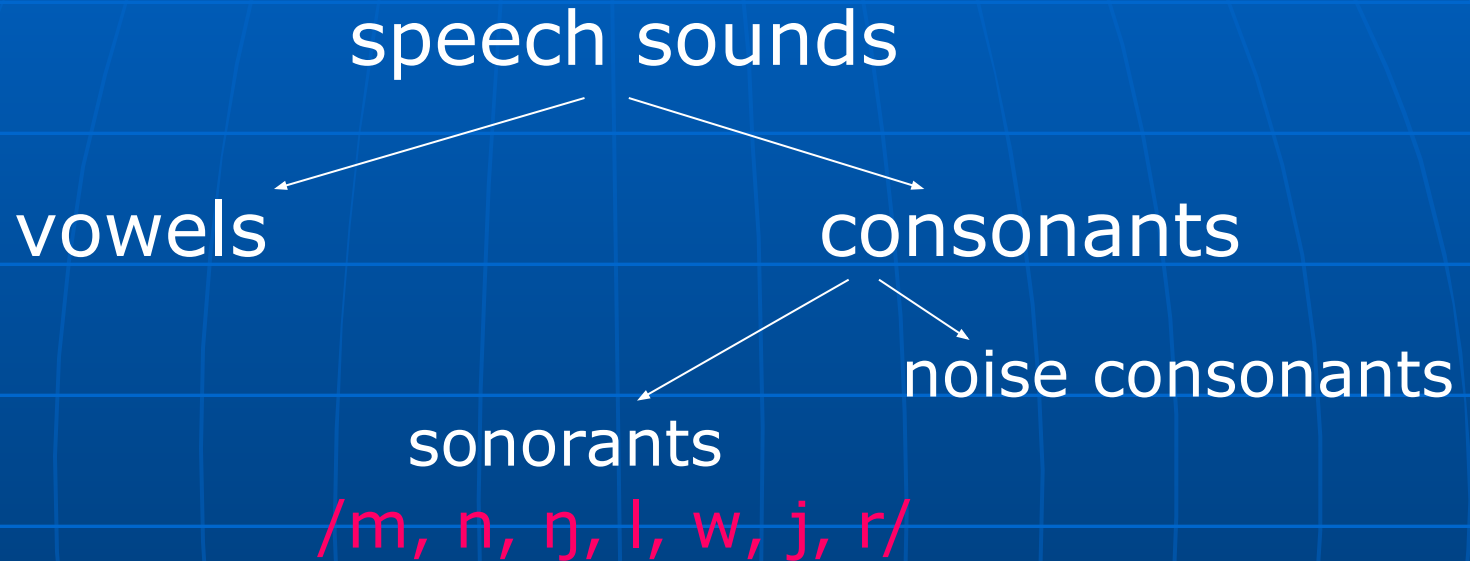


# Articulatory Analysis of English Speech Sounds

1. Principles of classification of English speech sounds.
2. Articulation basis. Differences in the articulation bases of English and Russian.
3. Phonetic interference.
4. The articulatory classification of English consonants.
5. The articulatory classification of English vowels.
6. The physical properties of English speech sounds.

# Principles of classification of English speech sounds



## Principles of classification:

- 1) The presence or absence of obstruction.
- 2) The distribution of muscular tension.
- 3) The force of the air stream coming from the lungs.

# *Articulation basis*

**articulatory habits  
characteristic of all the  
native speakers of a  
language**

# The main peculiarities of the English articulation basis

- The tongue is broadened, flattened, the tip is slightly drawn back from the teeth.
- Lips are neutral, slightly spread, the upper lip is tense.

