Today's topics:

- **Why phonetic terms, symbols?**
- **The vocal tract and place of articulation**

Background reading:

- *CL* Ch 2, sec 1 and sec 4

0. Getting oriented with Zoom

- Welcome to LING 101! While we're waiting for class to start, see if you can do these things on Zoom:
  - Turn the "Participants" list view on and off
  - Turn the "Chat" list view on and off
  - Mute and unmute your microphone
- During class:
  - Turning your **camera** on is **optional**
  - Please **mute** your **microphone** unless you want to **talk**
  - Use the **chat** to ask and answer **questions**

***** Always join Zoom via unc.zoom.us *****

***** If needed, log in with [...]@email.unc.edu *****

0. Course information — reminders

Welcome!

- Professor: **Jennifer Smith** [my web site]
- Course structure:

  M — Zoom lecture [LING 101 Zoom links and tips]
  - Lecture outline (slides) also available
  - Recording with captions posted within about one day

  W — Self-paced learning [info and schedule]

  F — Recitations (601–605)
  - You should all now have access to your rec's Sakai site

0. Course information — reminders

- **Textbook**: *Contemporary Linguistics*, 7th ed. (*CL*)
  - Be sure you have the 7th edition (green)
- **Course web site**: https://users.castle.unc.edu/~jlsmith/ling101.html
- Check the "**Daily syllabus**" page after every class to find out about new readings and assignments
  - Be sure to find the "Course info and policies" handout — ***download and keep in a safe place***

Remember to REFRESH your web browser
to get the latest version of a web page

0. Course information — Some tips for success

- Key goals for this course include:
  - Learning some **key concepts** about language
  - Developing **analysis** / **problem-solving** skills

- We will ask you to do both of these things:
  - **Learn** new information: terms, skills, facts
  - **Apply** new (and old) information to solve problems, ***often in new ways***

- It is crucial to go *beyond* just memorizing facts— **work to understand the new ideas** in this course

1. We need terminology for speech sounds

- Our first core topic in this course is the **sounds of language**: **phonetics** and **phonology**

- The first step is **phonetics**:
  - What **speech sounds** are used by humans?
  - How are they **produced**?

- For this, we need some **specialized terminology**:
  - How can we **describe** language sounds?
  - How can we **compare** sounds from different languages?

1. We need terminology for speech sounds

Foreign-language teaching examples…

- There is a Spanish sound sometimes described as "halfway between a *b* sound and a *v* sound"
- There is a French sound sometimes described as "halfway between *ee* and *oo*"

What do descriptions like these actually mean?

- In the next few classes, you will learn new **terminology** for describing and comparing language sounds

2. We need phonetic symbols

- We need a way to **transcribe** (write down) the individual **speech sounds** used in languages
  - Ideally: **one symbol ↔ one speech sound**
  - *Other terms for 'speech sound' are **phone** or **segment***

- **Spelling**, in general, will **not work well** for this
  - Spelling → sound relationships vary by language
  - Some writing systems 'spell' larger units than single speech sounds

2. We need phonetic symbols

- **English spelling** in particular is **not a good way** to represent speech sounds
- How many **speech sounds** (NOT letters!) are there in these English words?
    (a) *she*
    (b) *six*
    (c) *using*

2. We need phonetic symbols

- **English spelling** in particular is **not a good way** to represent speech sounds
- How many **speech sounds** (NOT letters!) are there in these English words?
  - (a) *she* 2
  - (b) *six* 4
  - (c) *using* 5…but maybe not the ones you thought?
- Don’t be fooled by **spelling**—practice saying words out loud and **listening** to yourself

2. We need phonetic symbols

- **English spelling** in particular is **not a good way** to represent speech sounds
  - Do *thigh* / *thy* start with the same sound?
  - How many ways can we spell the sound [k] as in *kite*?
  - How many pronunciations can be spelled *ough*?

2. We need phonetic symbols

- **English spelling** in particular is **not a good way** to represent speech sounds
  - Do *thigh / thy* start with the same sound? No!
  - How many ways can we spell the sound [k] as in *kite*? k, kk, ck, c, cc, ch, cque, +…
  - How many pronunciations can be spelled *ough*? *dough, bough, through, cough, enough,* +…
- Multiple letters can spell a single sound (and vice versa)
  The same letter(s) can spell different sounds
  The same sounds can be spelled by different letters

2. We need phonetic symbols

- The **International Phonetic Alphabet (IPA)** "attempts to represent each sound of human speech with a single symbol" (*CL*, p 18)
  - Note: Two sounds that are slightly different may be classified under the same symbol if they are not usually treated as distinct sounds within a single language

- Square brackets '[ ]' show that a letter or symbol is being used as a **phonetic symbol**, which in turn represents a **speech sound**
  - So **[k] is a <u>sound</u>, NOT a letter**

2. We need phonetic symbols

- Using the IPA, we can transcribe the **speech sounds** in these English words:

  (a) *she* 2 [ʃi]

  (b) *six* 4 [sɪks]

  (c) *using* 5 [juzɪŋ]

- On Wednesday and Friday, you will learn
  - the **IPA symbols** for these and other sounds of ("mainstream" American) English
  - the **phonetic properties** of these sounds
- We will start with some of this today

3. The vocal tract & place of articulation

- What is a **consonant**?

