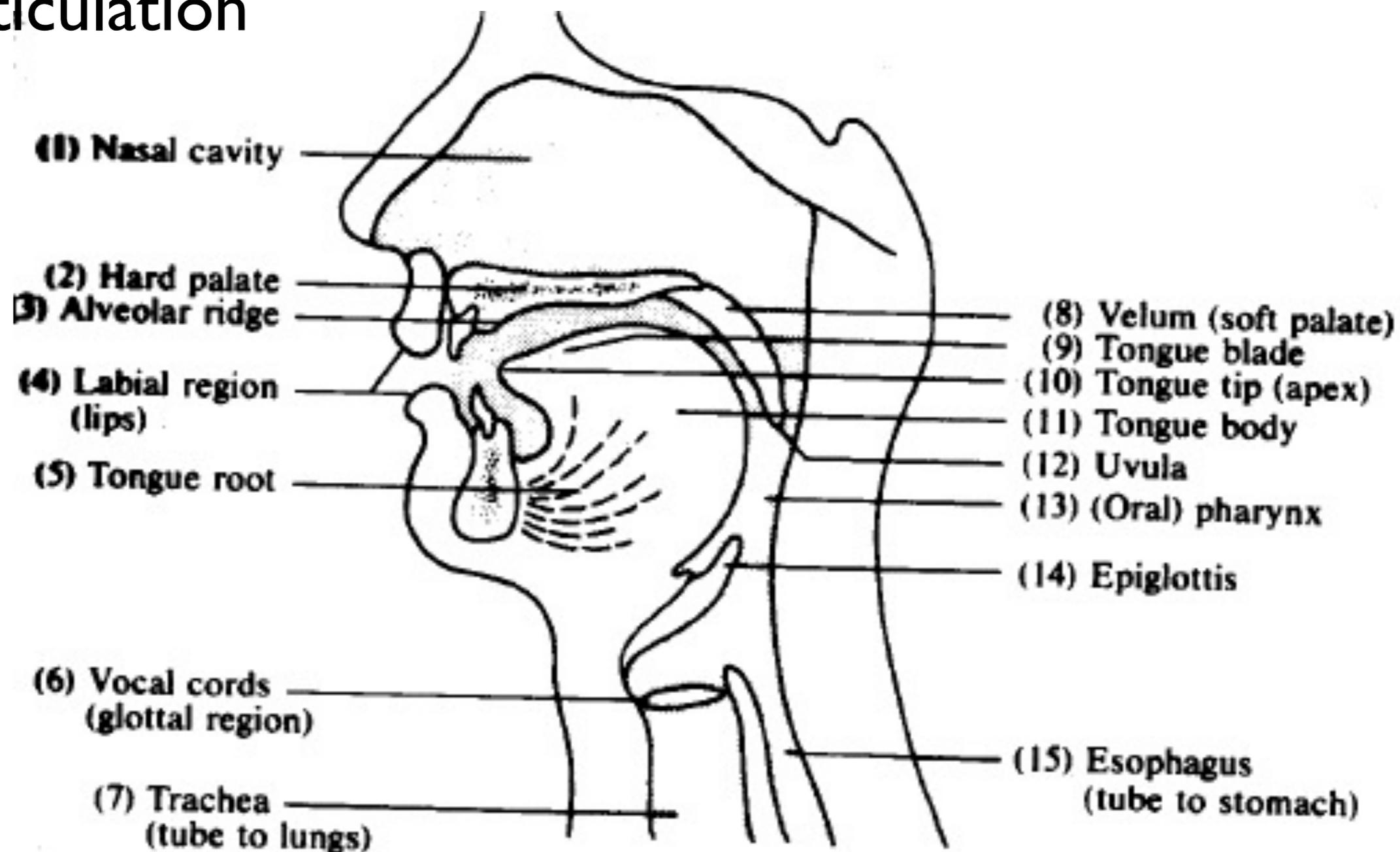
Glottis



Voicing

- p - ?
- t - ?
- f - ?

