

# LING 201: Introduction to Linguistics

EMU  
Fall 2011  
D. Cavar

# Agenda

- Course material, assignments and textbook
- Morphology 2
- Phonetics and Phonology I

# Course material

- Textbook:
  - in the library
  - previous (5<sup>th</sup> edition) on Google Books
- Slides and other material:
  - on the web: <http://www.cavar.me/damir/ling201-11/>
  - in Google Docs
  - in Dropbox

# Submission of assignments

- Email to instructor:
  - see link on course page
  - or:
    - `d c a v a r l @ e m i c h . e d u`
- File format PDF:
  - OpenOffice can export PDF, the newest release of Microsoft Office, in Linux GNOME or KDE desktop and Mac OS X from any application one can generate PDF

# Emailing the Instructor

- Structure of Email:
  - Subject line indicating clearly LING 201
  - Greeting
  - Body: precise request or question
  - Closing indicating clearly your name
- Do not expect immediate response to emails on the weekend.
- No replies to assignment questions or requests before class on due date.

# Excuses

- For assignments:
  - Just save your and my time: I get an assignment or not, I am not interested in, why I did not get it.
  - If you cannot come to class, please do tell me why.
    - You are missing each session a double hour, which is significant!
    - But, do not expect me to respond to this info mail.
    - I keep track of attendance and missed classes. You will get a summary of your assignment performance and number of missed classes.

# Office hours

- The office hours are indicated on the web page and on the syllabus. If there is a mismatch, the web pages are right.
- You do not have to tell me that you intend to come to my office hours. Just do it.
- Changes and exceptional cancelations of office hours are always announced on the course web page.

- **Any other issues?**



# Assignments

1. *Radar* and *laser* are acronyms. List three other recent English words that are acronyms and state their origin.

# Assignments

2. List three recent words that, like DOB (date of birth), are alphabetical abbreviations, and state their origin.

# Assignments

3. Consider the word *dissing* in the sentence *Are you dissing me?*

A. What does *dissing* mean?

B. What part of speech does *dissing* belong to? Defend your answer.

C. What is the (social) origin of *dissing* (or *diss*)? That is, what social group first started using the word?

D. How was *diss* formed? Defend your answer.

# Assignments

4. The following quotation is from a San Francisco Chronicle opinion piece regarding education issues by Debra J. Saunders (January 4, 1998):

Can a teacher be an educrat? Yes, although I should think most teachers are educators, not educrats. (Bet that a teacher with a PhD in education is an educrat, one with a PhD in math is an educator.)

A. What is an *educrat*?

B. What kind of word is *educrat*? That is, how was it formed?

# Assignments

- 7. English also has a prefix *un-*, whose use is illustrated in the following lists:

<b>List A</b>	<b>List B</b>
<i>likely</i>	<i>unlikely</i>
<i>acceptable</i>	<i>unacceptable</i>
<i>wise</i>	<i>unwise</i>
<i>real</i>	<i>unreal</i>
<i>common</i>	<i>uncommon</i>
<i>natural</i>	<i>unnatural</i>
<i>graceful</i>	<i>ungraceful</i>
<i>refined</i>	<i>unrefined</i>
<i>tamed</i>	<i>untamed</i>

# Assignments

7. English also has a prefix *un-*, whose use is illustrated in the following lists:

- A. What parts of speech are the words that the prefix *un-* attaches to?
- B. When *un-* is prefixed to a word, what part of speech is the resulting new word?
- C. In what way does the prefix *un-* change the meaning of the word it attaches to?
- D. New words such as *Uncola* (a type of soft drink) and *Uncar* (used in a bus company advertisement to refer to a bus) have been added to the English language. Given the pattern in lists A and B, why are words such as *Uncola* and *Uncar* “irregular”?



# Derivational morphology

- Deriving new words by applying rules.
- Base + affix/base → new word (base)
- Agentive -er
- Play+er, watch+er, do+er, write+er, kill+er, open+er etc.
- V+er → N
- Compositionality of meaning



# Inflection versus derivation

- Derivation - deriving new words, e.g. +able (do +able), +er (open+er), etc.
- Inflection - creating different grammatical forms of the same word, e.g. +s (he play+s), +ed (play +ed), +ing (play+ing), +s (toy+s), +s (Mary's), +er (hott+er), +est (hott+est).

# Inflection versus derivation

- Inflection
  - Doesn't change the grammatical category
  - Meaning relationship is regular.
- Derivation
  - May change the grammatical category.
  - Meaning relationship not always regular.
  - E.g. fixable versus readable.

