

LNGT0101

Introduction to Linguistics



Lecture #13
Oct 22nd, 2014

Announcements

- Average score on HW 2 is 45. Median is 46. Question on function vs. content words.
- Screening of *The Writing Code*: Which evenings in the week are best?

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Follow-up on questions from last class

- Parrots: Syrinx.
- You were at a party. You saw Mary talking to Tom Cruise. She did that before meeting another famous actor. You just don't remember which famous actor that was. You want to ask Julia, who was there with Mary, about the name of that actor. How do you do it?
- Here's how you CANNOT do it:
*Which actor did Mary talk to Tom Cruise before meeting t ? Horrendous!!!!

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Agenda

- Presentation and discussion about English spelling.
- Finish our discussion of consonants.
- Articulation of vowels.

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English spelling is kattastroffic



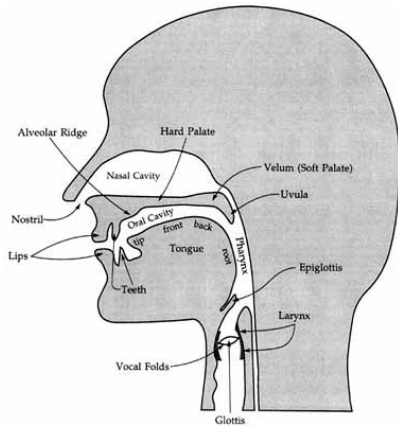
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Consonants vs. Vowels

- There are two major types of sounds in human language: **consonants** and **vowels**. How do they differ?
- In terms of articulation, consonants are produced when the airflow is obstructed in the vocal tract, while vowels are produced with relative free flow of the airstream in the vocal tract.
- Both consonants and vowels can be described in terms of a number of individual articulatory features.
- We start with consonants. But let's look at the human vocal tract first.

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The vocal tract



Articulation of consonants

- Consonant sounds can be characterized according to three main phonetic properties:
 - a) **place of articulation**,
 - b) **manner of articulation**, and
 - c) **voicing**.

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Places of articulation

- **Labial**, e.g., *bilabial* [p] and *labiodental* [f].
- **Dental**, e.g., French [d] in *dire*. English has *interdental* [θ] as in *thorn* and [ð] as in *there*.
- **Alveolar**, e.g., [t], [s], [n], and [l].
- **Alveopalatal**, e.g., [ʃ] as in *shoe*, [ʒ] as in *vision*, [tʃ] as in *choose*, and [dʒ] as in *jam*.
- **Palatal**, e.g., [j] in *yes*.

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Places of articulation

- **Velar**, e.g., [k], [g], and [ŋ], the last one is the final sound in *king*.
- **Uvular** consonants: These are produced by raising the back of the tongue to the uvula, e.g., French [ʀ] and Arabic [q].
- **Pharyngeal** consonants: These are produced at the pharynx, e.g., Arabic [ħ] and [ʕ].
- **Glottal** consonants: These are produced at the glottis, e.g., [h] in *hill* and [ʔ] in *uh-oh*.

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Manner of articulation

- Speech sounds are also differentiated by the way the airflow is affected as it travels from the lungs up and out of the mouth and nose. This is referred to as the manner of articulation for the sound.

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Stops, Fricatives, and affricates

- **Stops**, e.g., [b], [p], [t], [d], [k], [g], and [ʔ].
- When the air escapes through the nasal, rather than the oral, cavity, *nasal stops* are produced, e.g., [m], [n], and [ŋ].
- **Fricatives**, e.g. [f], [v], [s], [z], [θ], [ð], [ʃ], [ʒ], and [h].
- **Affricates**, e.g. [tʃ] as in *church*, and [dʒ] as in *jump*.

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Fricatives and affricates

- Acoustically, fricatives and affricates can be divided into two types based on their relative loudness. The noisier ones are called **stridents** (aka as **sibilants**): [s], [z], [ʃ], [ʒ], [tʃ], and [dʒ]), whereas the quieter ones are called ([θ] and [ð]) are **nonstridents**.

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Liquids (aka Approximants)

- **Liquids**: In the production of these sounds, there is some obstruction of the airflow in the mouth, but not enough to cause any real constriction or friction, e.g., [l] and [r].
- [l] is called a **lateral** sound, because the air escapes through the sides of the tongue.