3. The vocal tract & place of articulation

- What is a **consonant**?
  - A speech sound with a significant **constriction** (obstruction) in the **vocal tract**

- Consonants can be classified according to about four properties

- The first consonant property we will examine is **place of articulation** — *where* in the vocal tract the consonant's constriction is made

3. The vocal tract & place of articulation

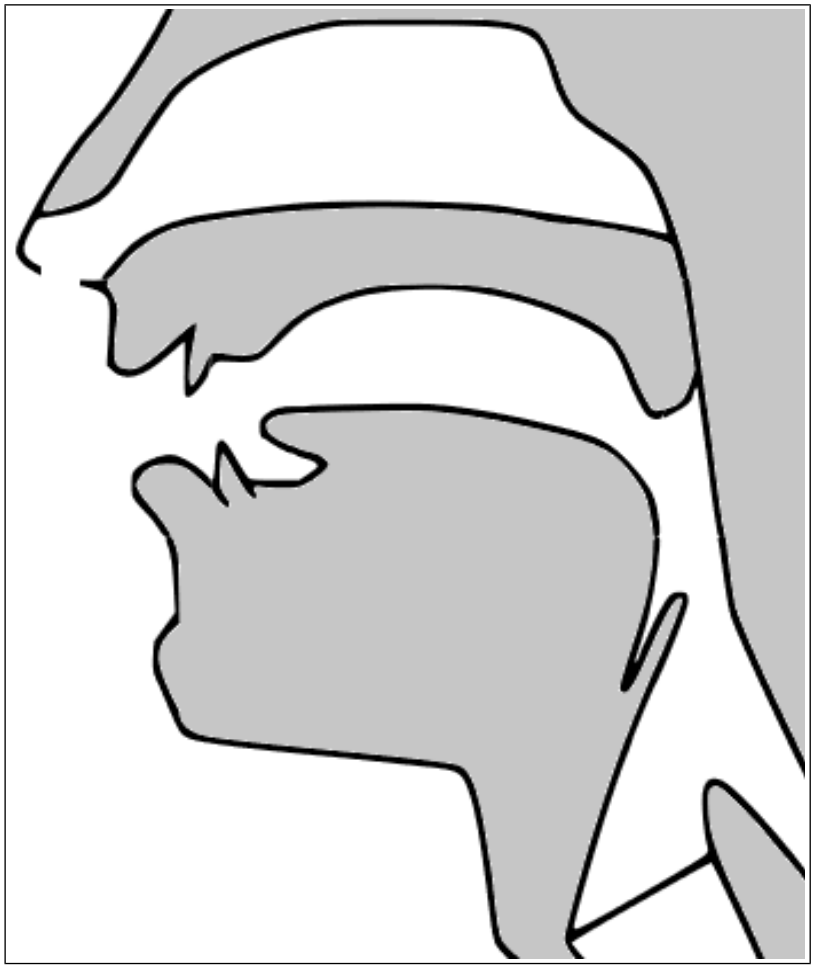
- To discuss consonant place of articulation, we need to know the **parts of the vocal tract**
  - See *CL*, Figure 2.4 (p 26)
  - More practice: http://smu-facweb.smu.ca/~s0949176/sammy/

    Daniel Currie Hall's interactive vocal-tract diagram

3. The vocal tract & place of articulation

Know these:

- lips
- teeth
- tongue tip
- tongue blade
- tongue body
- alveolar ridge
- (hard) palate
- velum (soft palate)
- glottis



Vocal tract drawing adapted from Daniel Currie Hall's interactive web site

3. The vocal tract & place of articulation

- Where in the vocal tract are these sounds made?
  - [m]
  - [f]
  - [θ] in *<u>th</u>ink*
  - [n]
  - [ʃ] in *<u>sh</u>e*
  - [j] in *<u>y</u>es*
  - [k]
  - [h]

3. The vocal tract & place of articulation

Sound	***Constriction in vocal tract***
[m]	lips
[f]	upper teeth + lower lip
[θ] in *<u>th</u>ink*	tongue tip or blade + upper teeth (or between teeth)
[n]	tongue tip + alveolar ridge
[ʃ] in *<u>sh</u>e*	tongue blade + post-alveolar region
[j] in *<u>y</u>es*	tongue body + hard palate
[k]	back of tongue body + velum
[h]	glottis (space between vocal folds)

3. The vocal tract & place of articulation

- Terms for **place of articulation**
  - [m] **bilabial**
  - [f] **labiodental**
  - [θ] in *<u>th</u>ink* **dental** (or **interdental**)
  - [n] **alveolar**
  - [ʃ] in *<u>sh</u>e* **alveopalatal**
  - [j] in *<u>y</u>es* **palatal**
  - [k] **velar**
  - [h] **glottal**

3. The vocal tract & place of articulation

- Summary: English consonant place of articulation

PoA term	***Constriction in vocal tract***	***Example***
bilabial	lips	[m]
labiodental	upper teeth + lower lip	[f]
(inter)dental	tongue tip or blade + upper teeth (or between teeth)	[θ]
alveolar	tongue tip + alveolar ridge	[n]
alveopalatal (or postalveolar)	tongue blade + post-alveolar region	[ʃ]
palatal	tongue body + hard palate	[j]
velar	back of tongue body + velum	[k]
glottal	glottis (space between vocal folds)	[h]