Places of Articulation



Speech versus Orthography versus Phonetic Transcription

- Our perception of speech: discrete segments
- English orthography does not reflect segments. Example:
 - *tin, nation*
 - *kick, choir, quick, cow*
- Phonetic symbols should be comparable across languages. Example
 - “c” English, French, Polish

Phonetic transcription standards

- International Phonetic Alphabet (IPA)
 - Omniglot IPA pages
- SAMPA - Computer Readable Phonetic Alphabet
- various others, mostly linguistically less relevant...

Places of Articulation

- Bilabial
 - p, b, m, w
- Labiodental
 - f, v
- Interdental
 - θ, ð
- Alveolar
 - t, d, s, z, n, l, ɹ

Places of Articulation

- Alveopalatal
 - \int , $ʒ$, $tʃ$, $dʒ$
- Velar
 - k , g , $ŋ$
- Glottal
 - h , $ʔ$

Special symbols

- Interdentals: θ , δ
- Alveopalatal: \int , \int , $t\int$, $d\int$
- r-sound: ɹ

Place and Manner of Articulation

- Place of articulation
- Manner of articulation
- How articulators (e.g. lips, tongue) achieve contact or proximity with the place of articulation

Manner of Articulation

- **Stops**

- airflow is completely obstructed during speech

- /p/ - voiceless, bilabial - *pin*

- /b/ - voiced, bilabial - *Bob*

- /t/ - voiceless, alveolar - *tin*

- /d/ - voiced, alveolar - *Dad*

- /k/ - voiceless, velar - *kite*

- /g/ - voiced, velar - *gag*

Manner of Articulation

- **Fricatives**

- airflow is forced through a narrow opening in the vocal tract, producing noise by friction
 - /f/ - voiceless, labiodental - *fish*
 - /v/ - voiced, labiodental - *vine*
 - /θ/ - voiceless, interdental - *thin*
 - /ð/ - voiced, interdental - *this, that*
 - /s/ - voiceless, alveolar - *sit*
 - /z/ - voiced, alveolar - *zebra*
 - /ʃ/ (/š/) - voiceless, alveopalatal - *ship*
 - /ʒ/ (/ž/) - voiced, alveopalatal - *measures*
 - /h/ - voiceless, glottal - *how, here*

Manner of Articulation

- **Affricates**

- beginning as a stop and releasing into a fricative
- /tʃ/ (/č/) - voiceless, alveopalatal - *chip*
- /dʒ/ (/ǰ/) - voiced, alveopalatal - *judge*

Manner of Articulation

- **Nasals**

- voiced oral stops, i.e. complete obstruction in the oral cavity, channeling the airflow into the nasal cavity
- /m/ - bilabial as /b/ (lowered velum) - *mice*
- /n/ - alveolar as /d/ (lowered velum) - *nice*
- /ŋ/ - velar - *long*

Manner of Articulation

- **Liquids**
 - “smooth” sounds, “flow easily”, consonant and vowel properties, tongue blade raised towards the alveolar ridge, no friction, free airflow through oral cavity
 - /l/ - alveolar - *life*

Manner of Articulation

- **Glides**

- vowel-like articulation, preceding and following true vowels (semivowels)
- /w/ - bilabial (velarized) - *wood*
- /ɱ/ - bilabial (velarized) with a voiceless beginning - *which* (/hw/)
- /ɹ/ - alveolar (tip of the tongue is retroflexed) - *red*
- /j/ (/y/) - alveopalatal - *yes*

Manners of articulation

- Stop
 - p, b, t, d, k, g
- Fricative
 - f, v, θ, ð, s, z, ʃ, h
- Affricate
 - tʃ, dʒ