# Inflection versus derivation

- Derivational morphemes are closer to the base than the derivational morphemes, i.e.
- Inflectional morphemes are the “outer shell” of the word
- E.g. modern+ize+ing
- BUT: \*modern+ing+ize
- E.g. play+er+s
- BUT: \*play+s+er

# Productivity

- Suffix *-able*
  - attaches only to transitive verbs
  - What is a transitive verb?
- Nouns with *-able* in English:
  - *peaceable, companionable, marriageable, impressionable, knowledgeable, actionable, saleable, reasonable, fashionable*
  - Is our generalization wrong?

# Productivity

- $V_{\text{trans}} + \textit{able}$  is productive
- $N + \textit{able}$  is not, i.e. it is restricted to a few examples
- Such forms need to be learned and memorized explicitly

# False Analysis

- What is the morphological structure of:
  - hospitable
  - sizeable (meaning “ample”)
- Is it  $V + \textit{able}$ ?

# False Analysis

- *-able* in *hospitable* and *sizeable* does not mean “to be able”
- *-able* is compatible with another derivational suffix, e.g. *-ity* that forms a noun:
  - *readable* (Adj) - *readability* (N)
  - *provable* (Adj) - *provability* (N)
  - *breakable* (Adj) - *breakability* (N)

# False Analysis

- But not with *hospitable* or *sizeable*
  - \* hospitability of our host
  - \* sizeability of the crowd
- Two arguments:
  - semantic
  - morphological



# Bound Base Morphemes

- Semantic properties of *-able* in:
  - malleable, feasible
  - are “to be able”
  - segmentation seems motivated:
    - *malle+able, feas+ible*
- But: *malle(y)* and *feas(e)* do not exist as independent or free morphemes

# Problems

- When arguing about the structure of a word:
  - base might be from a closed set of no longer productive forms
  - possible completely false analysis of the base
  - base may not be an existing word

# Morphological structure

- How will you analyze word 'unlockable'?
  - un+lock+able
- What are the two meanings of 'unlockable'?

# Morphological structure

- Add **un-** to a verb
  - make another verb
  - means “reverse the action of” or “undo”
  - example: lock  $\Rightarrow$  unlock
- Add **un-** to an adjective
  - makes another adjective
  - means “not”
  - example: lucky  $\Rightarrow$  unlucky

# Morphological structure

- Add **-able** to a verb
  - makes an adjective
  - means “able to have the action of the verb performed on it ”
  - example: break  $\Rightarrow$  break**able**

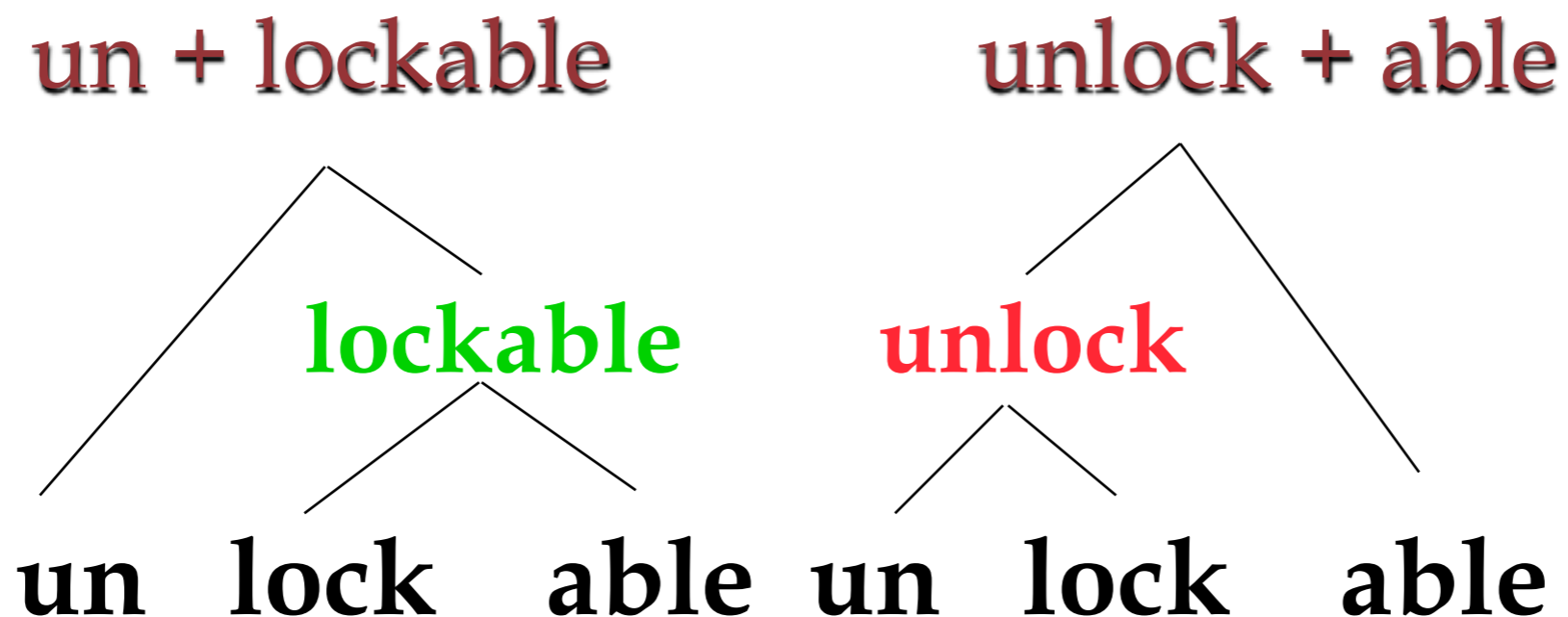
UNLOCKABLE?

