

# **Typology of Phonetic and Phonological Systems of English and Ukrainian**

# PHONETIC SYSTEM OF A LANGUAGE

## PHONEMES

*Vowels*

*Consonants*

*Monophthongs*

*Diphthongs*



# VOWELS in ENGLISH and UKRAINIAN

## ENGLISH

- 20 vowels
- 12 monophthongs  
[ɪ, i:, e, æ, ɒ, ɔ:, ʌ, a:, u, u:, ɜ:, ə].
- 8 diphthongs  
[eɪ, ɜu, aɪ, aʊ, ɔɪ, ɪə, ɛə, uə].

## UKRAINIAN

- 6 vowels  
[i, e, u, a, o, y]

# CLASSIFICATION OF VOWELS ACCORDING TO HORIZONTAL POSITION OF TONGUE

	English	Ukrainian
Front	ɪ : ɪ e æ	і е и
Central	ɜ : ə ʌ	-
Back	ɑ : ɔ : ɒ u u :	а о у

# CLASSIFICATION OF THE VOWELS ACCORDING TO THE VERTICAL POSITION OF THE TONGUE

	English	Ukrainian
High	i: ɪ u: ʊ	і и у
Mid	e ɜ: ə ʌ	е о
Low	æ ɑ: ɔ: ɒ	а



# **CONSONANTS IN ENGLISH and UKRAINIAN**

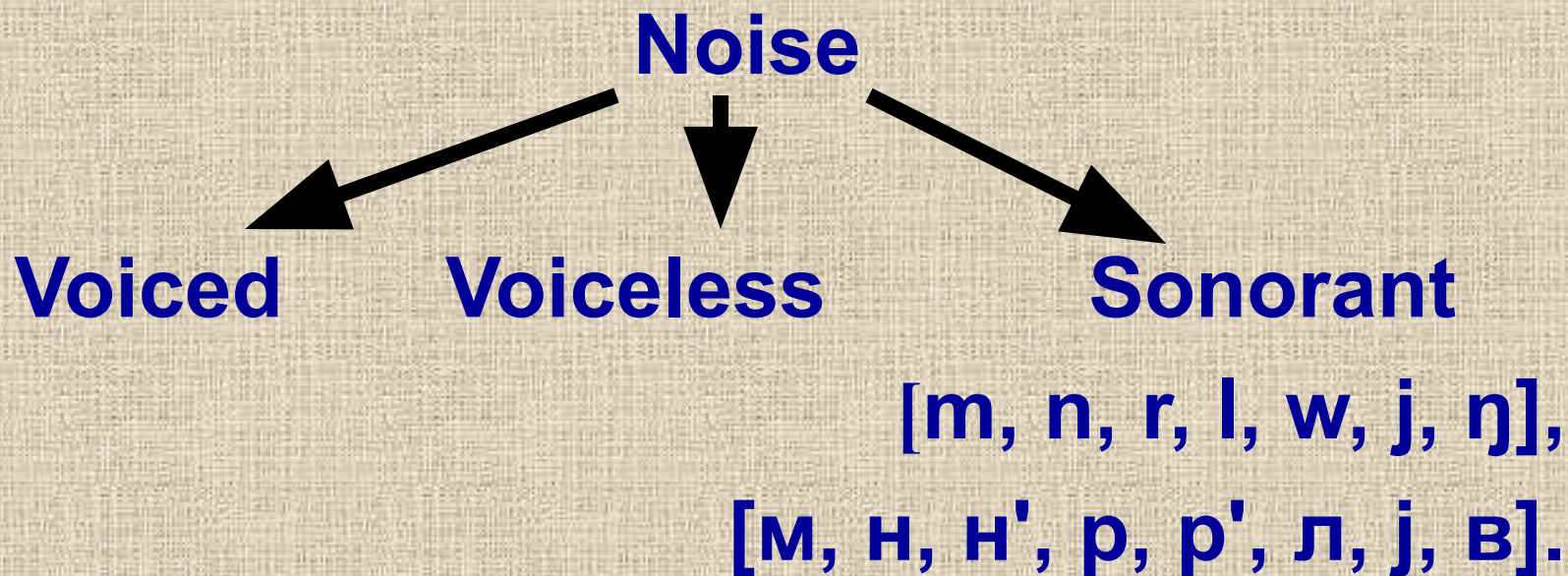
**In English**

**24**

**In Ukrainian**

**32**

# GROUPS OF CONSONANTS ACCORDING TO ROLE OF VOICE AND NOISE



# GROUPS OF CONSONANTS ACCORDING TO WAY OF PASSING OBSTRUCTION

Plosive

Fricative

Affricative

[p, t, k, b, d, g]	[f, v, θ, ð, s, z, ʒ, h, j]	[tʃ, dʒ]
[б, п, д, д', т, т', г, к]	[в, ф, з, з', с, с', ж, ш, г, х]	[дж, дз, ч, ц, ц', дз']



