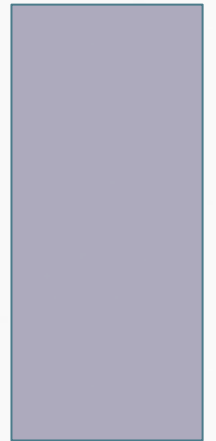
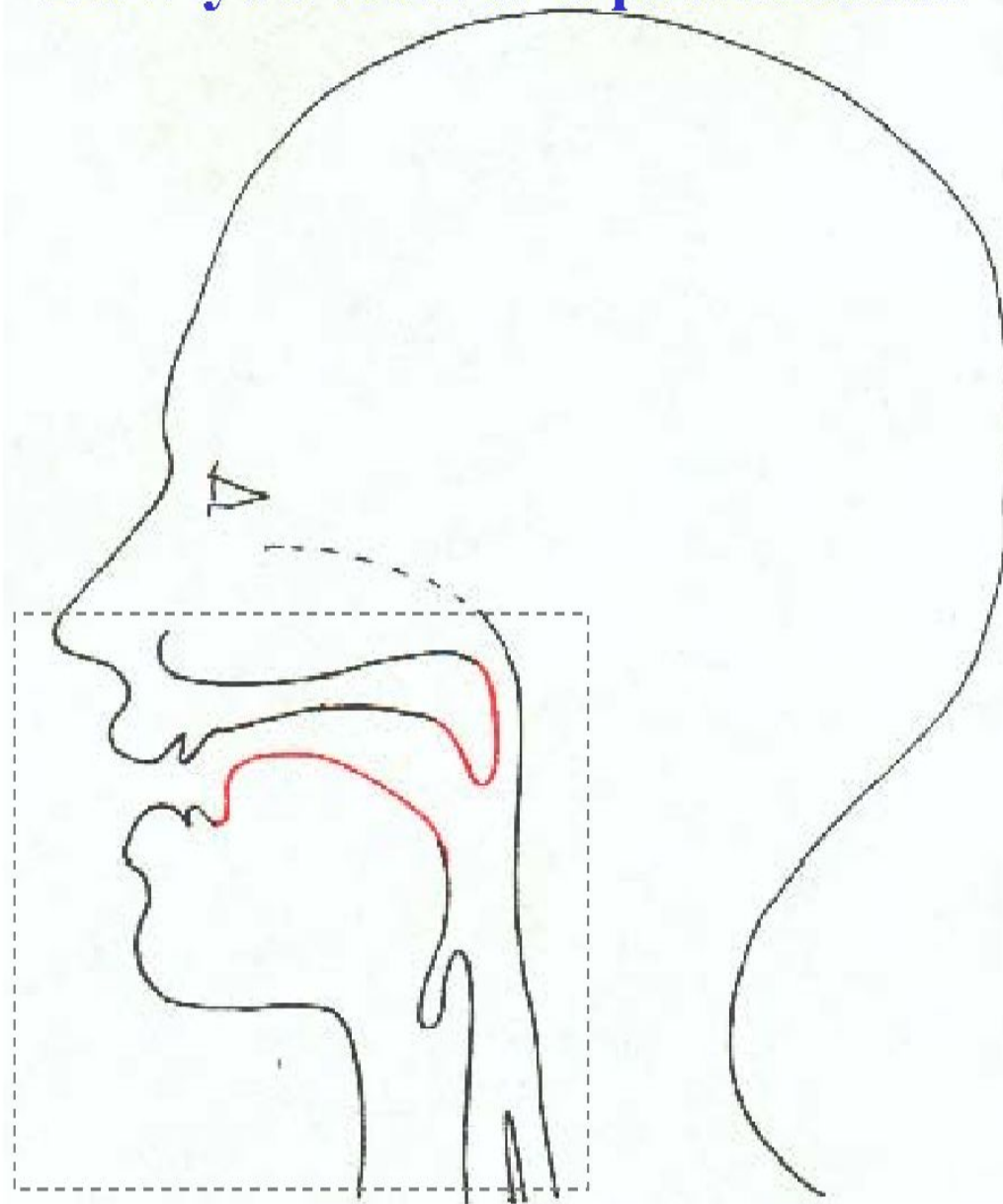