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Liquids (aka Approximants)

- There are several varieties of “r” in the world’s languages. The “r” could be a **trill**, as in Spanish *perro* (=‘dog’), in which case it is transcribed as [r].
- The “r” could also be a **retroflex**, as the case is in American and Canadian English, and is transcribed as [ɻ] in the IPA.
- Another sound commonly identified with “r” is the **flap**, which occurs in North American English in words like *writer* and *rider*. This sound is transcribed as [ɾ].

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Glides (aka Semi-vowels)

- **Glides**, e.g., [j] as in *yes* and [w] as in *wood*.
- Some English speakers produce a voiceless glide at the beginning of words like *when*, *which*, and *where*. It is transcribed as [ɰ].

[Wheat thins](#)

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Voicing

- Consonant sounds are also divided into two types, **voiced** and **voiceless**, based on whether they are produced with or without vibration of vocal cords.
 - [b], [d], and [z] are voiced.
 - [p], [t], and [s] are voiceless.

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Describing consonants

- A consonant can thus be described in terms of these three parameters: place of articulation, manner of articulation, and voicing.
- For example, [p] is a bilabial, voiceless stop, whereas [z] is an alveolar, voiced fricative.
- Now, describe [f], [m], and [w].

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<http://www.uiowa.edu/~acadtech/phonetics/#>

- Visit this link for the articulation of the consonants of American English (German and Spanish are also available, so have a look at these as well).
- Notice that there are some differences between this link and your textbook concerning phonetic terms and symbols, but it is a very useful link, particularly the animated diagrams.

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Aspiration of voiceless stops in English

- In English, the voiceless stops are produced with an extra puff of air when occurring initially. Compare your pronunciation of the [p], [t], and [k] sounds in both words in each of the following pair:

pan vs. *span*

tar vs. *star*

cool vs. *school*

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Aspiration of voiceless stops in English

- The voiceless stops in the first words are characterized as “**aspirated**” sounds, which distinguish them from the **unaspirated** voiceless stops that do not occur initially.
- In phonetic transcription, we indicate this difference in aspiration by superscripting the aspirated sound with [h], e.g., *pit* [p^hɪt]; *spit* [spɪt].

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Vowels

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Vowels

- Vowels are distinguished from consonants in that the passage through which the air travels is never so narrow as to obstruct the free flow of the airstream.
- It’s hard, however, to characterize vowels according to the same features that we have used in characterizing consonants. Why?

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Parameters for vowel articulation

- Therefore, to distinguish between different vowels, we rely on four other features:
 - (a) **Tongue height: High, Mid, and Low**
 - (b) **Which part of the tongue is involved: Front, Central, and Back**
 - (c) **Lip rounding: Rounded and Unrounded**
 - (d) **Tenseness or laxness of the vocal tract: Tense and Lax**

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American English Vowel Chart

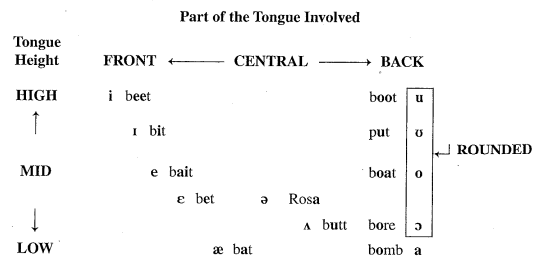


FIGURE 6.5 | Classification of American English vowels.

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A note on symbol discrepancy

- Take notice: The [a] in your textbook is the [ɑ] on the IPA chart. So, don't get confused.

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Diphthongs

- Two vowels may combine together to form a **diphthong**. Examples of diphthongs in American English are given below:
[aɪ] as in *die* [aʊ] as in *now*
[ɔɪ] as in *toy*
- Note that the vowels in *bait* and *boat* are also typically pronounced as diphthongs, and are therefore frequently transcribed as [eɪ] and [oʊ], respectively.
- In many books, the second vowel of an English diphthong is frequently represented as a glide: [ej] or [ow].

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Nasalization of vowels

- Vowels can be either **oral** or **nasal**.
- In English, nasal vowels typically occur before nasal consonants. Compare, for example, the vowel in *bat* and *ban*. In transcription, the diacritic [̃] is placed over the vowel to indicate that it is a nasalized vowel, as in *ban* [bæ̃n] and *boom* [bū̃m].

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Next class agenda

- Transcription: Play around on this website:
- [Link to an interactive chart to insert IPA symbols.](#)
- Syllable structure. Read the section on prosodic features in Chapter 6, pp. 252-255.
- Phonology. Read Chapter 6, pp. 224-235

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