# GROUPS OF CONSONANTS ACCORDING TO PLACE OF OBSTRUCTION

**English:**

bilabial

labiodental

alveolar

median

back-lingual

post-alveolar [r, ʃ, ʒ]

interdental [ð, θ]

-

**Ukrainian**

bilabial

labiodental

alveolar

median

back-lingual

-

-

dental [д, т, л, л', н]

# GROUPS OF CONSONANTS ACCORDING TO PLACE OF OBSTRUCTION

- bilabials: [p ,b, m, w], [п, б, в, м];
- labiodentals: [v, f ], [ф];
- alveolar [d, t, z, s, n, l, tʃ, dʒ],
- [д', т', н', ц, ц', ч, ш, з, з', дз', дз, с, ж];
- median: [j], [й, р, р'];
- back-lingual [k, g, ŋ], [г', к, х];
- glottal [h], [ɦ].

# ARTICULATORY TRANSITIONS OF PHONEMES

POSITIONAL	COMBINATORY
<p data-bbox="214 525 662 608">reduction</p> <p data-bbox="214 801 900 1125">devoicing (at the end of the words)</p> <p data-bbox="214 1293 558 1362">prothesis</p>	<p data-bbox="1078 529 1580 608">assimilation</p> <p data-bbox="1078 651 1427 705">dissimilation</p> <p data-bbox="1078 748 1534 802">accommodation</p> <p data-bbox="1078 845 1354 899">haplology</p> <p data-bbox="1078 942 1300 996">dieresis</p> <p data-bbox="1078 1039 1392 1093">epenthesis</p> <p data-bbox="1078 1136 1392 1190">metathesis</p> <p data-bbox="1078 1233 1402 1288">substitution</p> <p data-bbox="1078 1330 1257 1385">elision</p>

- Assimilation – phonetic process of influencing two adjacent consonants within a word or at word boundaries.
- Result: the articulation of one sound becomes similar or identical with the articulation of the other one.



# Assimilation affects:

- the work of an active organ: *congress*
- the point of articulation: *congratulate*
- the manner of noise producing:  
*let me* as ['lemɪ]
- the work of vocal cords: *gooseberry*
- the lip position: *twenty*
- the position of the soft palate:  
*sandwich*



# DEGREES OF ASSIMILATION

## Assimilation

```
graph TD; A[Assimilation] --> B[Complete]; A --> C[Partial]; A --> D[Intermediate];
```

### Complete

articulation of an assimilated consonant fully coincides with that of an assimilating one