# **THE SYSTEM OF ENGLISH VOWEL PHONEMES**

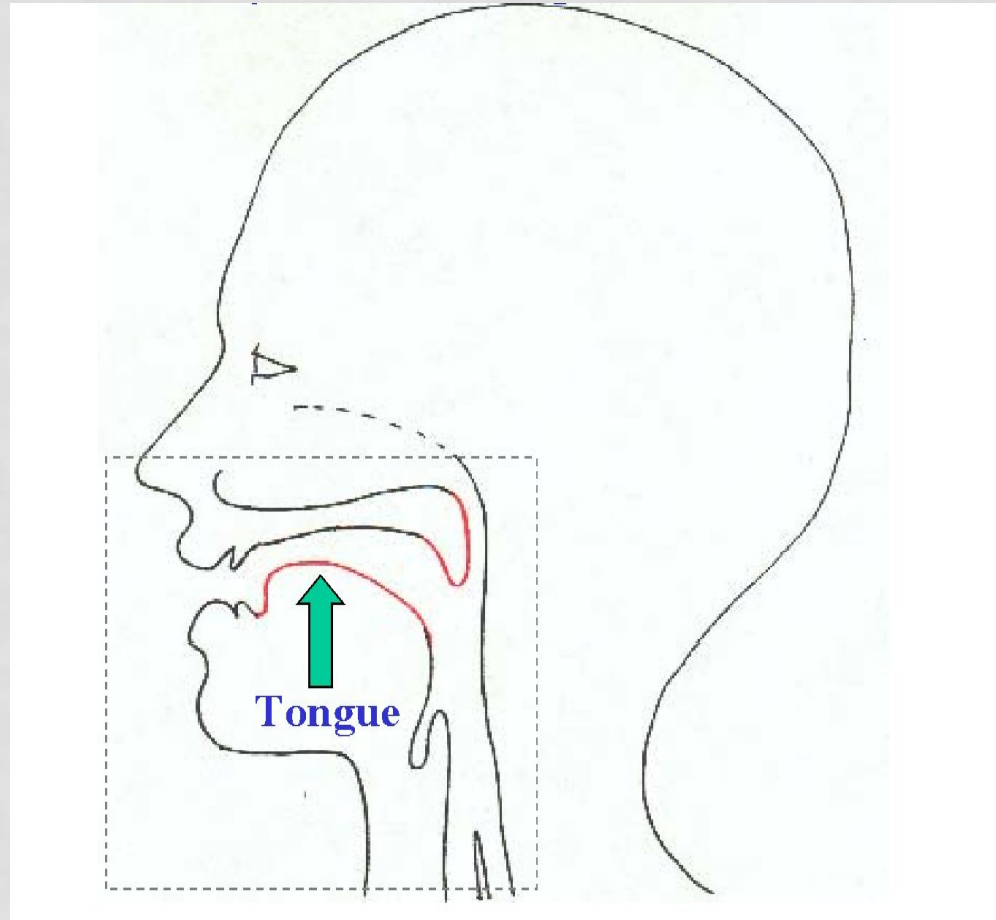
BY FILIMONOVA A. ELENA



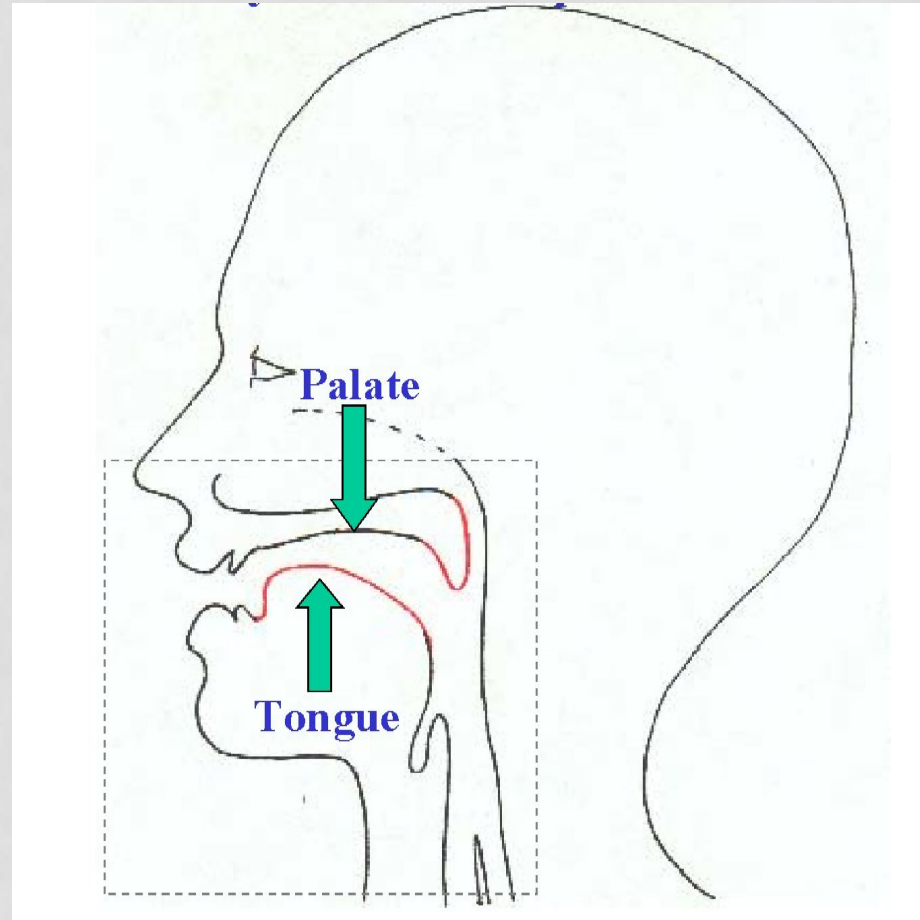
## How you look to a phonetician



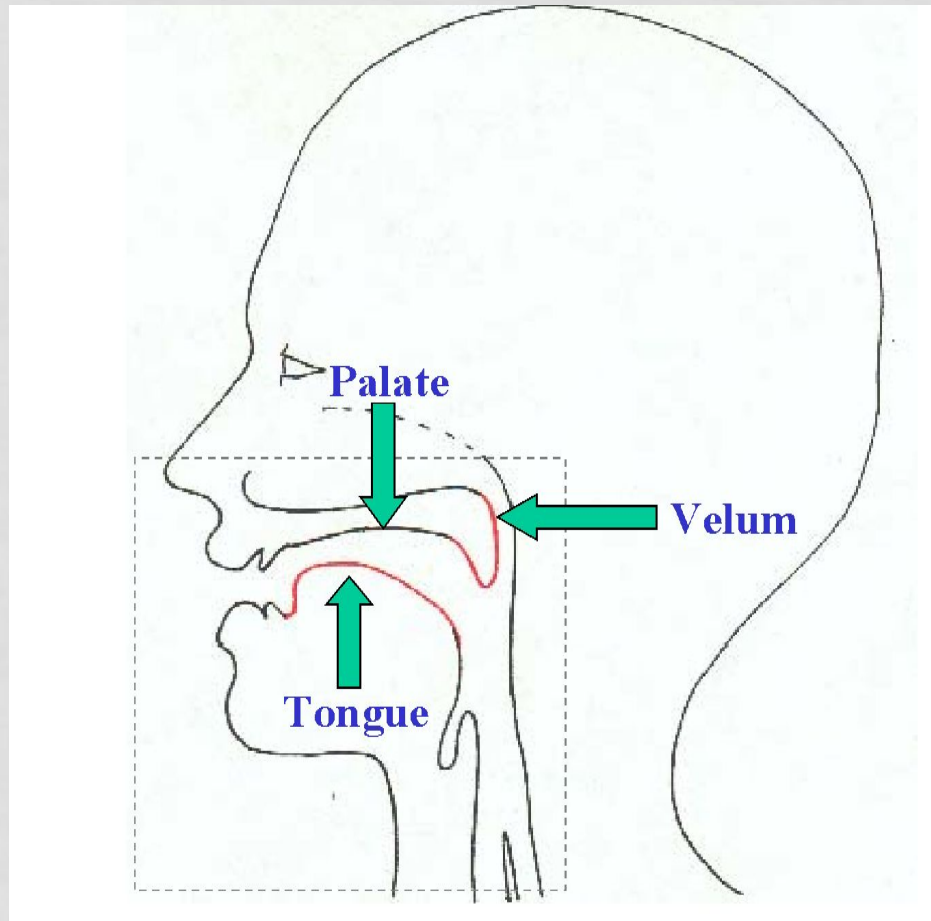
# HOW DO YOU LOOK TO A PHONETICIAN



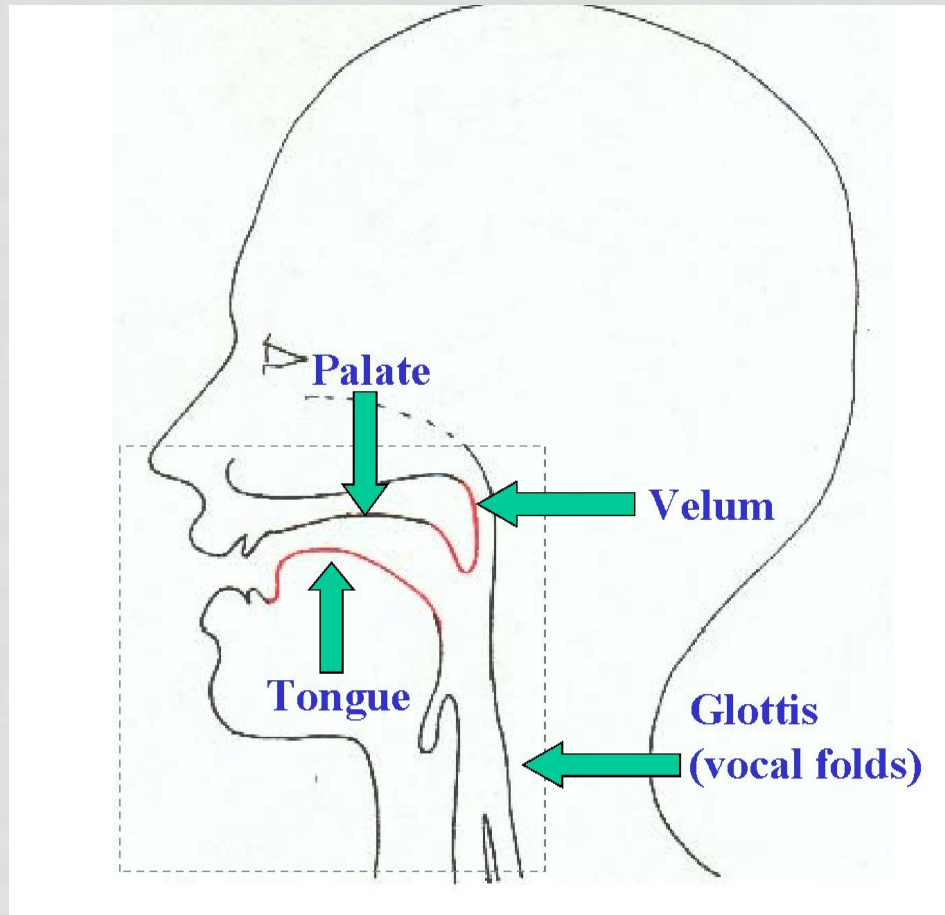
