

# LIGN 110 Section 25202 Week 3

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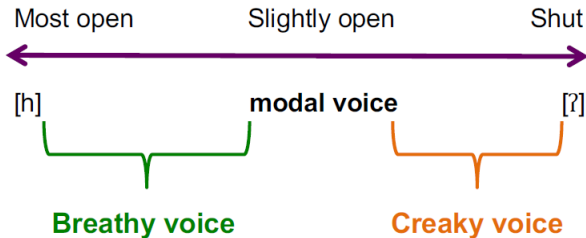
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10/19/2020

- Questions on lecture materials, quizzes, homework, final project?
- Reminder: Quiz Week 3 & Homework 1 due on Oct. 22; Preliminary report due on Oct. 23.
- Sound files can be found under <https://yuanucsd.github.io/website/lign110fall2020.html>

# Review of phonation types: breathy, modal, creaky, voiced, voiceless

## Phonation types



# Review of phonation types: breathy, modal, creaky, voiced, voiceless

## Phonation types practices

- breathy consonant:

- 1.[b̤]

- 2.[d̤]

- 3.[g̤]

- 4.[ŋ̤]

- breathy vowel:

- 1.[a̤]

- 2.[i̤]

- 3.[ṳ]

- 4.[o̤]

- combine them together

- 1.[be̤]

- 2.[b̤e]

- 3.[b̤̰e]

# Review of airstream mechanism

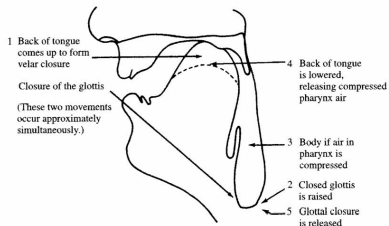
## Overview

	Source	Pulmonic	Glottalic	Velaric
Direction				
Egressive		p t k	Ejective p' t' k'	Impossible
Ingressive		Non-contrast	Implosive ɓ ɗ ɠ	Click ǀ ǁ ǂ ǃ

# Review of airstream mechanism

## Ejectives

**FIGURE 6.1** The sequence of events that occurs in a glottalic egressive velar stop [kʼ].



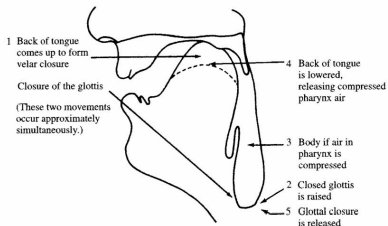
## How to produce ejectives (e.g. kʼ)

1. Back of the tongue comes up to form velar closure and form closure of the glottis
2. Closed glottis is raised
3. Body of air in pharynx is compressive
4. Back of tongue is lowered, released compressed pharynx air
5. Glottal closure is released

# Review of airstream mechanism

## Ejectives

**FIGURE 6.1** The sequence of events that occurs in a glottalic egressive velar stop [kʰ].



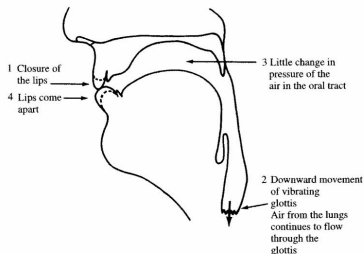
## Practice producing ejectives

1. [ka] vs. [kʰa]
2. [utu] vs. [utʰu]
3. [ojp] vs. [ojpʰ]

# Review of airstream mechanism

## Implosive

FIGURE 6.2 Estimated sequence of events in a Sindhi bilabial implosive [ ʙ ].



## How to produce Implosive (e.g. ʙ)

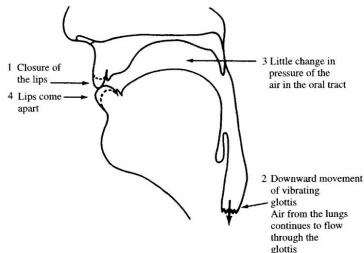
1. Closure of the lips
2. Downward movement of vibrating glottis; air from the lungs continues to flow through the glottis
3. Little change in pressure of the air in the oral tract
4. Lips come apart



# Review of airstream mechanism

## Implosives

FIGURE 6.2 Estimated sequence of events in a Sindhi bilabial implosive [ɓ].



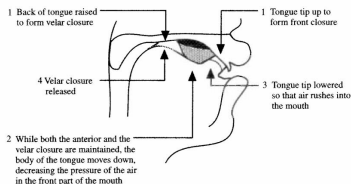
## Practice producing ejectives

1. [g a] vs. [gʼa]
2. [udu] vs. [udʼu]
3. [ojb] vs. [ojbʼ]

# Review of airstream mechanism

## Click

**FIGURE 6.3** The sequence of events in a dental click. Initially, both the tip and the back of the tongue are raised, enclosing the small pocket of air indicated by the dark shading. When the center of the tongue moves down, the larger, lightly shaded cavity is formed. Then the tip moves down to the position shown by the dashed line, and, a little later, the back of the tongue comes down to the position shown by the dashed line.