UN[LOCKABLE]

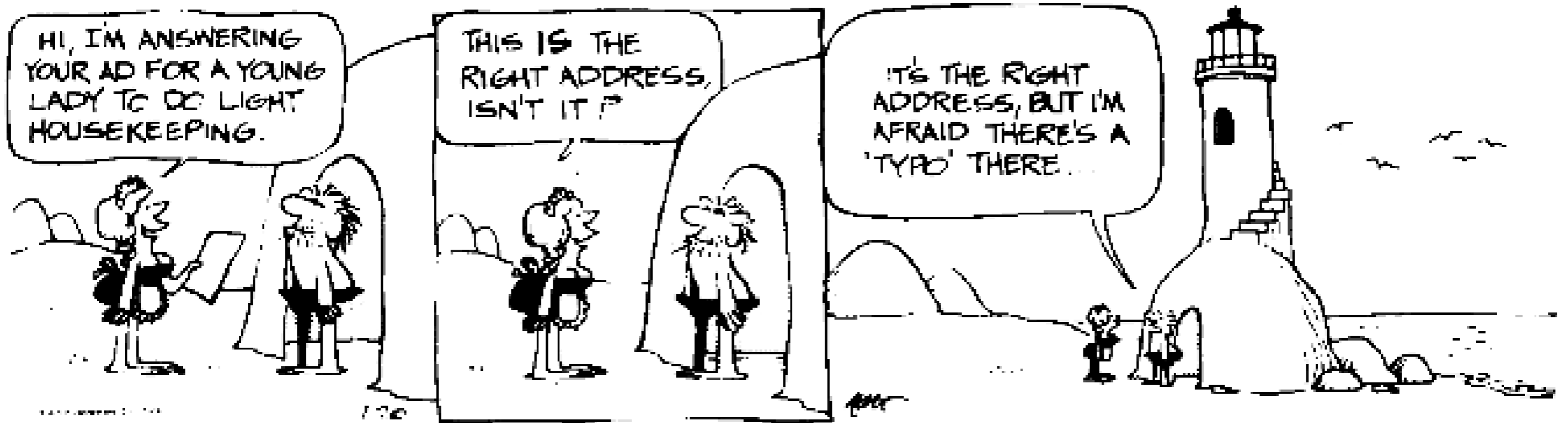
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# Structure and Compositionality

- Assumption: Human language is intrinsically structured
  - Merger: two units combine to form a larger unit
  - As units combine, their meanings combine



# Word Stress



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# Compositionality

- *fixable* = *able to be fixed*
- *inflatable* = *able to be inflated*
- But:
  - *readable*: not just *able to be read*, but *well written or good style* etc.
  - *payable*: not just *can be paid*, rather *should be paid*
  - *questionable*: not just *can be questioned*, but *dubious or suspect*
- Additional semantic property or meaning: *semantic drift*



# Compounds

- Compound - words are joined together to form another word
  - Blackboard
  - Black board
- Differences in stress:
  - Black 'board vs 'blackboard

# Compounds

- Darkroom versus dark room
- Compare 'alligator shoes' versus 'horseshoes'
- 'Bigfoot' versus 'big foot' and
- 'bigwig' versus 'big wig'

# Compounds

- high chair
- High chair (= special kind of chair for babies)
- \*higher chair (only possible for the phrasal interpretation)



# Phonetics

- Orthography vs. Speech
  - discrete symbols vs. continuous sound wave
  - transcription is an idealization of physical installation of speech
- Visualization of *bee, bah, boo*
  - See Praat
    - <http://www.fon.hum.uva.nl/praat/>

# Phonetics

- **Articulatory phonetics:** How are speech sounds produced in the vocal tract?
- **Acoustic phonetics:** What are the physical properties of the speech sound waves generated by the larynx and vocal tract?

