- **American English vowels: Symbols and properties to know**

Background reading:

- *CL* Ch 2, sec 6
- *CL* Ch 2, Table 2.17 (p 44)

0. Vowels: Overview and learning guide

- The reading you have done in *CL* Ch 2, sec 6, contains a lot of information and detail

- Here is what you **need to learn** from this reading
  → *These slides and links will help you!*

  - The vowel **symbols** in Table 2.11, p 42

  - The **phonetic properties** of these sounds that we can use to describe them

- Other details and charts in the reading are there to help you understand this central information

1. How to describe a vowel

- Goal: Know all of the symbols and descriptions for the vowels in **Figure 2.11** (*CL* p 42)

- We will **describe** vowels using the following four **phonetic properties**:
    - **height**
    - **backness**
    - **rounding**
    - **tense/lax**
    - <u>vowel</u> (corresponds to "constriction type" in consonants)

2. About vowels in varieties of English

- Vowels are where varieties (dialects) of English **differ** the most in their pronunciation

  - There are differences between the "standard" Englishes of different parts of the world

  - There are differences between "standard" and other varieties of English within each region

2. About vowels in varieties of English

- In this course, we will use online sound files representing "standard" or "mainstream" American English, and the corresponding IPA symbols, as a way to **learn about how to describe vowels**

    - The examples below come from the clickable [American English vowel chart](#) on the web site for the book *A Course in Phonetics*

    - If you are interested, there are sample British English vowels on the same web page

2. About vowels in varieties of English

- You, personally, may not have the exact same vowel quality in an individual word as demonstrated here
    - Practice **recognizing** the vowel sounds in the recordings and **matching** them to symbols
    - *For fun:* Try to analyze whether your own vowels are different from the models — and if so, how! (using phonetic properties)

- Later in the course, we will talk more about linguistic differences between some of the varieties of English

3. Height and backness

- Consider these vowels

  To hear them, click on the matching symbol in <u>this chart</u>

  Note: You do not need to let the web site access your microphone

  [ɪ] as in *bid*

  [ɛ] as in *bed*

  [æ] as in *bɑd*

3. Height and backness

- Consider these vowels

  To hear them, click on the matching symbol in <u>this chart</u>

  Note: You do not need to let the web site access your microphone

  [ɪ] as in *bid* | high

  [ɛ] as in *bed* | mid

  [æ] as in *bɑd* | low

- These vowels illustrate the three **height** categories: **high**, **mid**, **low**

  - Refers to vertical position of tongue body

3. Height and backness

- Consider these vowels

  To hear them, click on the matching symbol in [this chart](#)

  Note: You do not need to let the web site access your microphone

  [æ] as in *bad*

  [ʌ] as in *bud*

  [ɑ] as in *bod*

3. Height and backness

- Consider these vowels

  To hear them, click on the matching symbol in <u>this chart</u>

  Note: You do not need to let the web site access your microphone

  [æ] as in *bad* | front

  [ʌ] as in *bud* | central

  [ɑ] as in *bod* | back

- These vowels illustrate the three **backness** categories: **front**, **central**, **back**

  - Refers to horizontal position of tongue body

3. Height and backness

- Using height and backness, we can represent vowels in a two-dimensional diagram:

	front	*central*	*back*
high	ɪ		
mid	ɛ	ʌ	
low	æ		ɑ

- Be careful not to confuse **mid** and **central**!

4. Rounding

- Consider these vowels

  To hear them, click on the matching symbol in <u>this chart</u>

  Note: You do not need to let the web site access your microphone

  [i]   as in *bead*   (shown as [iː] on chart)

  [u]   as in *booed*   (shown as [uː] on chart)

  [ɪ]   as in *bid*

  [ʊ]   as in *hood*

- These vowels illustrate the **rounding** categories: are they **<u>round</u>** or **<u>unrounded</u>**?

4. Rounding

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  [i]   as in *bead*   (shown as [iː] on chart)

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  [ʊ]   as in *hood*

- These vowels illustrate the **rounding** categories: are they **<u>round</u>** or **<u>unrounded</u>**?

  [i] [ɪ] | unrounded   [u] [ʊ] | round

4. Rounding

- See vowel height, backness, and rounding for
  [i e a o u] on this X-ray video

  From: Peter Ladefoged's *Vowels & Consonants* textbook, via YouTube

5. The tense/lax distinction

- Consider these pairs of vowels
  To hear them, click on the matching symbol in <u>this chart</u>
  Note: You do not need to let the web site access your microphone

  [i]   as in *bead*   vs.   [ɪ]   as in *bid*
  [u] as in *booed*   vs.   [ʊ]   as in *hood*

5. The tense/lax distinction

- Consider these pairs of vowels
  To hear them, click on the matching symbol in <u>this chart</u>
  Note: You do not need to let the web site access your microphone

  [i]   as in *bead*   vs.   [ɪ]   as in *bid*
  [u] as in *booed*   vs.   [ʊ]   as in *hood*

- These comparisons illustrate **tense** and **lax** vowels

  - Tense vowels tend to be longer and have a more extreme (less central) tongue position than their nearest lax counterparts