Manners of articulation

- Nasal
 - m, n, ng
- Liquids: lateral and rhotic
 - l, ɹ
- Glides
 - j, w

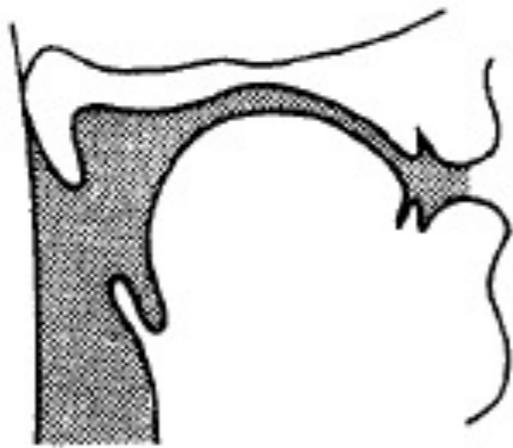
Practice: phonetic transcription

- Transcribe the first SOUND in the words
 - ship
 - who
 - chance
 - rough
 - joy
 - yes

Phonetic chart of consonants

	bilabial	labio dental	inter dental	alveolar	alveo palatal	velar	glottal
stops	p/b			t/d		k/g	
fricatives		f/v	θ/ð	s/z	ʃ/ʒ		h
affricates					tʃ/dʒ		
nasals	m			n		ŋ	
liquids				l			
glides	w				j		

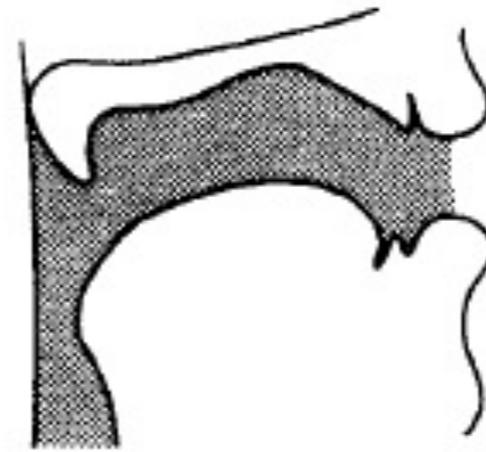
Vowel Height



/ɪ/
"bit"