# Phonetic interference

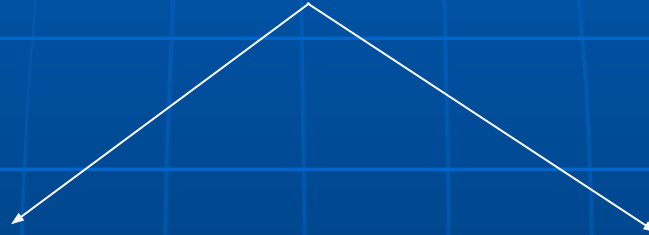
- **Bilingualism** – the practice of alternate use of two languages by a person in communication.
- **Language interference** – a process and a result of interaction and mutual influence of the language systems which are in contact.
- **Phonetic interference** – the deviation from the phonetic norms of the language.

# Phonetic interference

Phonetic interference

phonemic

prosodic



# The features of phonemic interference

- the loss of aspiration;
- degree of palatalization;
- place of articulation (e.g. the use of dental /t/ or /d/ instead of alveolar ones);
- shortening the duration of long vowels;
- the pronunciation of English /o, o:, u, u:/ with lip protrusion;
- the use of the wrong allophone of the phoneme (e.g. the dark [ɫ] instead of the clear [l]).

# Prosodic interference

Prosodic interference involves the use of wrong prosodic patterns:

- The use of falling tones instead of rising ones.

E.g. Shut the door ↘ behind you!

Good ↘ bye!

- The choice of the wrong pitch, stress or rhythmic pattern.

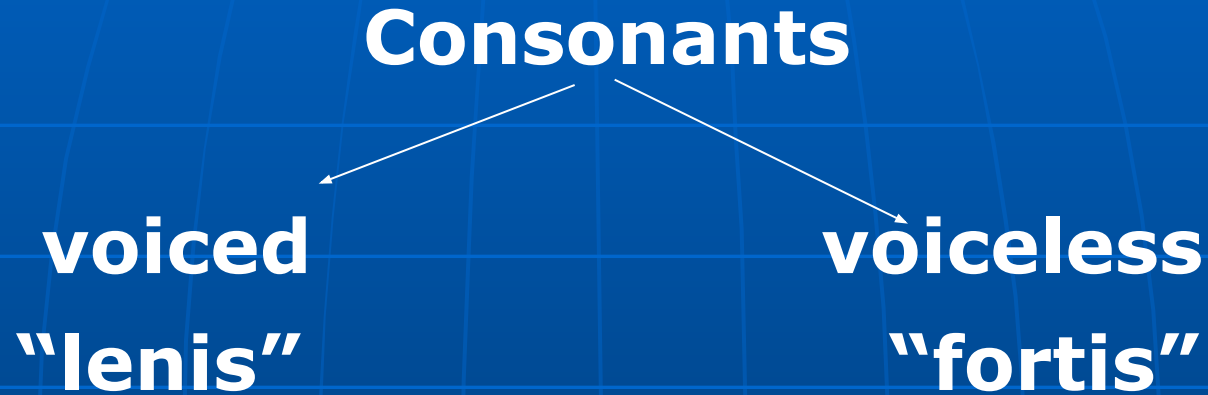


# ***The articulatory classification of English consonants***

## **Principles:**

- I. The work of the vocal cords and the force of exhalation.**
- II. The active organ of speech and the place of obstruction.**
- III. The type of obstruction and the manner of noise production.**
- IV. Position of the soft palate.**