  - The web site we are using for audio examples actually transcribes the tense vowels [i] [u] as *long* with the [ː] symbol

5. The tense/lax distinction

- A **diagnostic** for tense/lax in English:

    - In English, only **tense** vowels can come at the <u>end of a one-syllable word</u>

    - With one exception: [ɔ] (if you have it!—see below) is **lax** but can appear in this position (for historical reasons)

5. The tense/lax distinction

- Many languages have small vowel inventories, so *only* **height**, **backness**, and **rounding** are needed to distinguish all vowel categories

- But other languages — such as English — need to make this further distinction between tense and lax vowels

6. Mid vowels in American English

- The **mid tense vowels** are seen in these words:

  bayed   (mid front tense vowel)

  bode   (mid back tense vowel)

- Do you notice anything special about these vowel sounds? (Hint: Try saying them slowly.)

6. Mid vowels in American English

- These vowels are **diphthongs** — complex vowel categories that start with one vowel quality and end with another

- We reflect this in a two-part phonetic transcription:

  [ej]   as in *bayed*   [ow]   as in *bode*

  To hear them, click on the matching symbol in this chart; note that diphthongs are **arrows** (not circles) on the chart
  Note: You do not need to let the web site access your microphone

- An alternative transcription convention uses lax vowels instead of glides in diphthongs: [eɪ] [oʊ]—as seen on the clickable chart we're using for audio

6. Mid vowels in American English

- Most languages have mid (tense) vowels that are *not* diphthongs

  - For such languages, we would simply transcribe the vowels [e], [o] (no glides)

- Using a diphthong pronunciation for mid vowels is one common characteristic of an American **accent** in foreign-language learning!

6. Mid vowels in American English

- Here is a vowel category that some American varieties have, and some do not: [ɔ]

- If you have a **different** vowel in *thought* and *lot*, then you probably have *thought* [ɔ] and *lot* [ɑ]
  - If you have the **same** vowel in *lot* and *thought*, then the vowel you have is probably [ɑ]

- Another test: [ɔ] is **round**, [ɑ] is **unrounded**

- Hear the contrast: [ɔ] *bawd* vs. [ɑ] *bod*
  Click on the matching symbol in <u>this chart</u>
  Note: You do not need to let the web site access your microphone

7. Remembering vowel symbols

- Easy to learn: **Tense vowel** symbols

  - These match the expected pronunciation of the corresponding alphabet letter *in many non-English languages* (example: Spanish)

	front	*back*
	front	*back*
high	[i]	[u]
mid	[e] (*Eng.* [ej])	[o] (*Eng.* [ow])
low		[ɑ]

7. Remembering vowel symbols

- Think of these **lax vowels** as similar to the tense vowels with **related** symbols

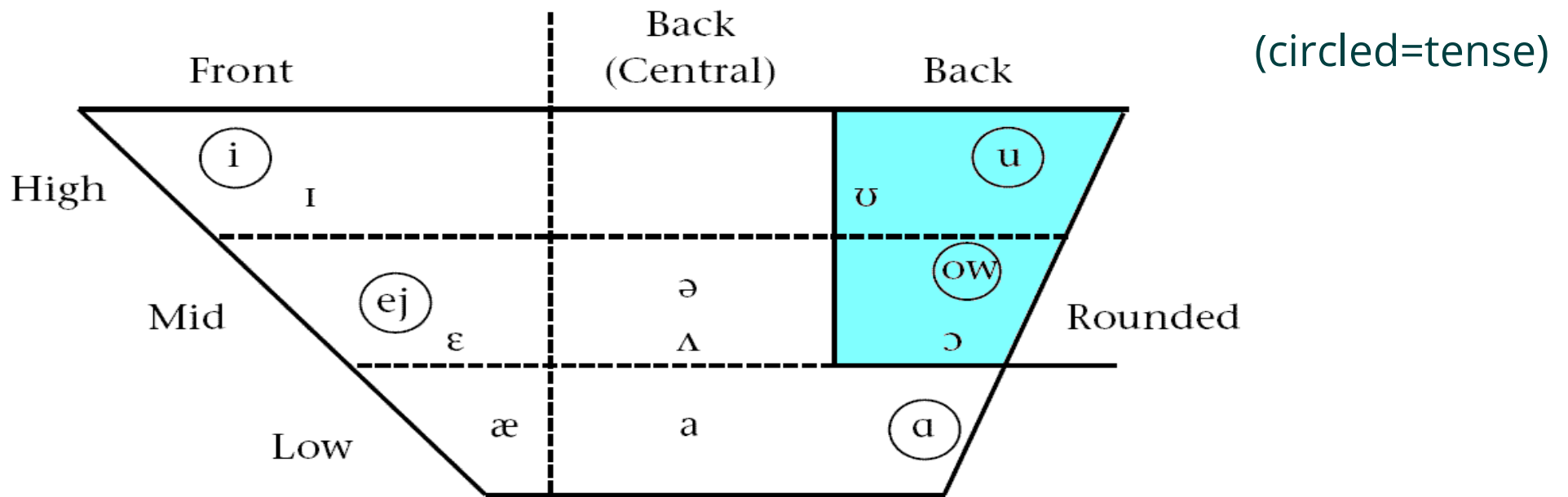|	*front*	*back*
high	[ɪ]	[ʊ]
mid	[ɛ]	[ɔ]
low	[æ]	