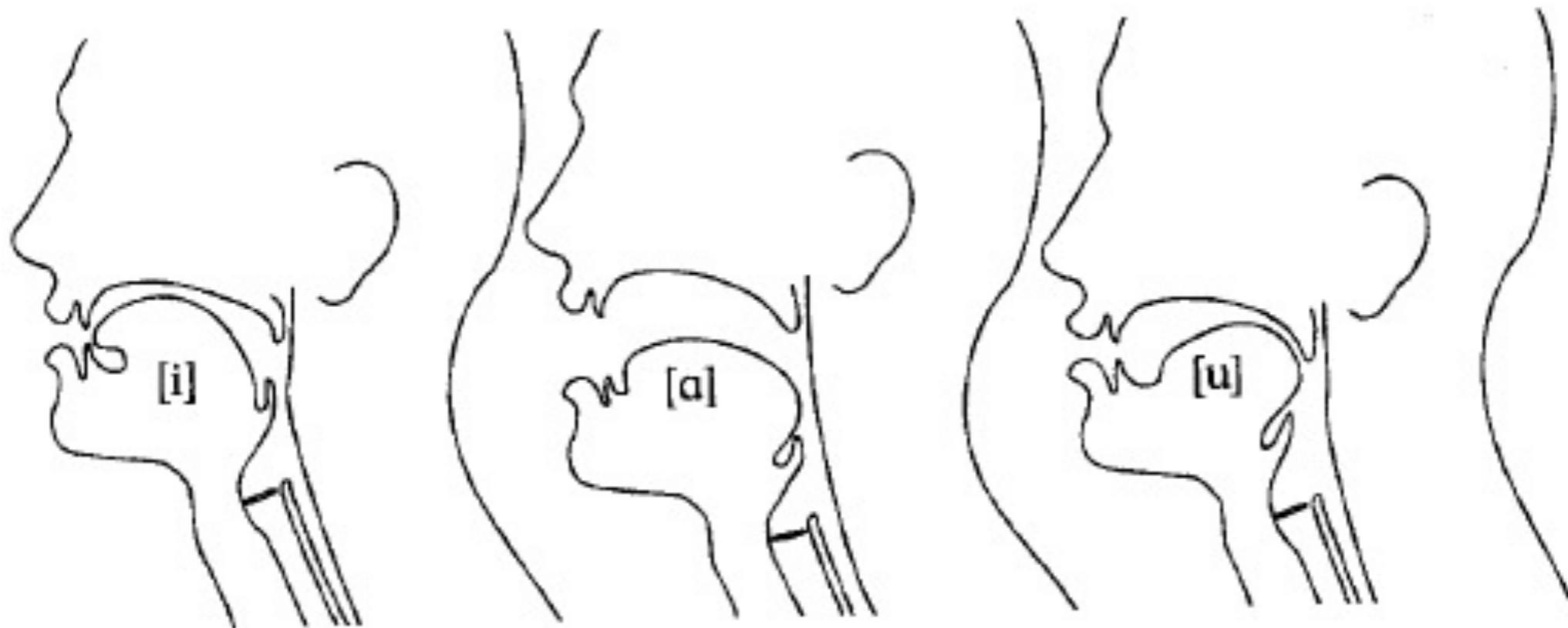


/ɛ/
"get"



/ɑ/
"hot"

Vowels: Front-Back Dimension



Vowels

- Round versus unround
 - In English
 - front vowels are unround
 - back vowels are round

Vowels

- Consonants:
 - partial or total obstruction of the airstream in the vocal tract
- Vowels:
 - relatively open vocal tract (resonating chamber)
 - Formed by
 - position of the tongue body and blade
 - relative opening of the lips
 - relative opening of the oral pharynx
 - position of the jaw

Vowels

- Vowel types
 - *lax* (short)
 - less muscular tension, shorter duration
 - *tense* (long)
 - *reduced*
 - or unstressed vowels

Lax (Short) Vowels

- /ɪ/ - high, front - *bit* /bɪt/, *wish* /wɪʃ/
- /ɛ/ - mid, front - *get* /gɛt/, *mess* /mɛs/
- /æ/ - low, front - *ash* /æʃ/
- /ʊ/ - high, back (round, i.e. rounding lips) - *put* /pʊt/, *foot* /fʊt/
- /ʌ/ - mid, back - *putt* /pʌt/, *luck* /lʌk/
- /ɑ/ - low, back - *hot* /hɑt/, *pot* /pɑt/
- /ɔ/ - low, back, rounded - *caught* /kɔt/ (see in contrast *cot*)

Reduced Vowels

- /ə/ - “schwa”, mid, back - *sofa* /soʊfə/,
democrat /dɛməkræt/, *democracy* /dɛmɑkrəsi/
- /ɪ/ - high, back (in unstressed or unaccented syllables) - *chicken* /tʃɪkɪn/
- /ə/ - later... vowels before /ɹ/

Tense (Long) Vowels and Diphthongs

- Longer than lax vowels, sound higher
- compare *reed* /ɹiːd/ and *rid* /ɹɪd/
- demo on Praat
- Diphthongs:
 - single vowels that begin in one vowel position and end in another vowel position