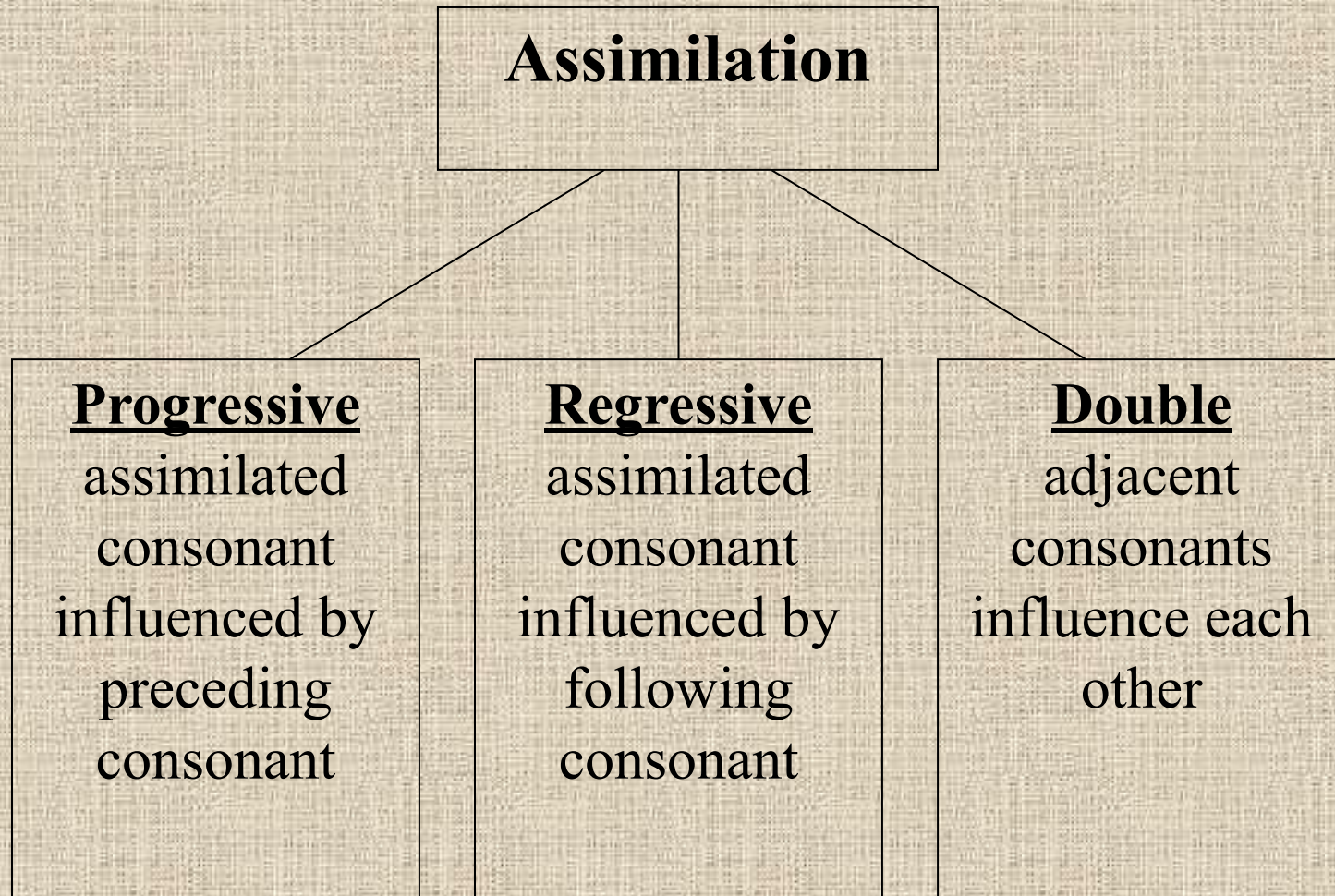
### Partial

an assimilated consonant retains its main phonetic features and becomes only partly similar in some features of its articulation to an assimilating sound

### Intermediate

an assimilated consonant changes into a different sound, but does not coincide with the assimilating consonant

# TYPES OF ASSIMILATION



- **Devoicing** of the voiced consonants at the end of words is not typical of English.
- The English sounds [b], [d], [g] may be partly devoiced in some words.
- Typical of Ukrainian (*дід, дуб*).

- **Reduction** – phonetic phenomenon involving vowels in which they change their quality or even fall out when unstressed.



# TYPES OF REDUCTION

## REDUCTION

```
graph TD; A[REDUCTION] --> B[QUANTITATIVE]; A --> C[QUALITATIVE]; A --> D[ZERO];
```

### QUANTITATIVE

reduction of the length of a vowel observed without changing its quality

### QUALITATIVE

quality of a vowel is changed

### ZERO

omission of a vowel or a consonant



# TYPES OF SYLLABLE

<b>Depends on the stress</b>	<b>Depends on the initial sound</b>	<b>Depends on the final sound</b>
<ul style="list-style-type: none"><li data-bbox="150 596 421 654">• Stressed</li><li data-bbox="150 882 486 939">• Unstressed</li></ul>	<ul style="list-style-type: none"><li data-bbox="730 596 989 654">• Covered</li><li data-bbox="730 882 1047 939">• Uncovered</li></ul>	<ul style="list-style-type: none"><li data-bbox="1251 596 1433 654">• Close</li><li data-bbox="1251 882 1433 939">• Open</li></ul>

