Tutorial 2
Consonants

September 19, 2024

Learning Outcomes
By the end of this tutorial, you should be able to:

- Describe and identify consonants in terms of phonation, place of articulation, and manner of articulation
- Identify shared and contrasting properties of consonants
- Determine the broad IPA transcription of consonants (in various positions in a word)
- Identify a consonant sound based on midsagittal diagrams and explain how you know using appropriate and relevant terminology

We recommend having the IPA chart with you (see Lecture 3) as you work through the activities.

Consonants and their parameters

Recall that consonant phones can be described using three parameters: phonation type, place of articulation, and manner of articulation. Apply your knowledge of these three parameters in the questions 1–5.

1. Determine the articulatory description of [ɲ]: _____
2. Determine the articulatory description of [ɻ]: _____
3. Determine the articulatory description of [χ]: _____
4. Circle the words containing a voiceless labiodental fricative:

   afford trunk laughter jumpy florist physics active thought

5. Circle the words containing an affricate:

   judge large push charcoal patchy chemical gelatin baggage

Compare and contrast articulatory properties

Consonant pairs may share the same properties (along one or more parameters). As we saw in class, we sometimes use these shared properties to group phones into larger categories. In 6–10, identify how the following pairs of consonants sounds are the same or different. Two examples are provided below.

Example: [q] and [χ] have the same phonation; they are both voiceless.

Example: [m] and [n] have different places of articulation; [m] is bilabial while [n] is alveolar.

6. [t] and [n] have the same _____; they are both _____.

7. [k] and [d] have the same _____; they are both _____.
8. [b] and [m] have different _____; [p] is _____while [m] is _____.
9. [c] and [ʔ] have different _____; [c] is _____ while [ʔ] is _____.
10. [r] and [ɾ] have different _____; [r] is _____ while [ɾ] is _____.

Transcribing consonants

Recall that transcription allows linguists to represent the form of words (or individual phones) in a way that is consistent across languages. This system is the IPA, where each phone gets their own special symbol. Use your knowledge of the IPA to answer questions 11–13. The first one is already given, as an example.

11. Determine the IPA symbol that represents the consonant sound in the **beginning** of the words…

think	*psychology*	*knight*	*wrist*
[θ]			

12. Determine the IPA symbol that represents the consonant sound in the **middle** of the words…

badger	*butter*	*nation*	*father*

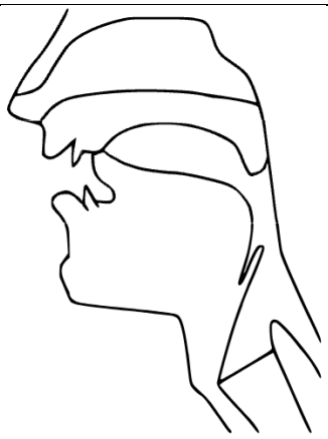
13. Determine the IPA symbol that represents the consonant sound in the **end** of the words…

tough	*baggage*	*pluck*	*rave*

Midsagittal diagrams for consonants

Midsagittal diagrams are often helpful in visualizing (on a two-dimensional plane) and identifying certain consonants based on the configuration of the speech articulators. Use your knowledge of speech articulators, parameters for consonants, and the IPA to answer 14–15.

14. Analyze the midsagittal diagrams below. First, identify the consonant (in IPA) being represented. Second, provide the articulatory description. Lastly, describe how you know this in relation to the diagram using the relevant and appropriate terminology.

Midsagittal diagram			
IPA			
Articulatory description			
How you know			

15. **Challenge question**: Not all consonants can be represented accurately by such diagrams. Identify an English consonant that is difficult to identify based solely on a midsagittal diagram and explain why that is.

Tips for interpreting midsagittal diagrams

- Use the three parameters as a guide!
- For phonation: look at the line representing the vocal folds. A straight line indicates a voiceless phonation while a squiggly line indicates a voiced phonation.
- For place: identify which (passive or active) articulators are involved (or interacting).
- For manner: determine the type of constriction (i.e., how the airflow is being modified through configuration of the articulators) For example, a stop sound involves full closure somewhere in the vocal tract.
- A note on oral vs. nasal phones: nasal phones involve lowering the velum so that air can pass through the nasal cavity—always check the placement of the velum (raised or lowered) to determine whether you are dealing with an oral vs. nasal phone.