# HOW DO YOU LOOK TO A PHONETICIAN

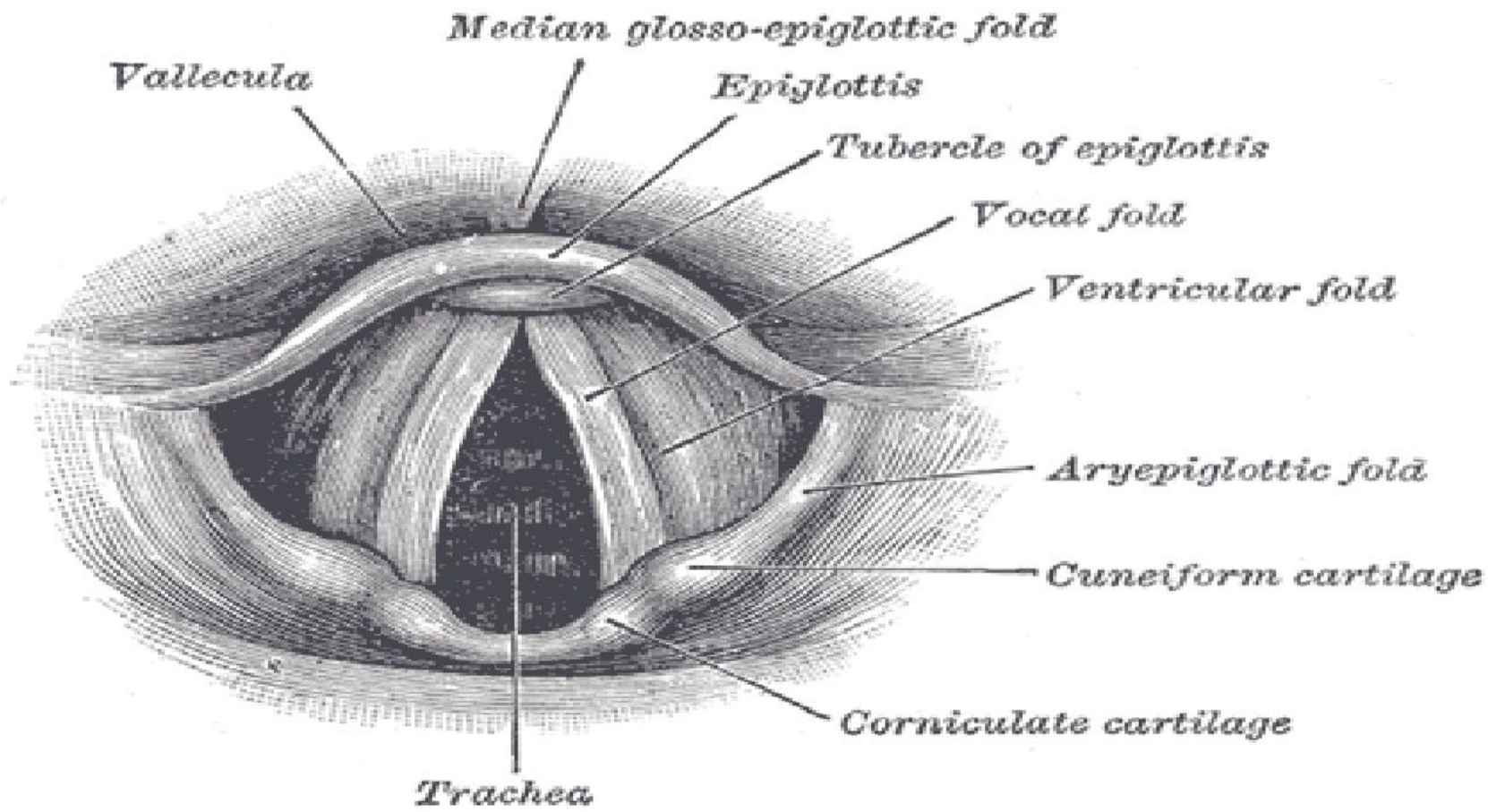


# HOW DO YOU LOOK TO A PHONETICIAN

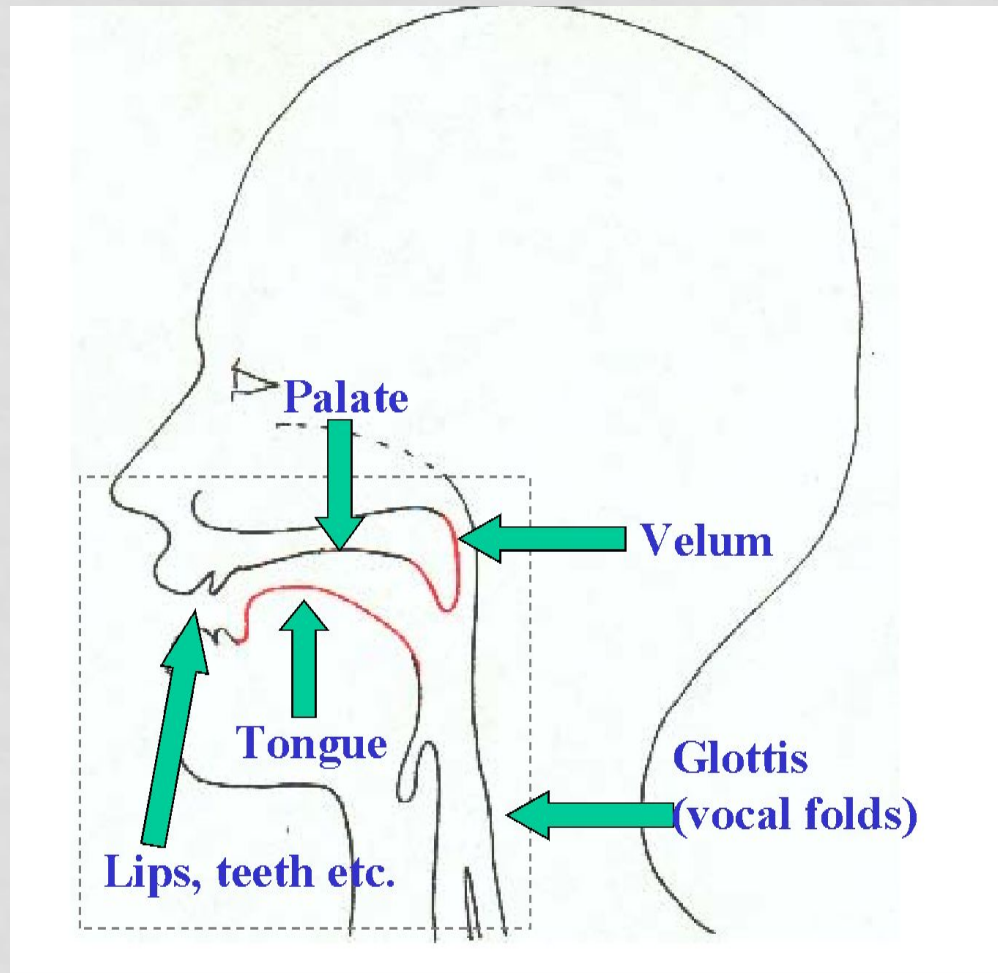


# HOW DO YOU LOOK TO A PHONETICIAN



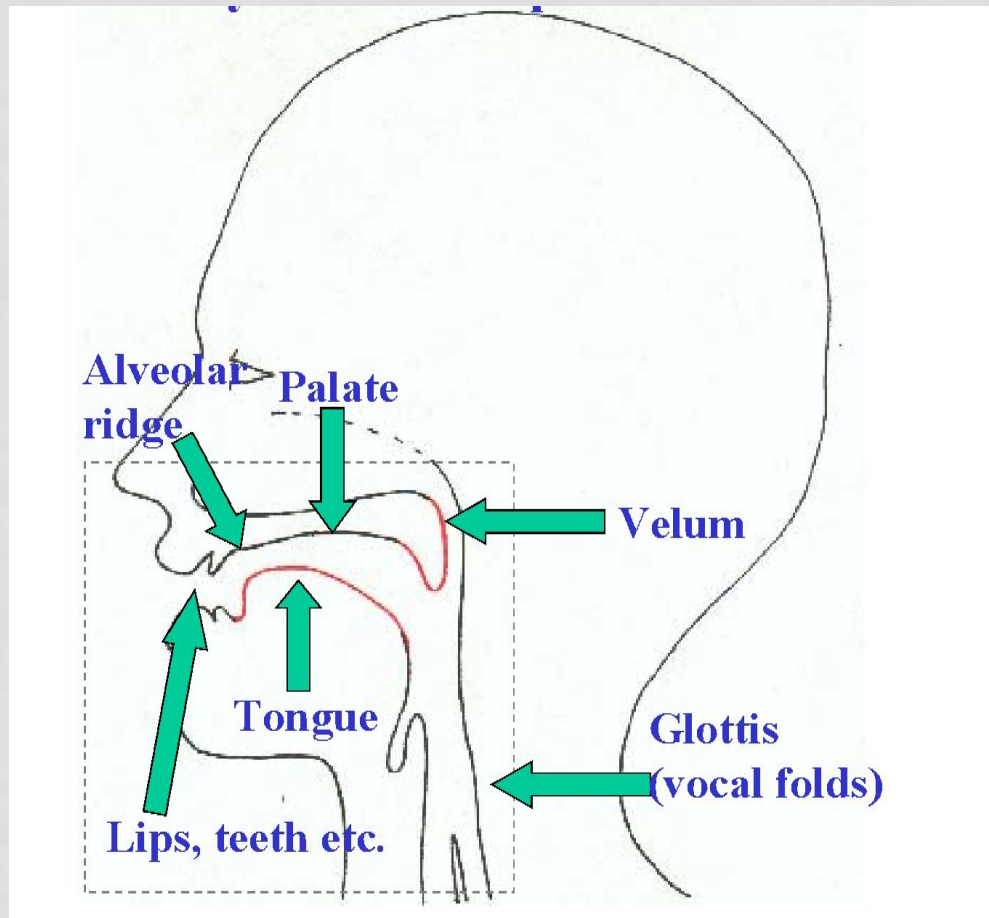


# HOW DO YOU LOOK TO A PHONETICIAN

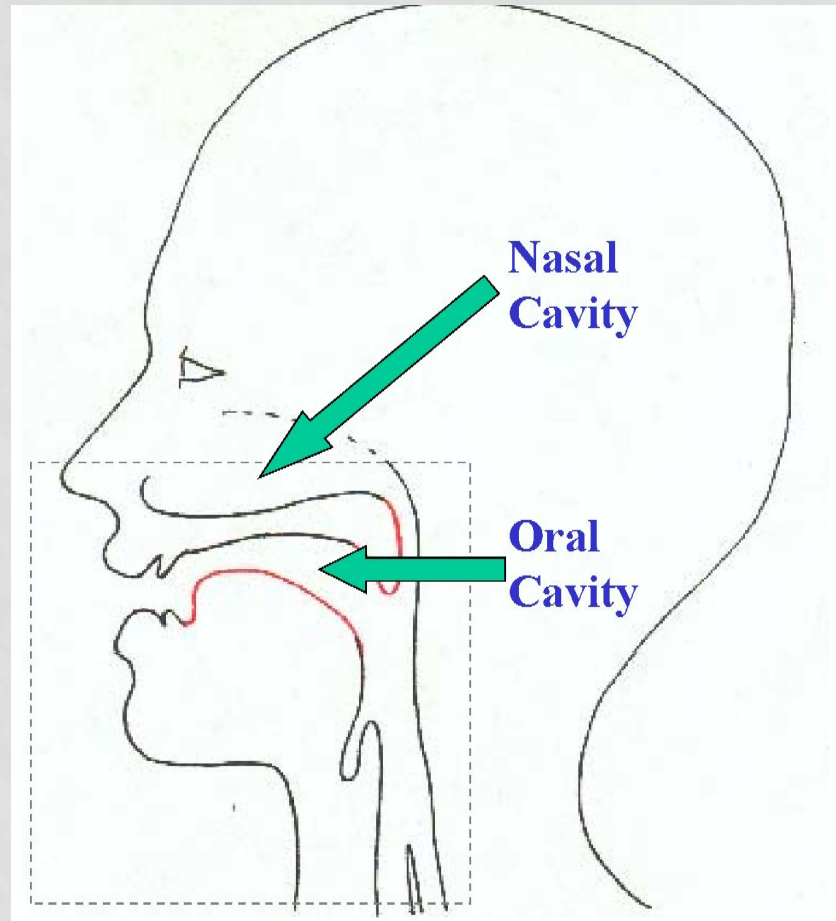