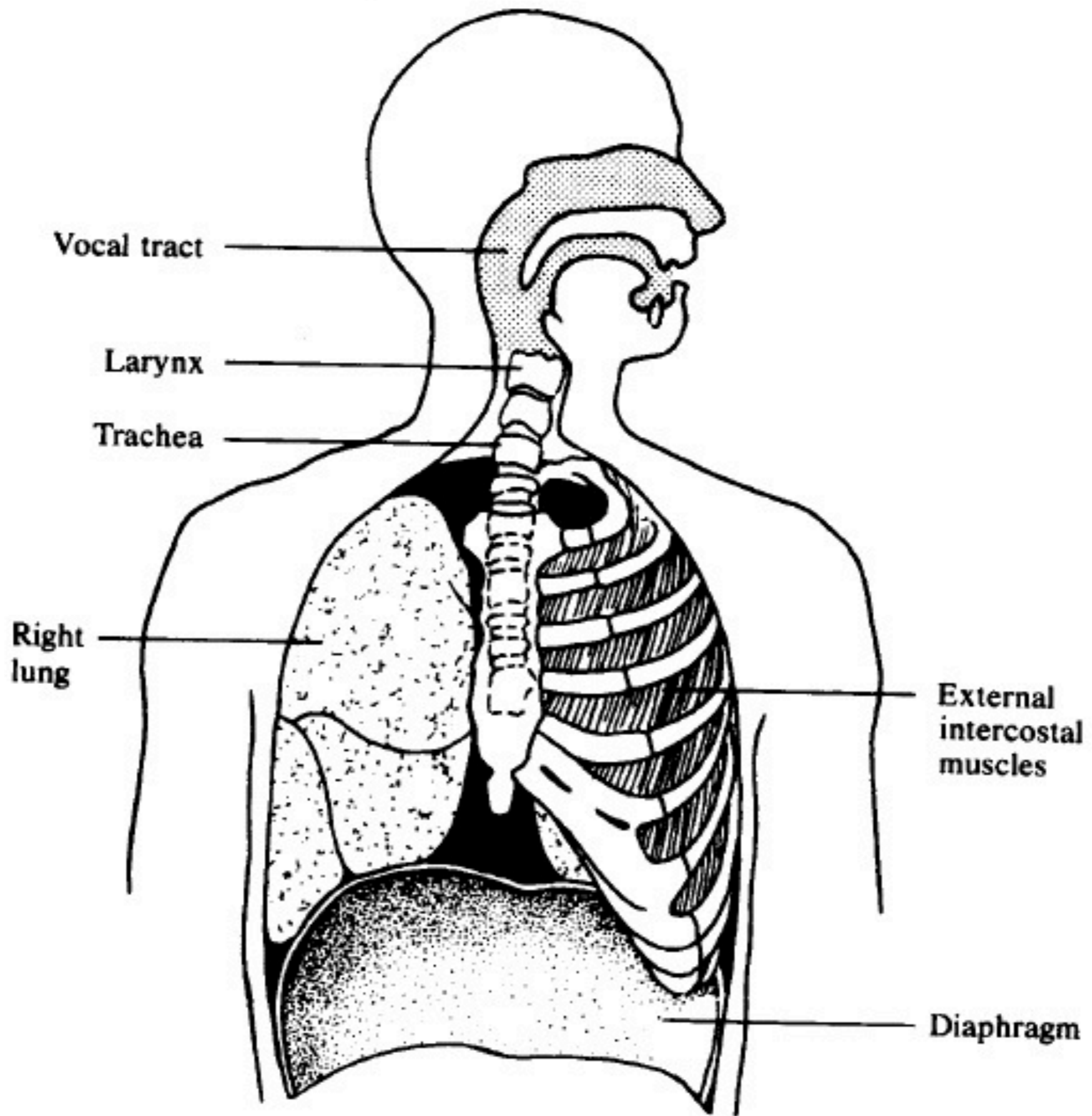
# Articulation

- Speech is:
  - a rapidly flowing series of noises
    - produced inside the throat, mouth, and nasal passages
    - radiates out from the mouth and sometimes the nose
- Learning to speak:
  - control of a few muscles that move the lips, jaw, and tongue?