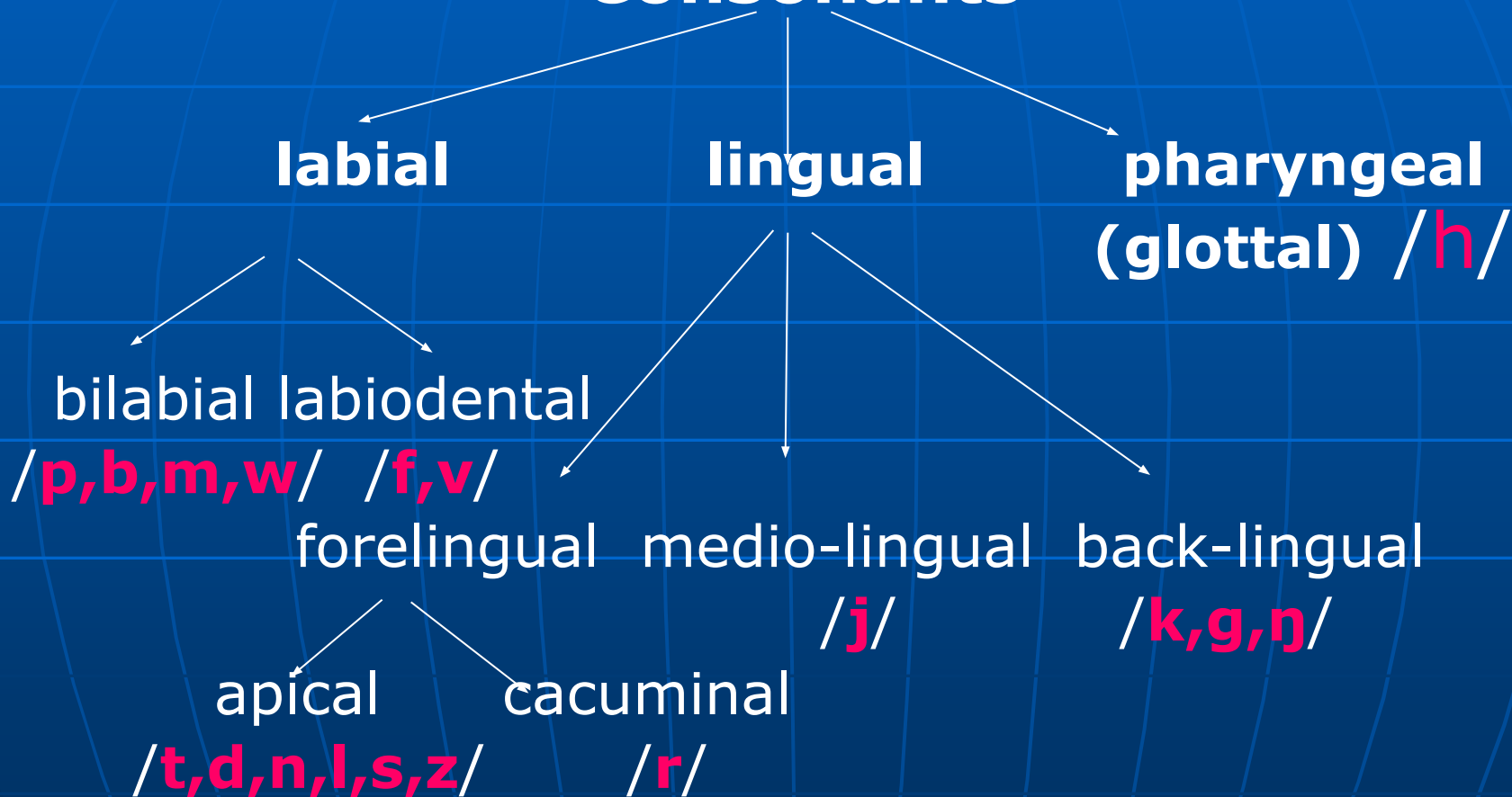
# *The articulatory classification of English consonants*