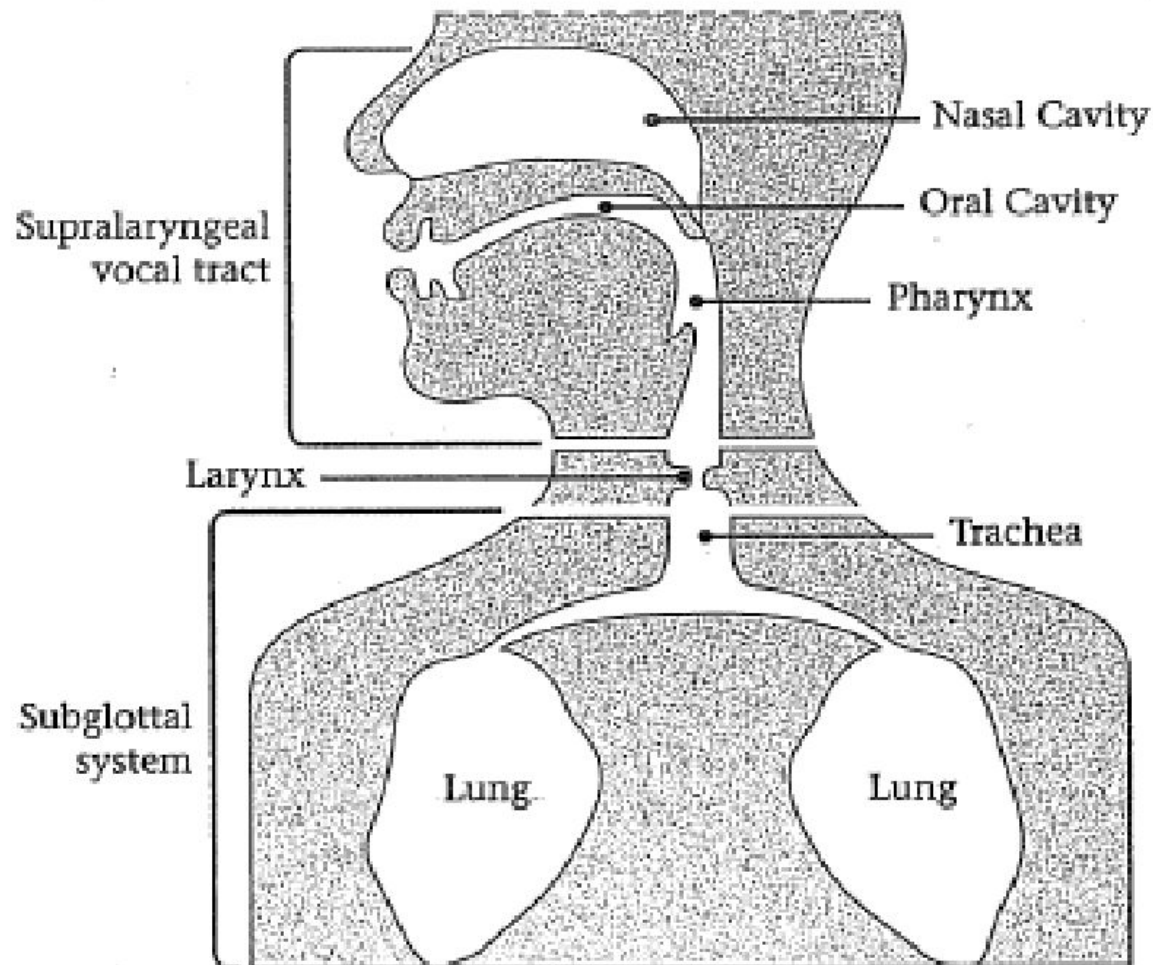
# HOW DO YOU LOOK TO A PHONETICIAN



# HOW DO YOU LOOK TO A PHONETICIAN

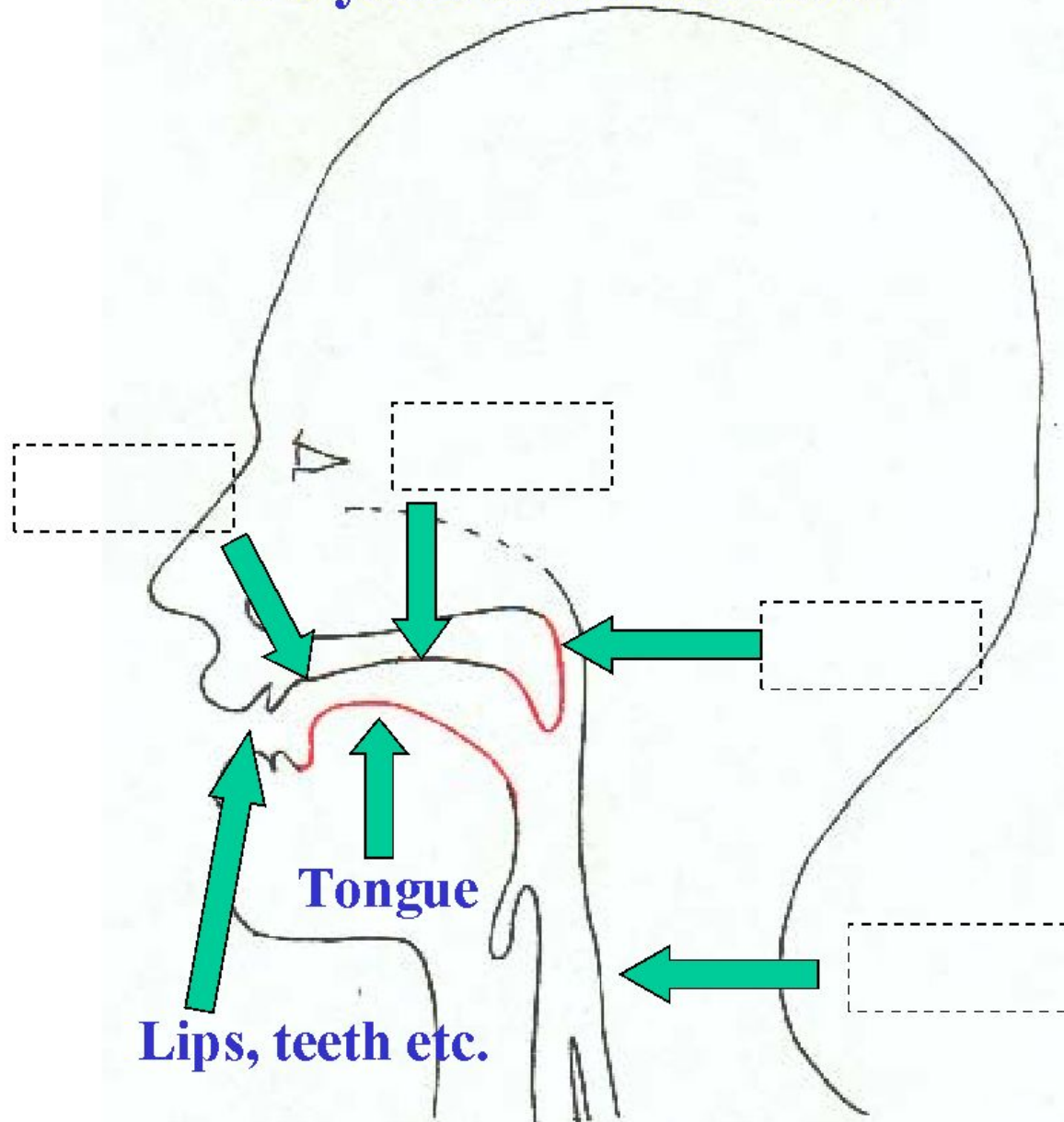


(1) The speech production mechanism.



From Lieberman and Blumstein, *Speech Physiology* (1990), p. 4. Copyright 1990 Cambridge