# Articulation

- More complicated:
  - more than 100 muscles
  - complex interaction of
    - outward flow of air from the lungs
    - modification of the airflow at the larynx
    - modification of the airflow by the position and movement of the tongue and other anatomical structures of the vocal tract





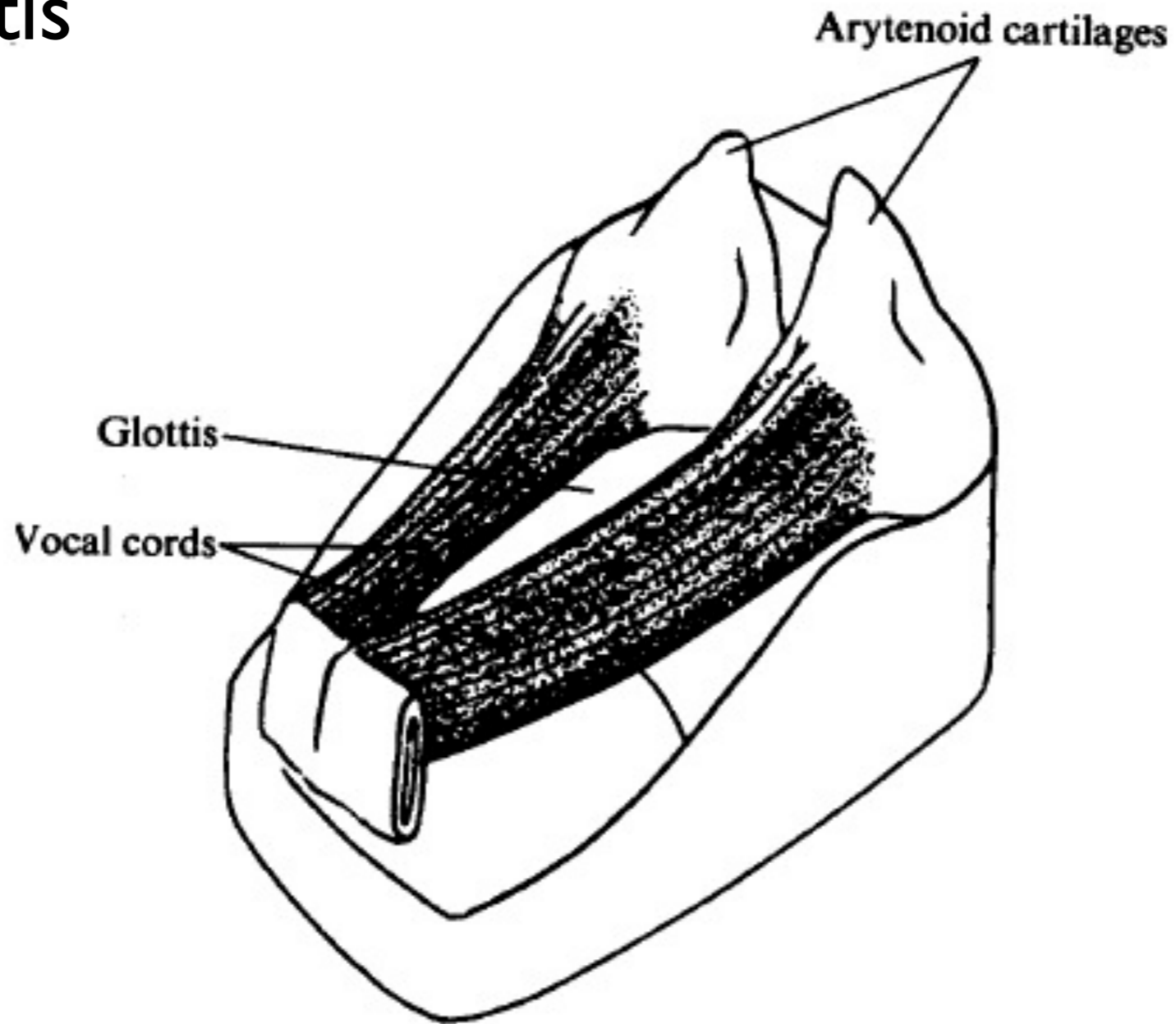
# Larynx

- See [Larynx on Wikipedia](#)

# Airflow from lungs

- expanding the lungs (diaphragm, external intercostals)
- muscles restrain the lungs from emptying too rapidly
- breathing is adapted to the needs of speech

# Glottis



# Vocal cords

- <http://www.humnet.ucla.edu/humnet/linguistics/faciliti/demos/vocalfolds/vocalfolds.htm>

# The role of vocal cords

- voicing (phonation): vibration of vocal cords
  - the airflow must be sufficiently rapid
  - vocal cords must be relatively lax
  - vocal cords must be sufficiently close
- voiceless sounds: vocal cords more tense and wider apart