**/h, m, n, ŋ, l, w, j, r/**

# The articulatory classification of English consonants (active speech organ)

## Consonants



# *The articulatory classification of English consonants (place of obstruction)*

## **Consonants:**

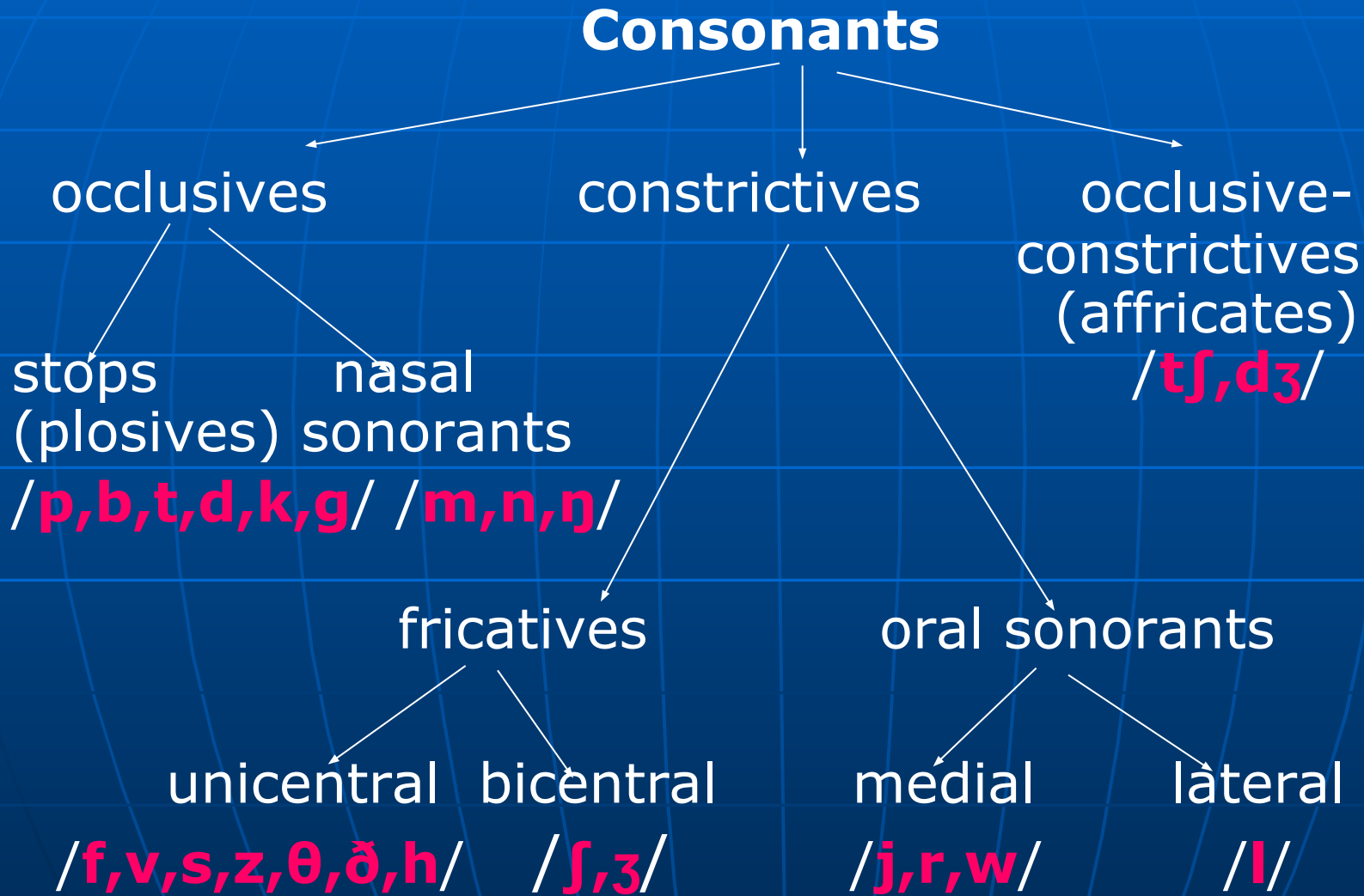
- **dental or interdental /θ, ð/**
- **alveolar /t, d, n, l, s, z/**
- **post-alveolar /r/**
- **Palatal /j/**
- **palatal-alveolar /ʃ, ʒ, tʃ, dʒ/**
- **Velar /k, g, ŋ/**

# *The articulatory classification of English consonants*

## **Types of obstruction:**

- complete closure (occlusion)
- incomplete closure (constriction)
- closure immediately followed by constriction (occlusion-constriction)