7. Remembering vowel symbols

- Two mid central lax unrounded vowels:
  [ə] "schwa" vs. [ʌ] "wedge"
    - [ʌ] is used for a <u>stressed</u> sound: *c**u**p*
    - [ə] is used for an <u>unstressed</u> sound: *sof**a***

- In this course, you won't be asked to distinguish these two symbols by <u>sound</u> or by <u>properties</u> (we will treat them as interchangeable)

- Hear [ʌ] *bud*
  Click on the matching symbol in <u>this chart</u>
  Note: You do not need to let the web site access your microphone

7. Remembering vowel symbols

- Two similar low vowels: [a] vs. [ɑ]

  - [a] is <u>central</u>; [ɑ] is <u>back</u>

  - In "standard" American English, [a] is used **only** as part of the diphthongs [aj] *bite*, [aw] *loud*

  - Some other varieties of American English do use [a] in additional contexts

    . Boston: *p*[a]*k your c*[a] *in H*[a]*vard Y*[a]*d*

    . Some SE US varieties: *time, tide* have [a]

  - You won't be asked to distinguish these two vowels by <u>sound</u> (but do know their <u>properties</u>!)

8. Summary so far

(circled=tense)

9. More diphthongs

- We've seen these diphthongs: [ej], [ow]
    - We simply classify them as <u>mid front unrounded tense vowel</u> and <u>mid back round tense vowel</u> — just like simple vowels — because their transitions are minor

9. More diphthongs

- In "standard" American English, these words have more extreme (major) **diphthongs**:
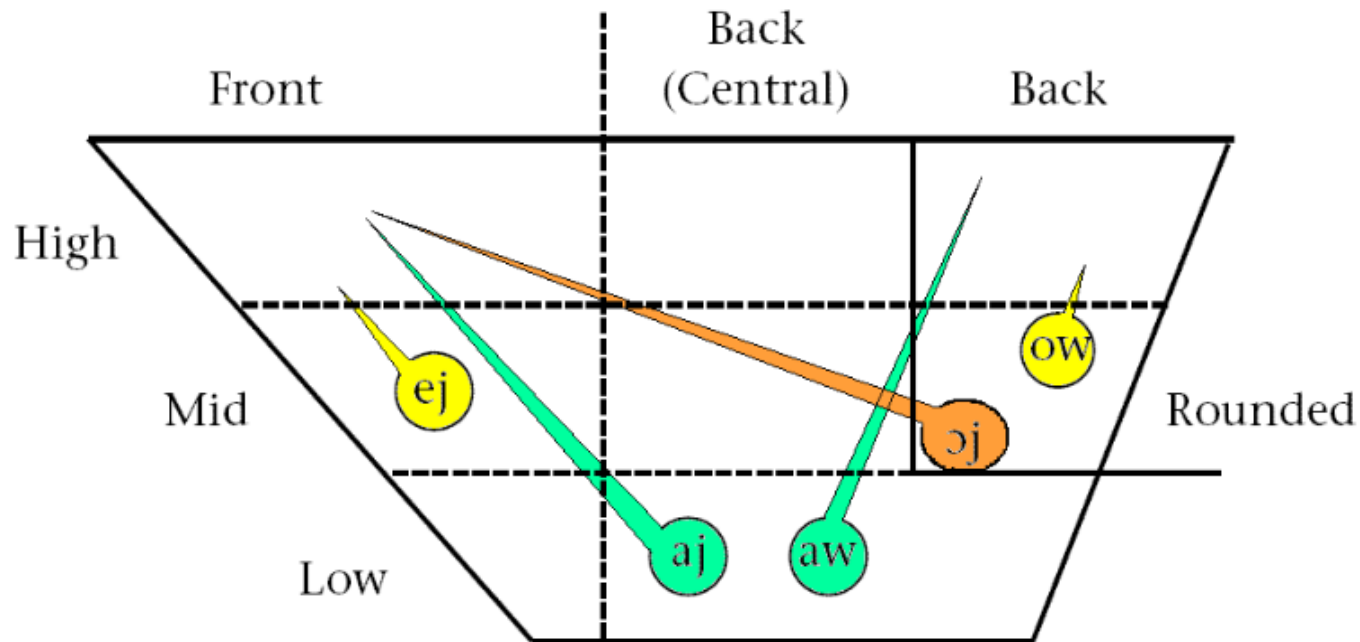
  [aj]   as in *bite*   →   Do <u>you</u> have [aj] in *bide*?

  [aw]   as in *loud*

  [ɔj]   as in *boy*

9. More diphthongs

- For the three major diphthongs, we can just describe their starting and ending points

Diphthongs as transitions between vowel qualities

- All five diphthongs in "standard" American English are **tense** (yes, even [ɔj]!)