# The role of vocal cords

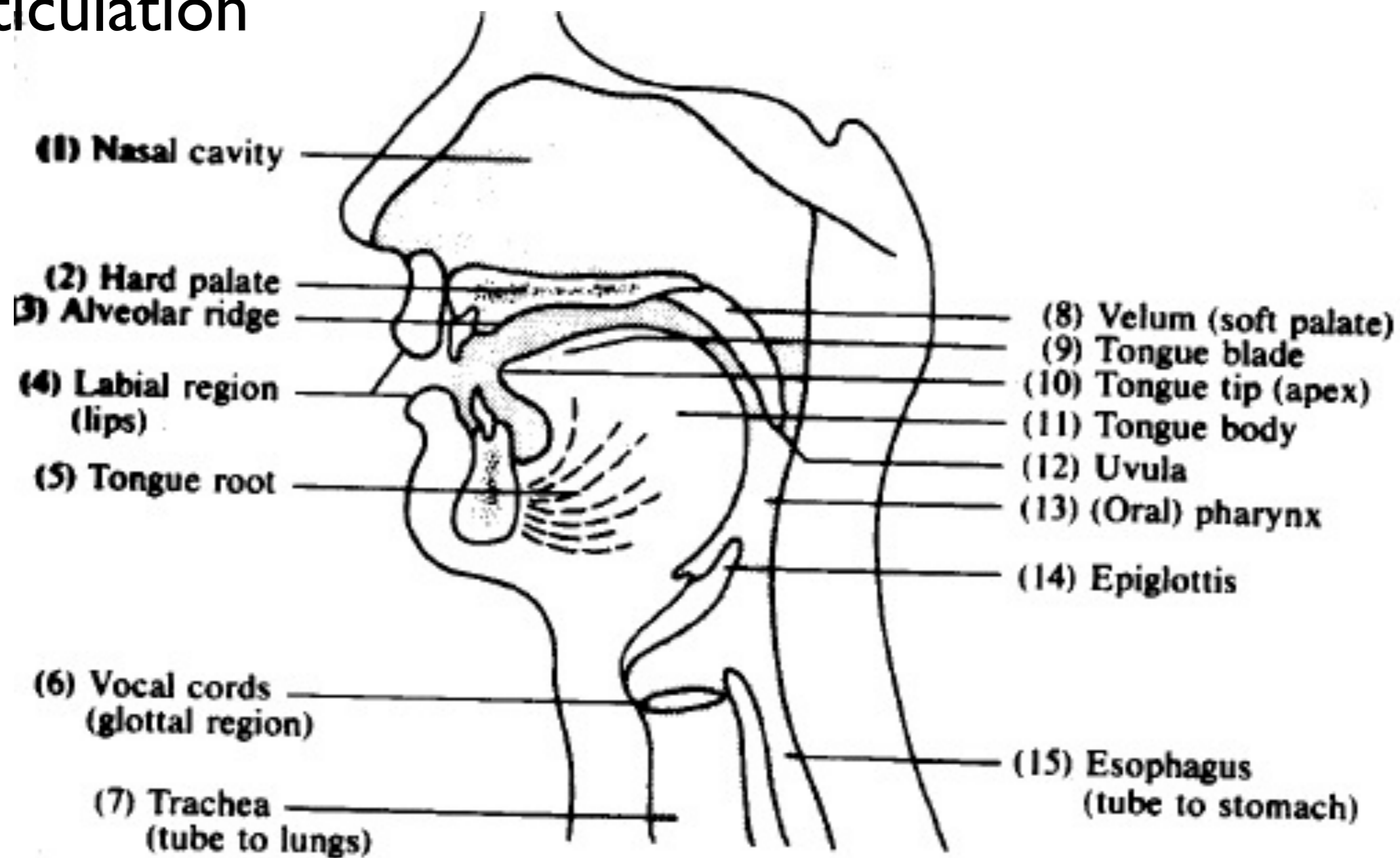
- voicing (phonation): vibration of vocal cords
  - frequency of vocal cord vibrations determines the perceived pitch
    - determined by size (male lower, female higher)
  - extra noise or buzz with the z-sound (voiced), compared to the s-sound (voiceless)
  - for s the vocal cords are wider spread and tense, compared to z

# Voicing

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



# Places of Articulation



# Phonetic transcription

- English has 26 letters. How many sounds does English have?

# 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

# Spelling versus Sounds

- Different spelling - the same sounds
  - see, senile, sea, seize, scenic, siege
  - ceiling, cedar, cease,
  - juicy, glossy, sexy