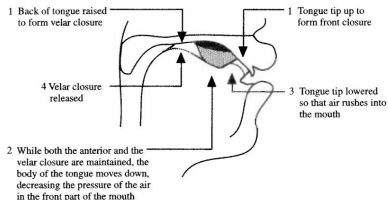
## How to produce click (e.g. dental click )

1. Tongue tip up to form front closure; Back of tongue raised to form velar closure
2. While both the anterior and the velar closure are maintained, the body of the tongue moves down, decreasing the pressure of the air in the front part of the mouth
3. Tongue tip lowered so that air rushes into the mouth
4. Velar closure released.

# Review of airstream mechanism

## Clicks

**FIGURE 6.3** The sequence of events in a dental click. Initially, both the tip and the back of the tongue are raised, enclosing the small pocket of air indicated by the dark shading. When the center of the tongue moves down, the larger, lightly shaded cavity is formed. Then the tip moves down to the position shown by the dashed line, and, a little later, the back of the tongue comes down to the position shown by the dashed line.



## Practice producing ejectives

1. [ka] vs. [k̠a]  
(Palatoalveolar)
2. [di] vs. [g̠i] (Dental)
3. [eme] vs. [eŋ̠e]  
(Bilabial)
4. [k̠a] vs. [k̠ʰa] vs. [k̠a] vs. [g̠a] (Alveolar lateral)

# Review of airstream mechanism

## Summary

- It is impossible to have a voiced ejective sound because ejective requires vocal folds to be closed.
- It is possible to have voiceless implosives, e.g. [ɓ]
- Breathy and creaky means there is voicing. It is impossible to have voiceless breathy/creaky sound. It is also impossible to have a sound that is creaky and breathy at the same time.
- Click symbols themselves do not specify the voicing.

Velar stops are needed to specify the voicing because there is always a constriction at velum for clicks.

[k̠]: Voiceless dental click;

[g̠]: Voiced dental click;

[k̠̥]: Voiceless dental click;

[ŋ̠]: (Voiced) nasal dental click;

[ŋ̠̥]: Voiceless nasal dental click

# Exercises

## Transcription exercise

1.Sound 1

2.Sound 2

3.Sound 3

4.Sound 4

5.Sound 5

6.Sound 6

7.Sound 7

8.Sound 8

9.Sound 9

# Exercises

## Production exercise (textbook p. 248 Question 7)

Gujarati distinguishes breathy voiced stops and vowels:

1. /bar/ "twelve"
2. /b̤ar/ "outside"
3. /b̥ar/ "burden"
4. /a̤r/ "obstruction"
5. /p̤ɔr/ "last year"
6. /p̥ɔr/ "early morning"
7. /p<sup>h</sup>ɔdz/ "army"
8. /aɭ/ "bones"

# Exercises

Production exercise (textbook p. 261 Question 3d)

Ejective practice

1. [ap'ɛ]
2. [ot'u]
3. [ik'a]
4. [nut'a]
5. [k'ele]
6. [p'ɔk'i tok']
7. [p'oc'u]

# Exercises

Production exercise (textbook p. 262 Question 5d)

Implosive practice

1. [baɓɛ]

2. [baɓɛ]

3. [ɓabɛ]

4. [dudɑ]

5. [ɗudɑ]

6. [gla]

7. [ɗɪɪb]

8. [aɓnu]

9. [aɓɗu]



# Exercises

## Production exercise

Click practice

1. [ŋ̂|eta]

2. [k̂|ka]

3. [ĝ|ŋi]

4. [oĝ|bu]

5. [ik̂|]

6. [uŋ̂|e]

# Exercises

## More Zyof

In the game known as Zyof, egressive → ingressive counterparts, and all ingressive → egressive counterparts. However, the airstream initiator remains the same; for example, all glottalic sounds remain glottalic.

In addition, voiceless → voiced counterparts, and voiced → voiceless counterparts.

Which of the following IPA symbols represents a correct replacement in the game of Zyof for the consonant provided?

- A. [htʰ] vs. [ɦd]
- B. [k̠] vs. [g̠]
- C. [pʰ] vs. [g]
- D. [qʰ] vs. [ɟ]

## Exercises

Which of the following sounds is possible?

- A. Voiced velar implosive ejective [g̃ʼ]
- B. Voiceless creaky high front unrounded vowel [ḭ]
- C. Devoiced voiced alveolar click [g̥!]
- D. Voiceless breathy low back unrounded vowel [ɑ̤]