# The articulatory classification of English consonants (type of obstruction and manner of noise production)



*The articulatory classification of English consonants  
(position of the soft palate)*

**Consonants**

```
graph TD; A[Consonants] --> B[oral]; A --> C[nasal]; B --- D["/p,b,t,d,k,g,f,v,ʃ,ʒ, s,z,θ,ð,tʃ,dʒ,w,l,r,j/"]; C --- E["/m,n,ŋ/"]
```

***oral***

***/p,b,t,d,k,g,f,v,ʃ,ʒ,  
s,z,θ,ð,tʃ,dʒ,w,l,r,j/***

***nasal***

***/m,n,ŋ/***

# *The articulatory classification of English vowels*

The System of Cardinal Vowels by Daniel Jones

Front Vowels

Back Vowels

Nº 1

u Nº 8 close

Nº 2 e

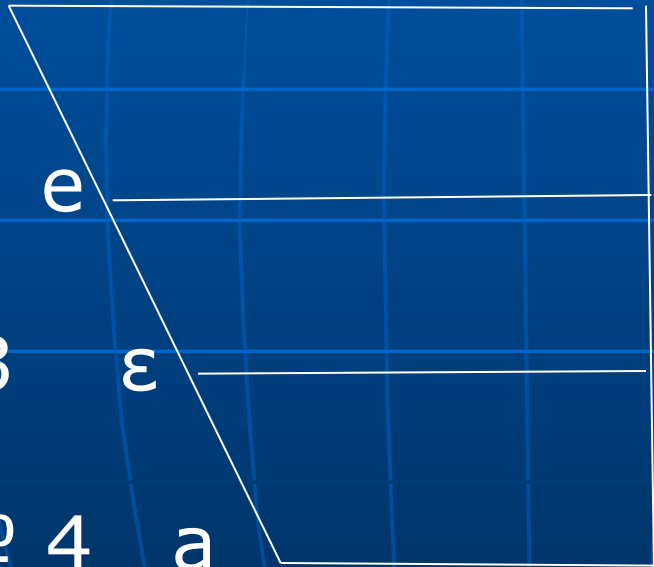
o Nº 7 half-close

Nº 3 ε

ɔ Nº 6 half-open

Nº 4 a

ɑ Nº 5 open



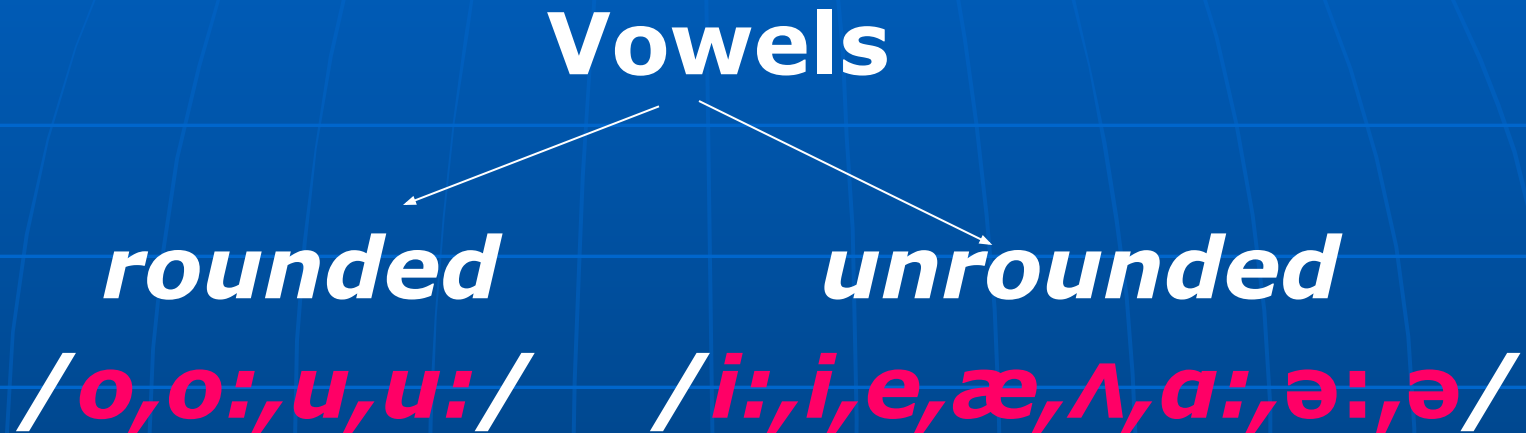


# *The articulatory classification of English vowels*

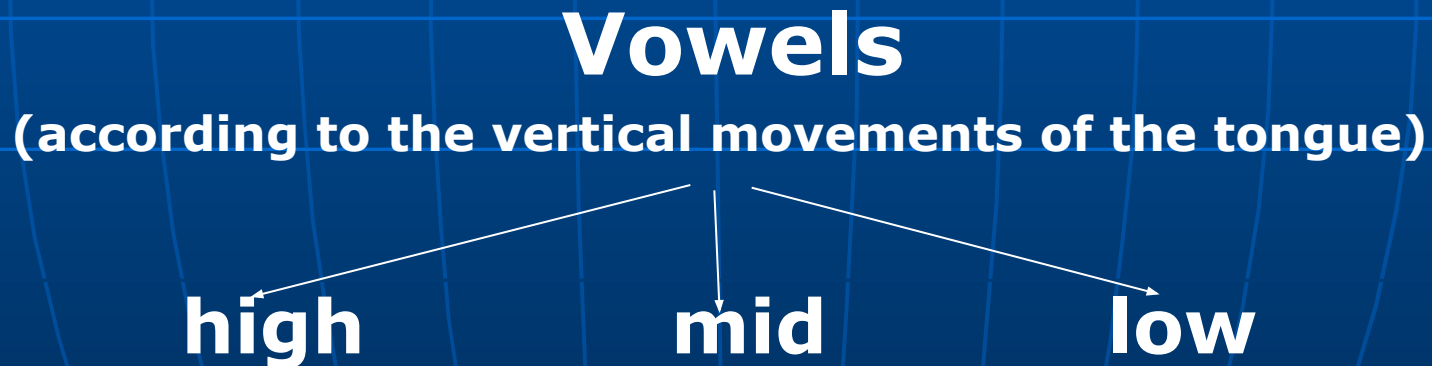
## Principles:

- I. **Position of the lips**
- II. **Position of the tongue**
- III. **Degree of tenseness and the character of the end of a vowel**
- IV. **Length**
- V. **Stability of articulation**