Tense Vowels

- /i/ - high, front - *bead* /bid/, *three* /θri/
- /eɪ/ (also /e/, /ey/) - mid, front (with accompanying high front offglide) - *clay* /kleɪ/, *weigh* /weɪ/
- /u/ - high, back (rounded) - *crude* /kɹuːd/, *shoe* /ʃu/
- /oʊ/ (also /o/, /ow/) - mid, back (rounded) (with high back offglide) - *boat* /boʊt/, *toe* /toʊ/
- /ɔɪ/ (also /oy/) - mid, back (rounded) (with high front offglide) - *boy* /bɔɪ/, *Floyd* /flɔɪd/
- /aʊ/ (also /aw/) - low, back (with high back offglide) - *cow* /kaʊ/, *blouse* /blaʊs/ (dialectal: /kæʊ/)
- /aɪ/ (also /ay/) - low, back (with high front offglide) - *my* /maɪ/, *thigh* /θaɪ/

Vowel Symbols: high vowels

- [i] high front tense unround
 - bead, three, meet
- [ɪ] high front lax unround
 - kick, bit, wish
- [ʊ] high back lax round
 - put, foot
- [u] high back tense round
 - shoe, mood, crude

Vowel symbols: mid vowels

- [ɛ] front mid lax unround
 - pet, get, mess
- [ə] reduced vowel, mid back
 - democracy
- [ʌ] mid back lax, round
 - cut, luck
- [ɔ] back lax
 - caught

Vowel symbols: low vowels

- [æ] front low lax unround
 - cat, ash
- [ɑ] low back lax unround
 - hot, pot
- [a] low back tense unround (East Coast dialect)
 - park, car

Sounds in other languages

- Already mentioned: Polish (or Slavic)
- Click-sounds: sample from Xhosa

- **Exercises**

Vowel symbols: more diphthongs

- [aɪ]
 - my, die, bye
- [aʊ]
 - cow, blouse

Practice: transcription

- Find words containing
 - [aɪ] and [aʊ]

Transcription Task

- ship
- who
- chance
- Ray
- joy
- yes

Transcription Task

- ship [ʃɪp]
- who [hu]
- chance [tʃæns]
- Ray [reɪ]
- joy [dʒɔɪ]
- yes [jes]

Transcription practice

- changes
- mostly
- music
- musician
- peanuts
- system

Transcription practice

- changes [tʃeɪndʒɪz]
- mostly [moʊstli]
- music [mjuzɪk]
- musician [mjuzɪʃən], [mjuzɪʃn]
- peanuts [piːnʌts]
- system [sɪstəm], [sɪstɪm]

Transcription practice

- Cash
- Bought
- A lot of
- Rage
- Coat
- Joy
- Canada

Transcription practice

- Cash [kæʃ]
- Bought [bɔt]
- A lot of [ə lɒt əv]
- Rage [reɪdʒ]
- Coat [koʊt]
- Joy [dʒɔɪ]
- Canada [kænədə]

Transcription practice

- Duck
- The peak
- Wedge

Transcription practice

- *Duck* [dʌk]
- *The peak* [ðə pik]
- *Wedge* [wɛdʒ]

Phonemic versus phonetic transcription

- Phonemic transcription - includes only the necessary information about the sounds which contrast in a given language.
- Phonetic transcription - includes lots of small detail of pronunciation. E.g. aspiration in English.

Types of /t/ in English

- How the two words differ?
 - tin
 - stint
- Is the difference phonological or phonetic?
- Aspiration - a puff of air accompanying the articulation of a sound.
- Aspirated [t^h] appears at the beginning of a stressed syllable.

Types of /t/ in English

- *kitten*
- *button*
- [kɪʔ̥n̩]
- [bʌʔ̥n̩]
- Glottal stop replaces /t/ before a syllabic /n/: the stop articulation is carried out by the glottis and the tongue tip does not form an occlusion at all.

Plural Nouns in English

- Transcribe:
 - *cat* - *cats* /kæts/
 - *dog* - *dogs* /dɔgz/
 - *bush* - *bushes* /bʊʃɪz/
- Consider: *map*, *back*, *can*, *tab*, *dish*, *ridge*...
- What are the generalizations?

Homework

- Homework assignment III
 - Chapter 3, Exercises 5, 10, 13
- Reading: chapter 4 up to section 4.3, Akmajian et. al!