University Press. All rights reserved. Reprinted with permission.

**Do you remember now?**



# Describing Speech Sounds

Is the air-flow blocked?

*vowel vs. consonant*

What are the vocal folds doing?

*voiced vs. voiceless*

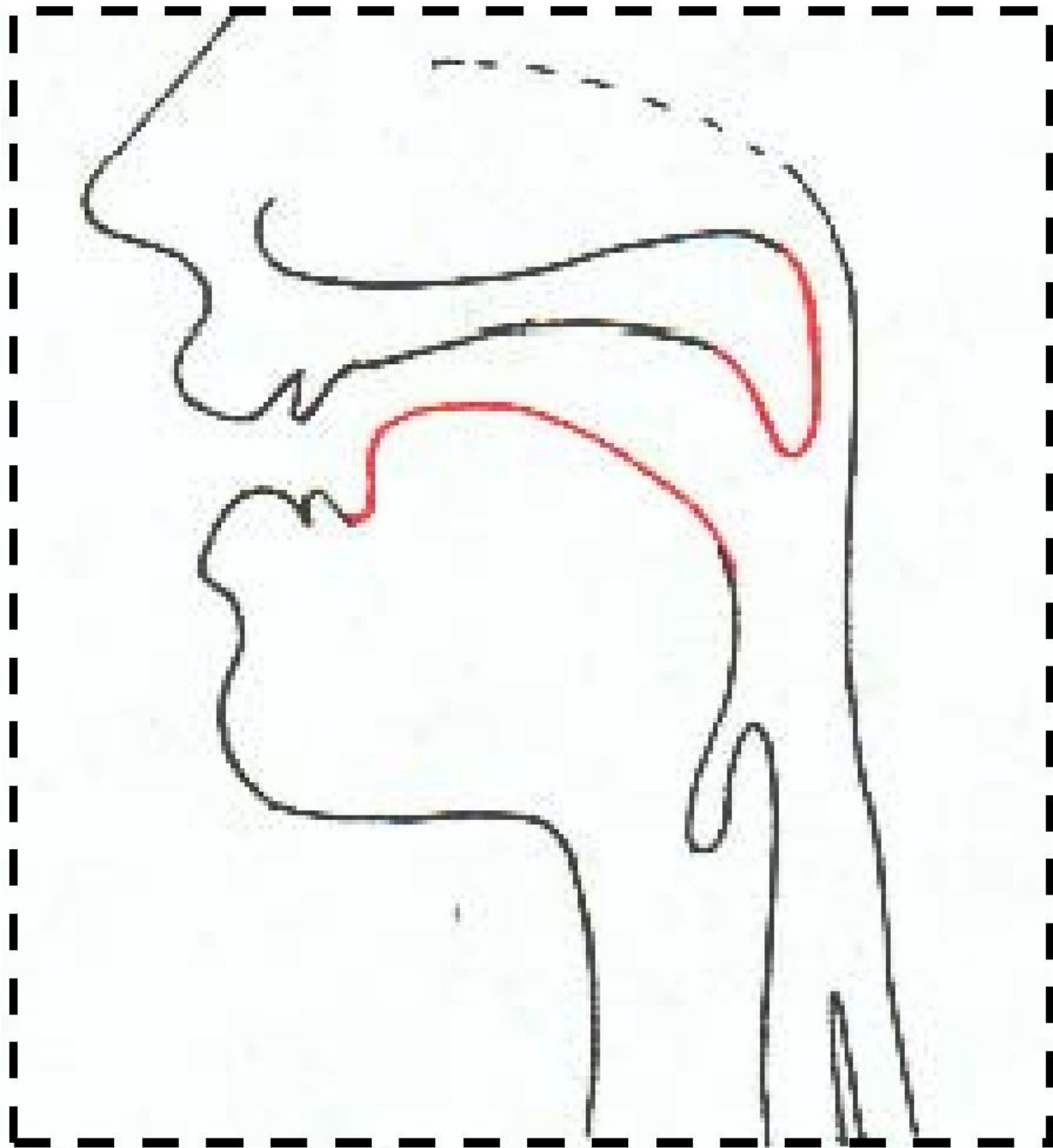
Where is the air-flow blocked?