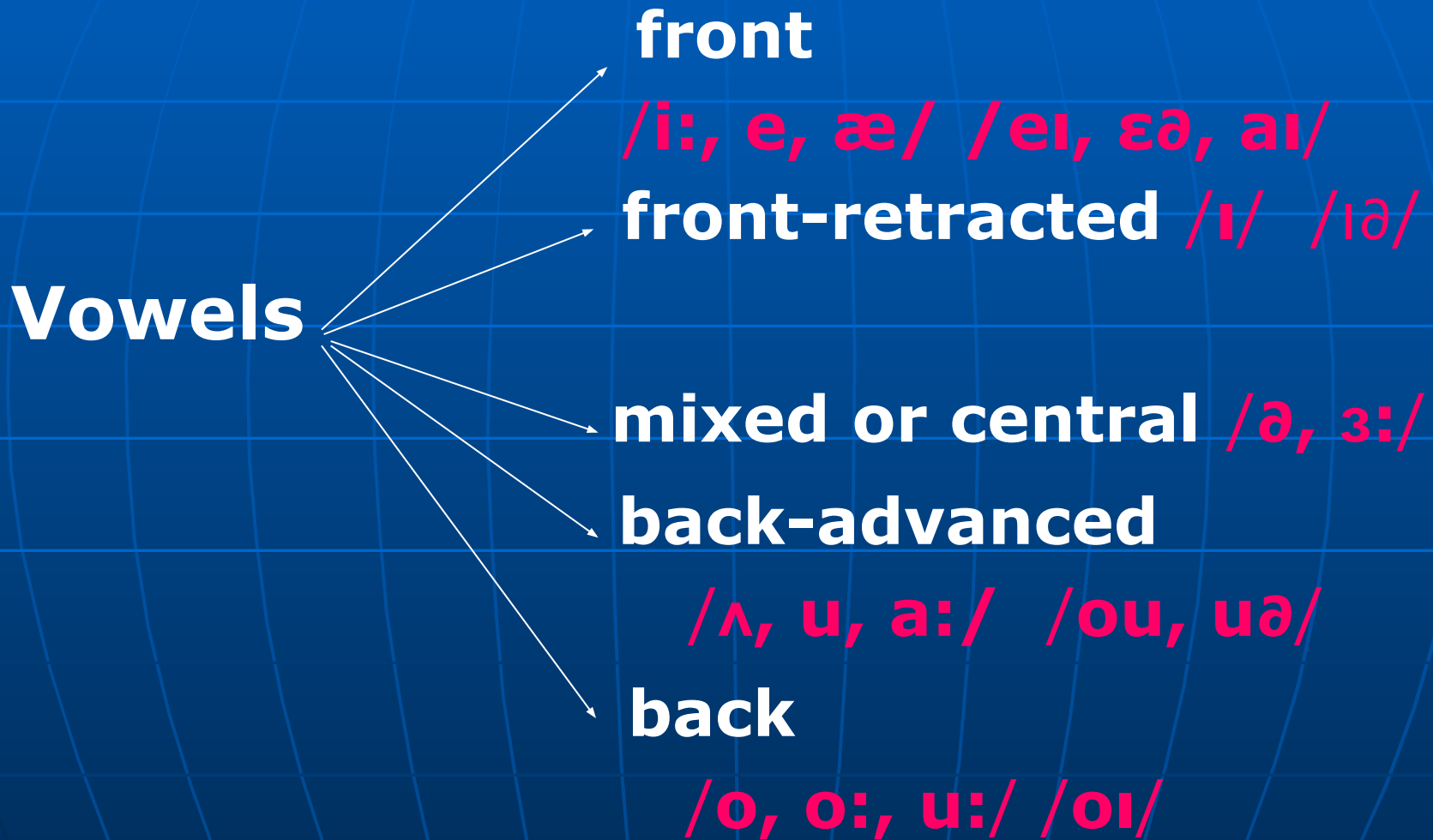
# The articulatory classification of English vowels (position of the lips)