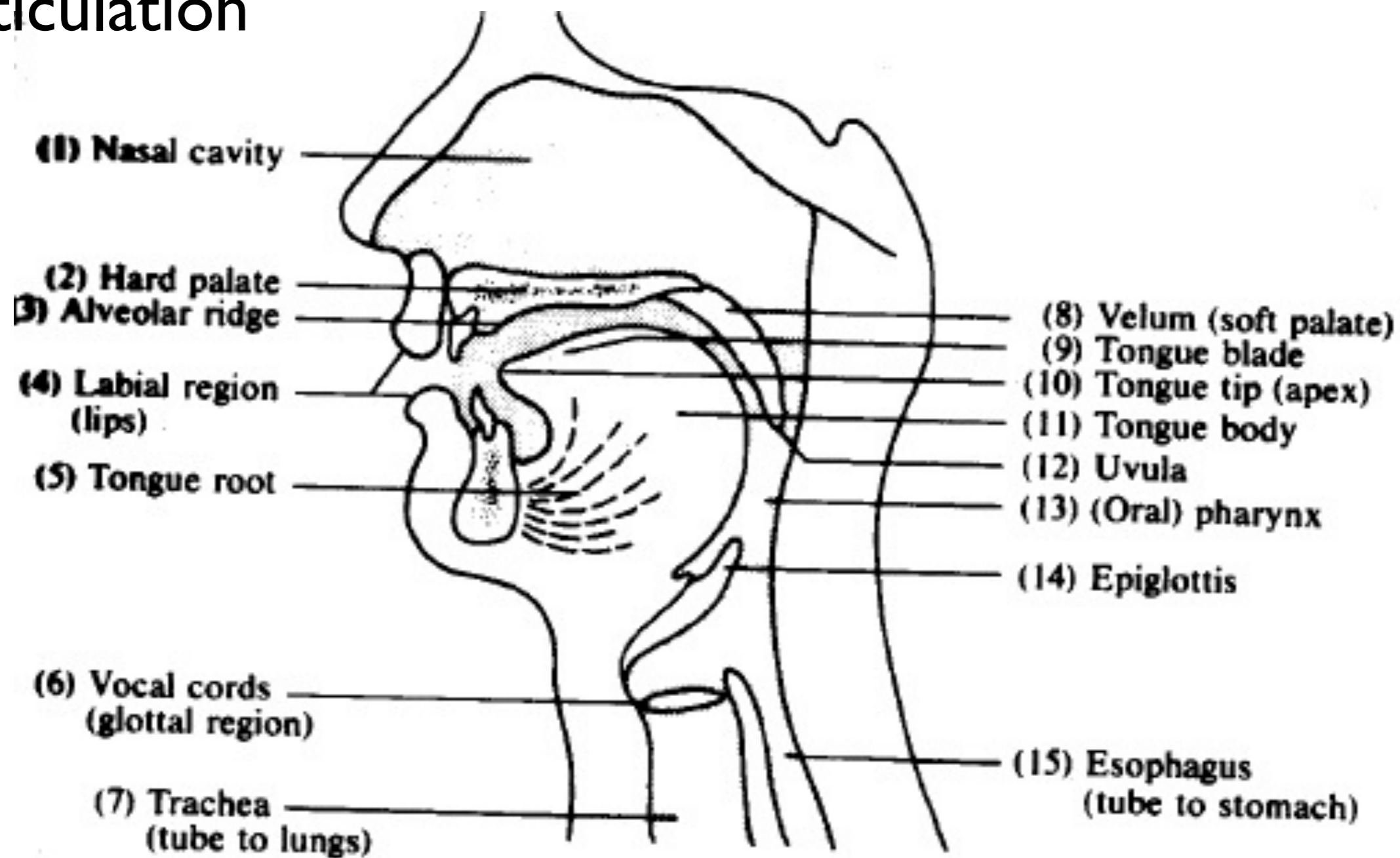
# Spelling versus Sounds

- -ough
  - cough
  - tough
  - bough
  - though

# Spelling versus sounds

- George Bernard Shaw claimed that English spelling is so chaotic that "ghoti" could be pronounced *fish*. Why? What words can you identify in which <gh> is pronounced "f"?

# Places of Articulation



# Places of Articulation

- Bilabial
  - p, b, m, w
- Labiodental
  - f, v
- Interdental
- 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