*labial, alveolar, palatal, velar etc.*

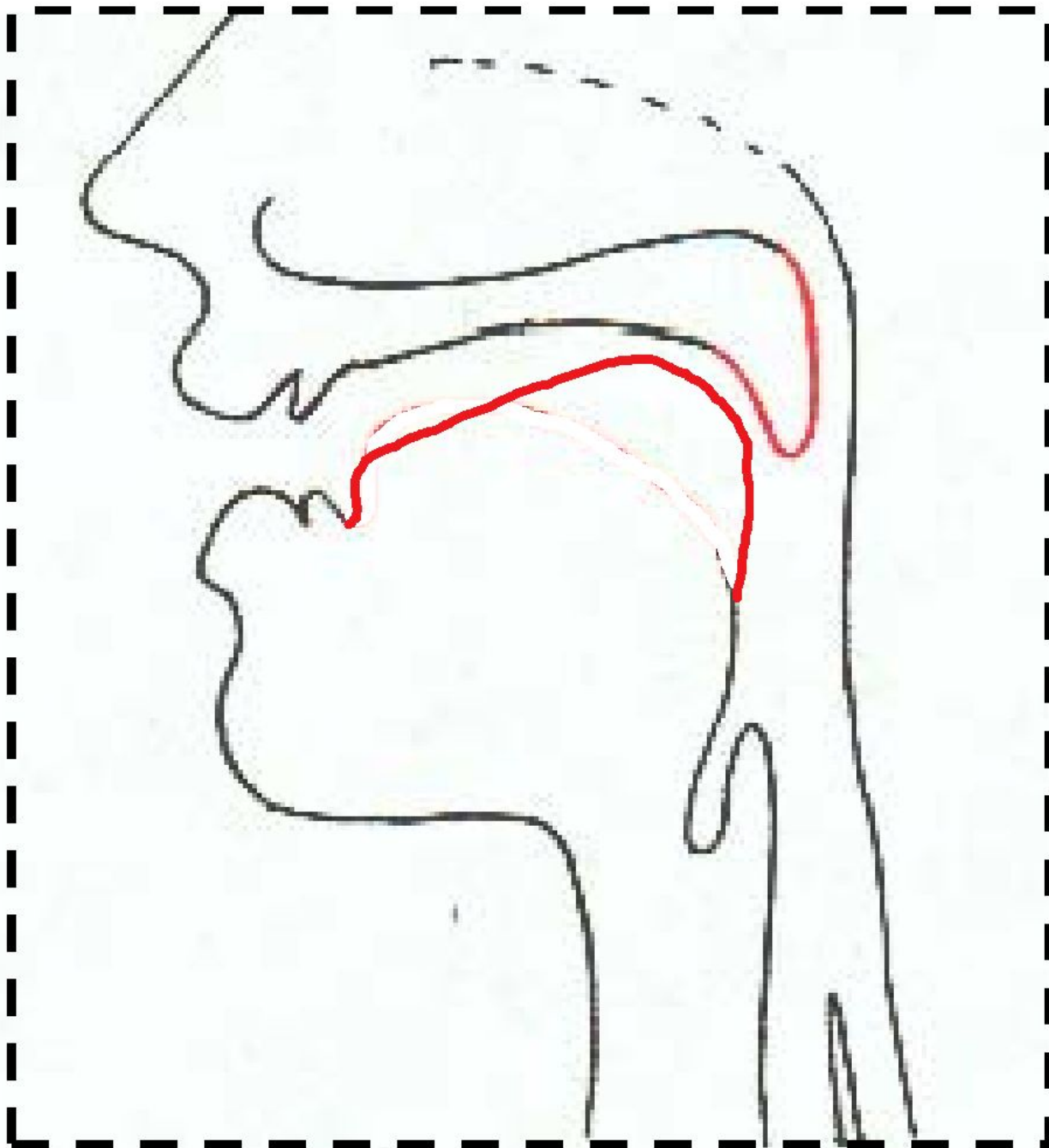
Where/how is the air flowing?

*nasal/oral, stop, fricative, liquid etc.*

What can you do to  
alter the shape of  
your vocal tract?

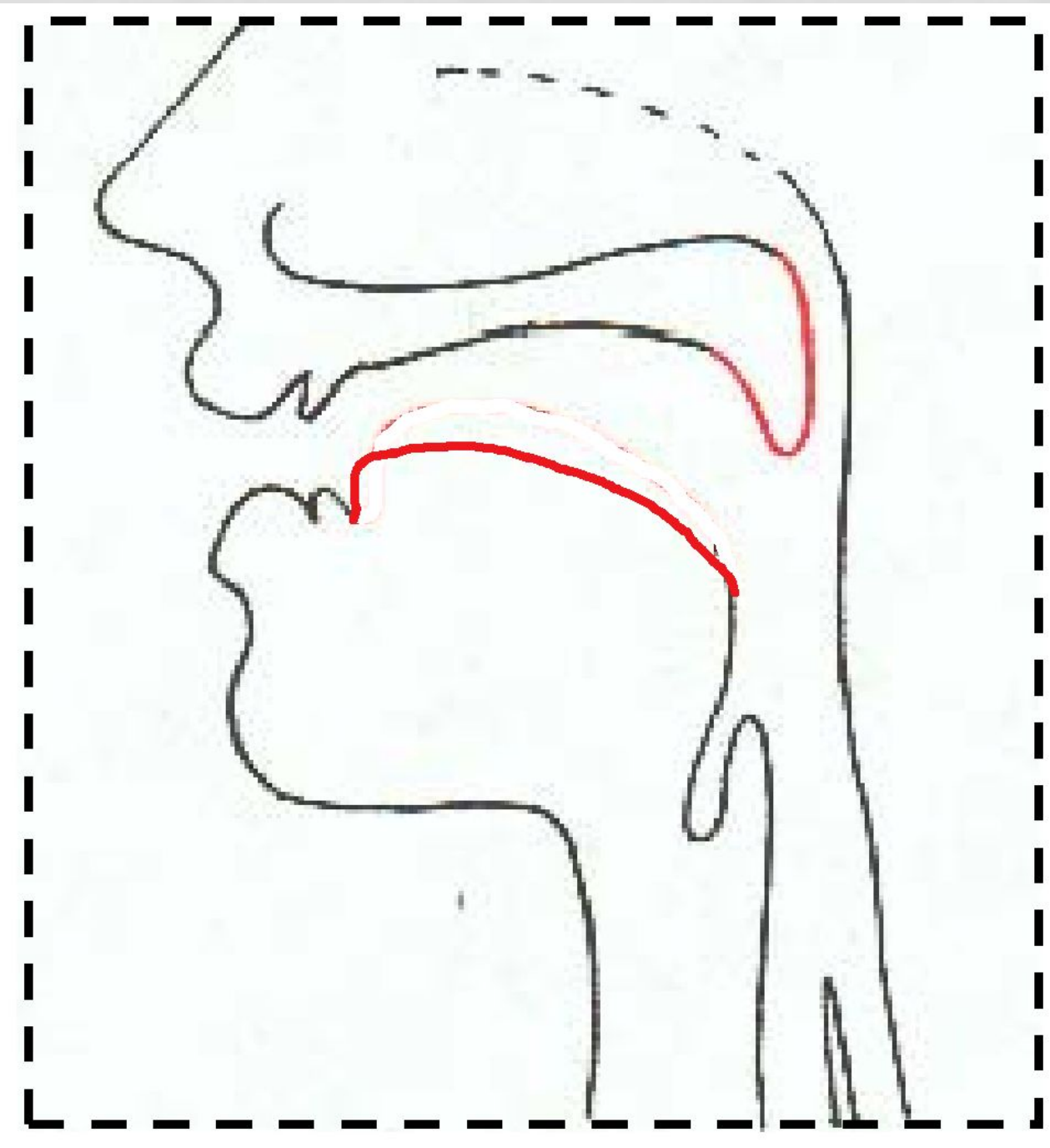


[i]