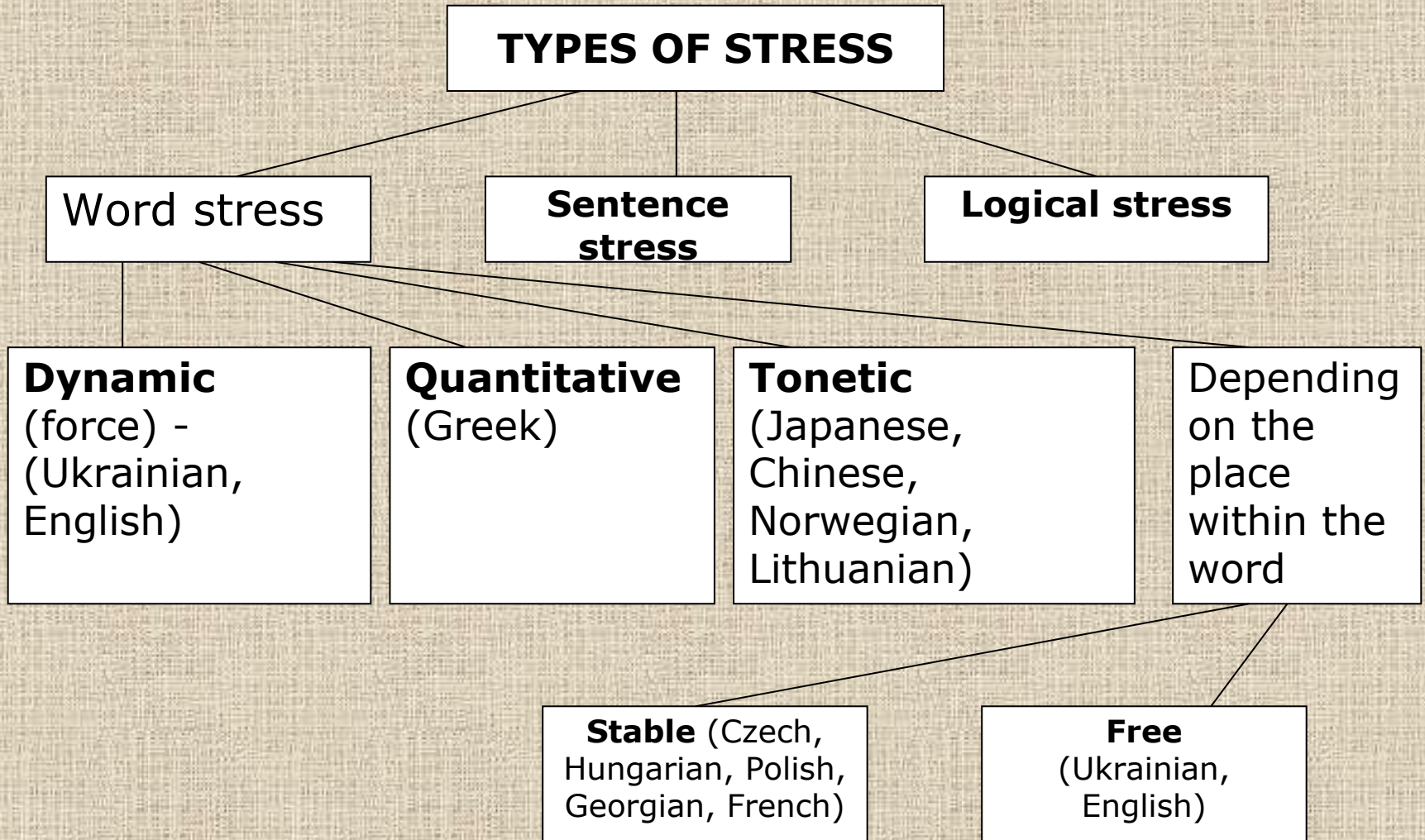
# SYLLABLE

<b>Syllables</b>	<b>English</b>	<b>Ukrainian</b>
Open	<i>are, ear</i>	<i>араб</i>
Open covered	<i>we, play</i> <i>27 %</i>	<i>ми, два</i> <i>66%</i>
Close	<i>art, act</i> <i>73%</i>	<i>ось</i> <i>34%</i>

# Word-stress

<b>ENGLISH</b>	<b>UKRAINIAN</b>
<p>English word stress – dynamic with a tonetic component.</p> <p>Free.</p> <p>English rhythm – stress-timed.</p>	<p>Ukrainian word stress – dynamic with a duration component.</p> <p>Free.</p> <p>Ukrainian rhythm –syllable-timed.</p>

# TYPES OF STRESS





# TYPES OF WORD STRESS

## PRIMARY

**English**  
**Ukrainian**

## SECONDARY

**English**  
falls on the syllable  
separated from the  
nuclear syllable by one  
unstressed syllable:  
*pro<sub>ˌ</sub>nunci'ation,*  
*ˌrecog'nition*



# WORDS WITH TWO STRESSES

## ENGLISH

- Compound adjectives:  
*'well-'known,*  
*'absent-'minded*
- Composite (phrasal)  
verbs *'get 'up, to 'give*  
*a'way.*
- Words with prefixes: *un-*,  
*in-*, *dis-*, *sub-*, *ex-*,  
*under-*, *re-*

## UKRANIAN

Optional cases:

*за'гально'освітній,*  
*ко'ристо'любивий*

# INTONATION

**Intonation** – a complex unity of speech melody, sentence stress, tempo, pausation, timbre.