- Lateral fricatives:
- Alveopalatal: ʃ, ʒ, tʃ, dʒ
- r-sound: ɹ

# Manners of articulation

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

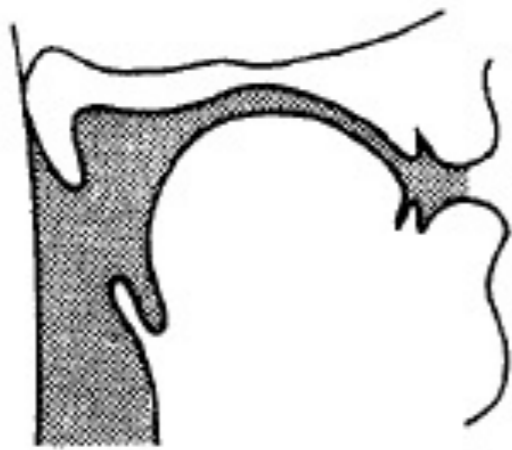
# Manners of articulation

- 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

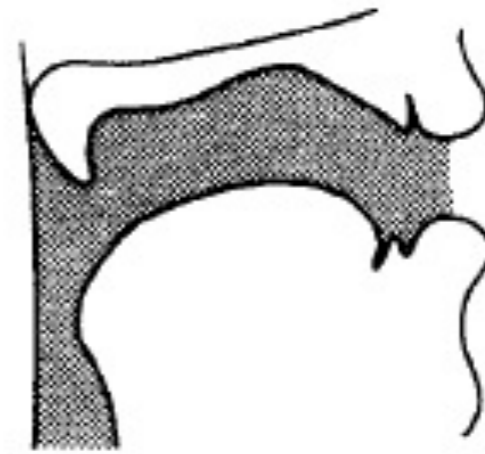
# Vowel Height



/i/  
“bit”

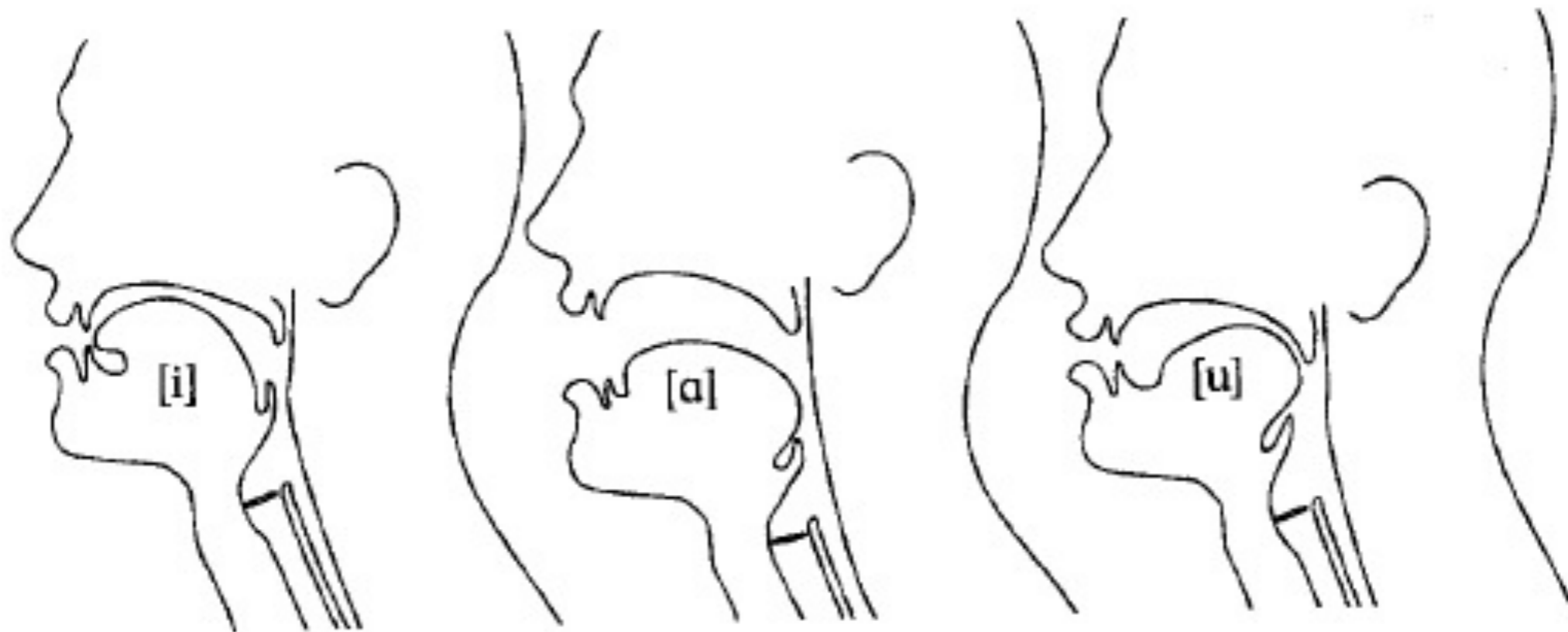


/ɛ/  
“get”



/ɑ/  
“hot”

# Vowels: Front-Back Dimension



# Vowel Symbols

- i, I, ʊ, u
- eɪ, ɛ, ə, ʌ, oʊ, ɔ, ɔj
- æ, aɪ, aʊ, ɑ



# Homework

- Homework assignment II
  - Page 61 in edition 6, i.e. the newest edition, exercise 10, and
  - pages 104-105 in edition 6 exercises 1-3
- Reading: finish chapter 3 from Akmajian et. al!