[u]





[æ]

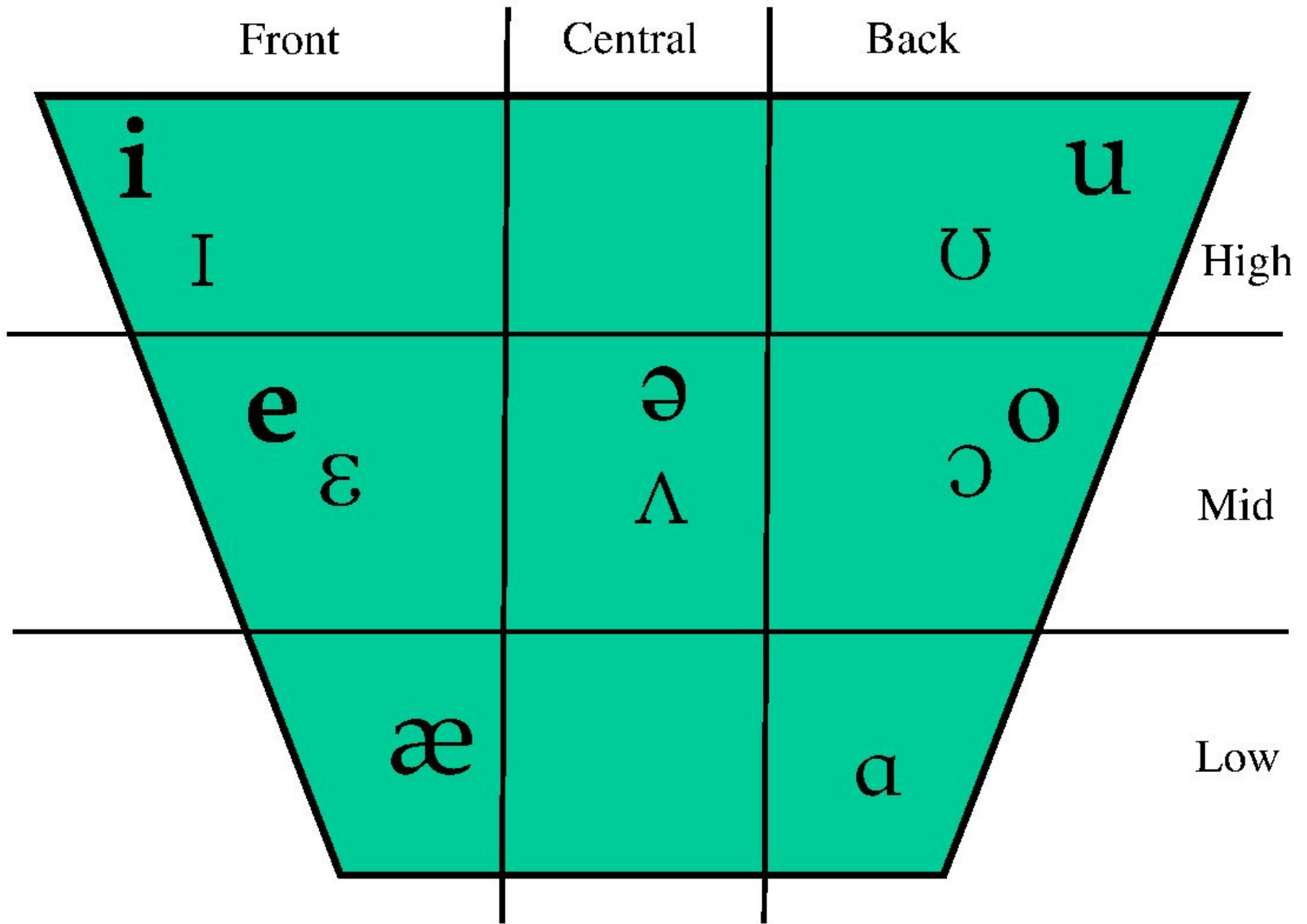
- raise or lower your tongue
- advance or retract your tongue
- round or not round your tongue
- tense or lax

**YOU  
CAN**

# TEST IT AT HOME

- slowly pronounce the vowels, feel where the tongue is
- look in the mirror as you pronounce them
- close your mouth and try to pronounce the vowels
- use a lollipop





# Vowel features

- High/mid/low: raise or lower the tongue
- Front/central/back: advance or retract tongue
- Round/unrounded: round or spread lips
- Tense/lax: tense tongue muscles or not

E.g.

[i] is a high, front, (unrounded) tense vowel.

[u] is a high, back, round tense vowel.



## Some dialectal differences

- **caught/cot, dawn/Don**[Mid back lax vowel and mid back tense vowel]: many American speakers do not have both of these.
- **aunt/ant, plaza, etc**

# Diphthongs: two-part vowels (cf. monophthongs)

1. [aɪ]

2. [aʊ]

3. [ɔɪ]

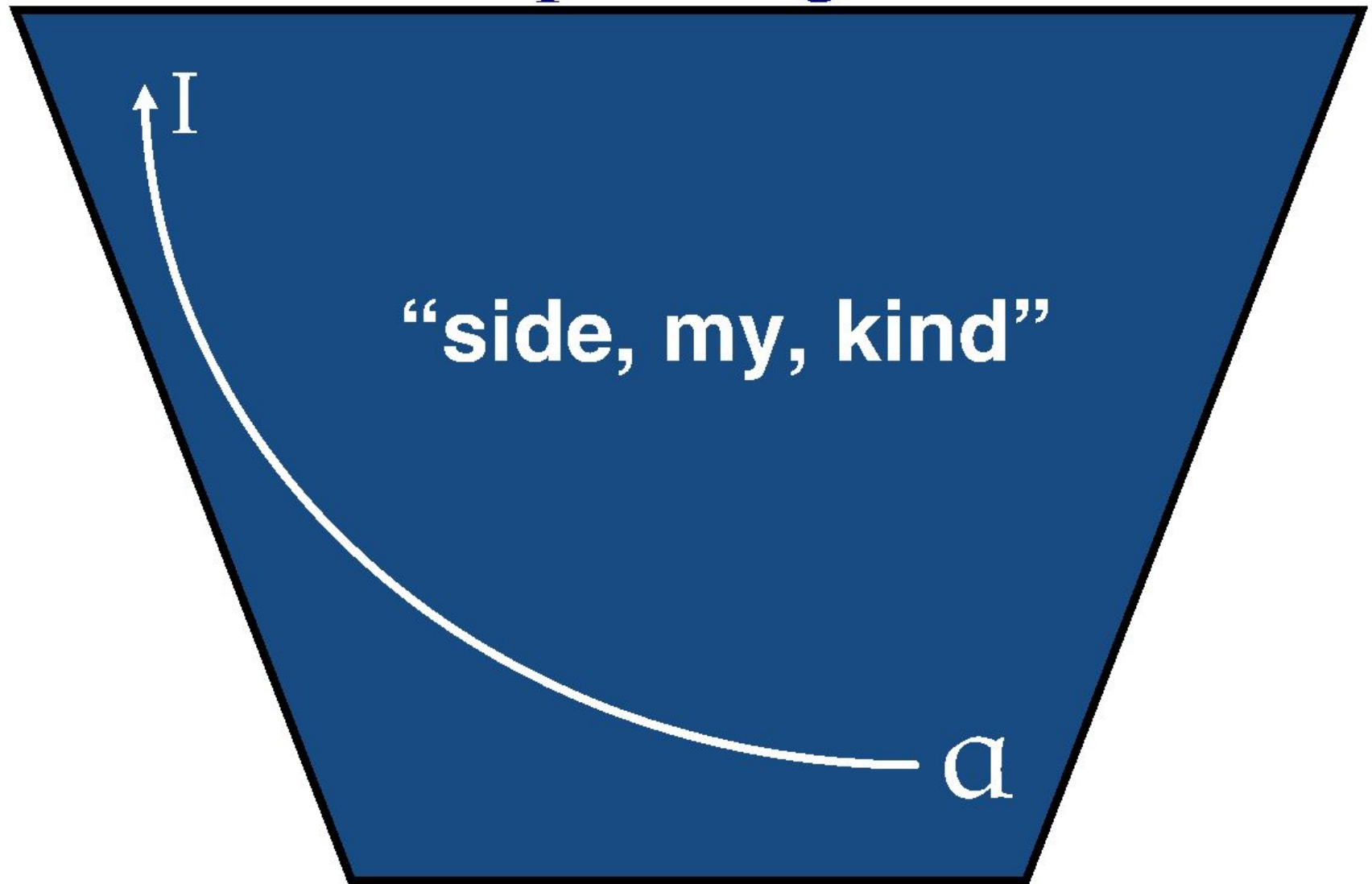
4. [oʊ]