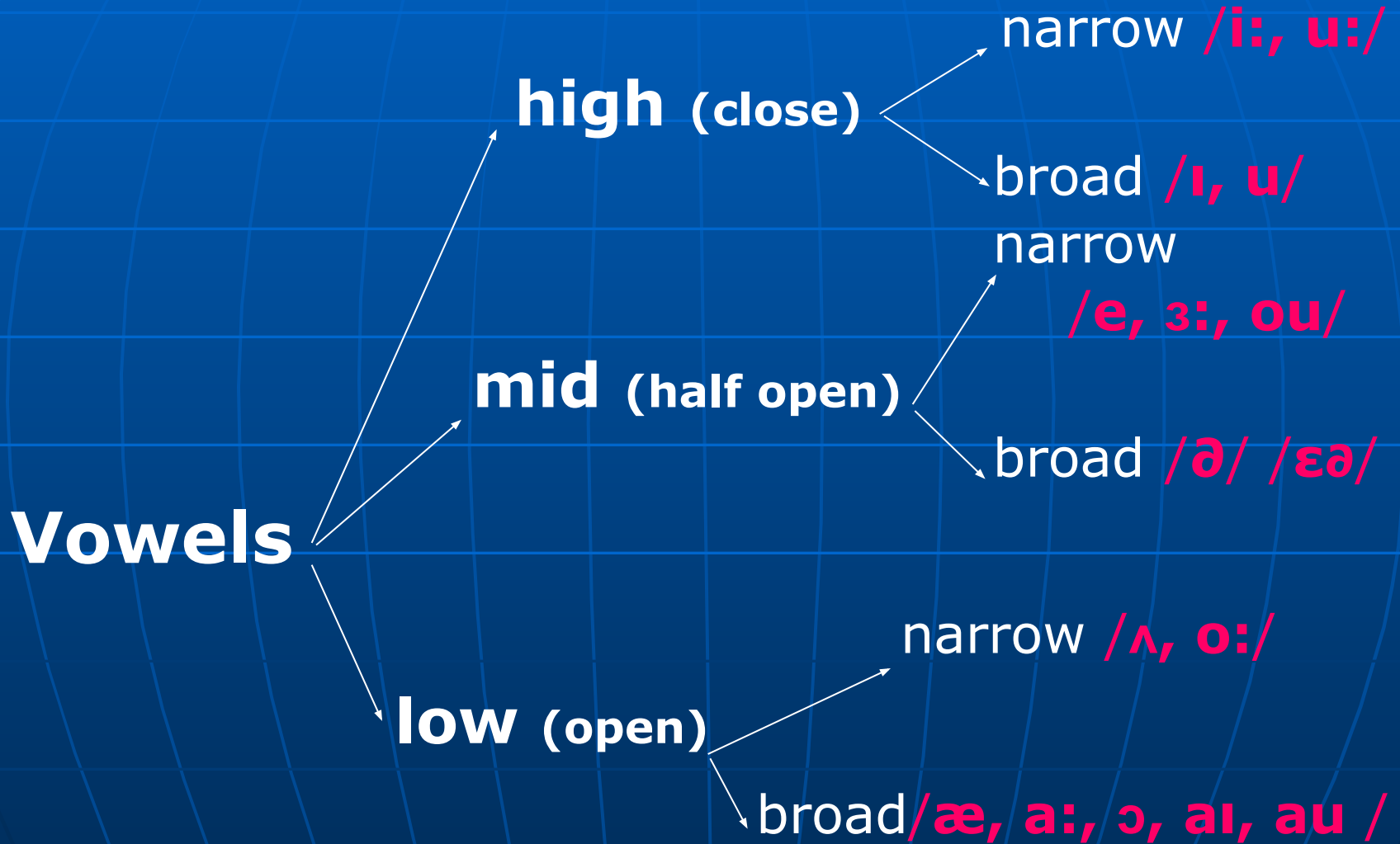
# *The articulatory classification of English vowels (position of the tongue)*



# The articulatory classification of English vowels



# The articulatory classification of English vowels



# *The articulatory classification of English vowels*

**According to the  
degree of muscular tension**

***tense***

***lax***

**According to the  
character of the end**

***free***

***checked***

# *The articulatory classification of English vowels*

**According to their length**

*short*

*long*



# *The articulatory classification of English vowels*

## Factors influencing the vowel length

- 1) The position of a vowel in a word: /si: – si:d – si:t/
- 2) Word accent: forecast (noun) /ˈfo:kɑ:st/  
forecast (verb) /fo:ˈkɑ:st/
- 3) The number of syllables in a word:  
/ə:/ in 'verse' and 'university'
- 4) The character of the syllabic structure:  
open syllable: 'her' /hə:/; closed syllable: 'earn' /ə:n/
- 5) Sonority: /i:/ is longer than /ɑ:/



# *The articulatory classification of English vowels*

**According to the stability  
of articulation**



## The physical properties of speech sounds

**Frequency** – the number of vibrations per second.

**Intensity** – variations in the loudness of the sound.

**Duration** – the quantity of time during which the same vibratory motion is produced.