5. [eɪ]

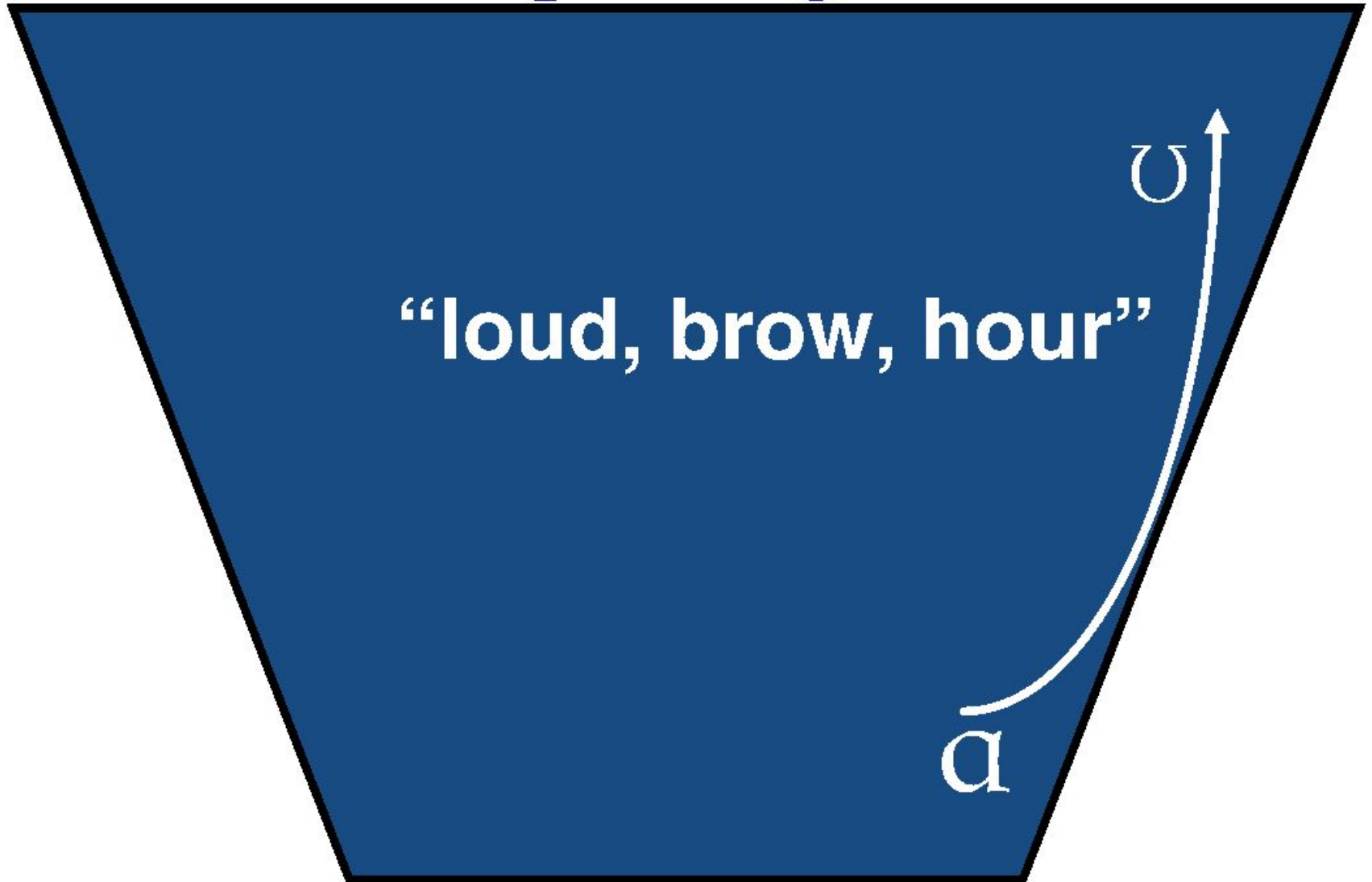




# Diphthongs:



# Diphthongs:



“loud, brow, hour”

ɯ

ɑ

# Diphthongs:

“boy, annoy, toil”

ɔɪ



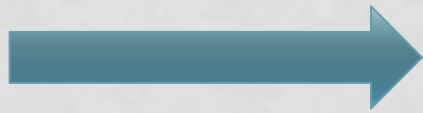
# QUALITY OF A VOWEL

- Size
- Volume
- Shape of resonator
- Stability of active speech organs
- Segment duration
- Force of articulation
- Degree of tenseness of speech organs
- etc



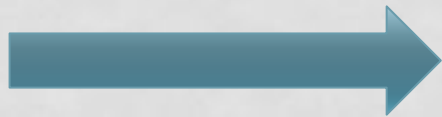
**INTERCONNECTED  
INTERDEPENDENT**

Tongue is in the back position



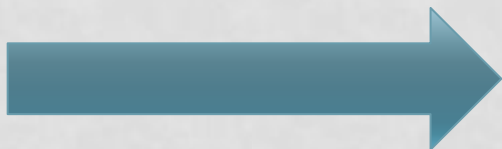
Lip rounding

Tongue is in the front position



Tongue raised higher

Lengthening of a vowel



Tension in speech organs

# **PRINCIPLES OF CLASSIFICATION**

# STABILITY OF ARTICULATION

- - monophthongs/ diphthongs/ diphthongoids



The problem of diphthongs status!  
Vassilyev and Zinder vs British scientists

# TONGUE POSITION

TONGUE  
POSITION

```
graph TD; A[TONGUE POSITION] --- B[horizontal]; A --- C[vertical]
```

**The problem of front-retract  
and back-advanced vowels!**

horizontal

vertical



# LIP ROUNDING

**What is phonologically relevant?**

- 1) Spread lips?**
- 2) Neutral lips?**
- 3) Rounded lips?**

**Can you name any physiological connection of this aspect and other articulatory features?**

**CHECKNESS**



**LENGTH**

# DURATION/ LENGTH

D.Jones:

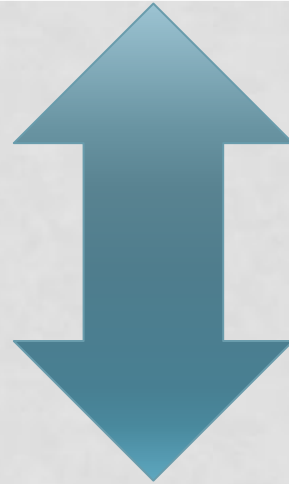
V.Vassilyev:

chronemes

- 1) sit-seat
- 2) pull-pool
- 3) Berlin – Berlin street
- 4) dark – duck
- 5) door - doll

**Gimson:** beat bee bid bit

**TENSENESS**



**HISTORY**

# **WHAT CHARACTERISTICS ARE FUNCTIONALLY RELEVANT?**

**STABILITY OF ARTICULATION**

**TONGUE POSITION**

**THANK YOU FOR  
ATTENTION!**