

Typology of Phonetic and Phonological Systems of English and Ukrainian

PHONETIC SYSTEM OF A LANGUAGE

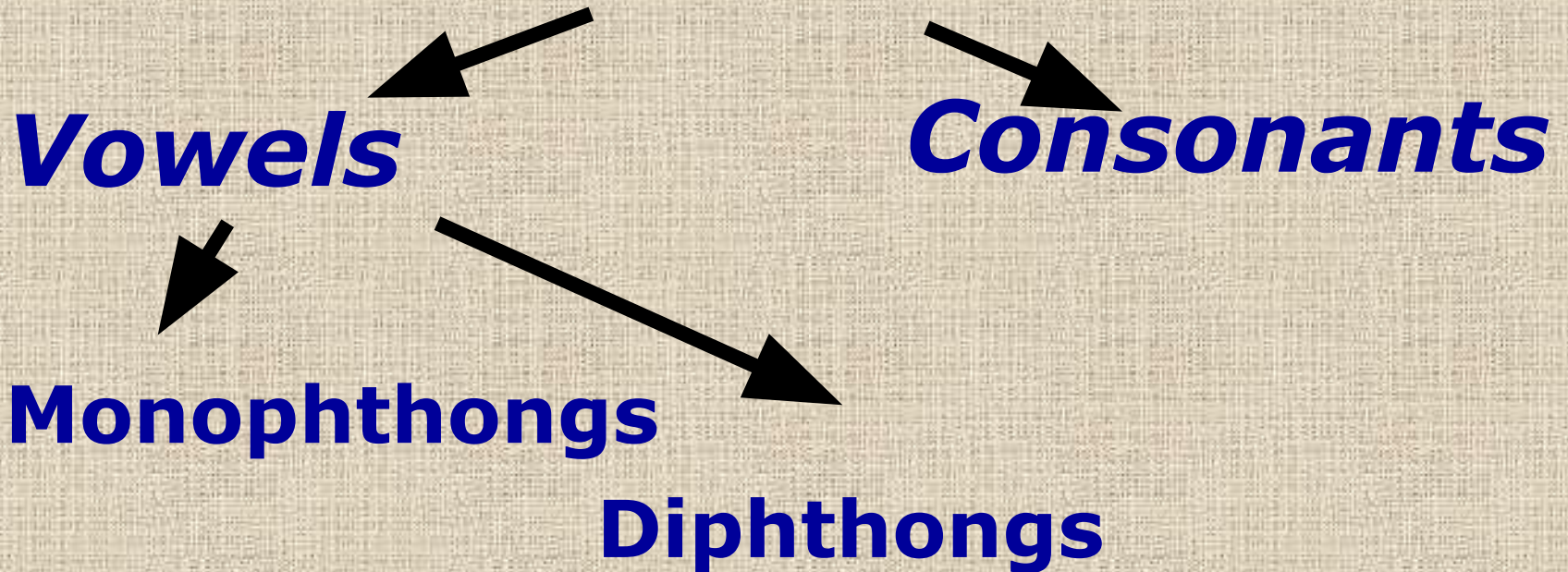
PHONEMES

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

CONSONANTS IN ENGLISH and UKRAINIAN

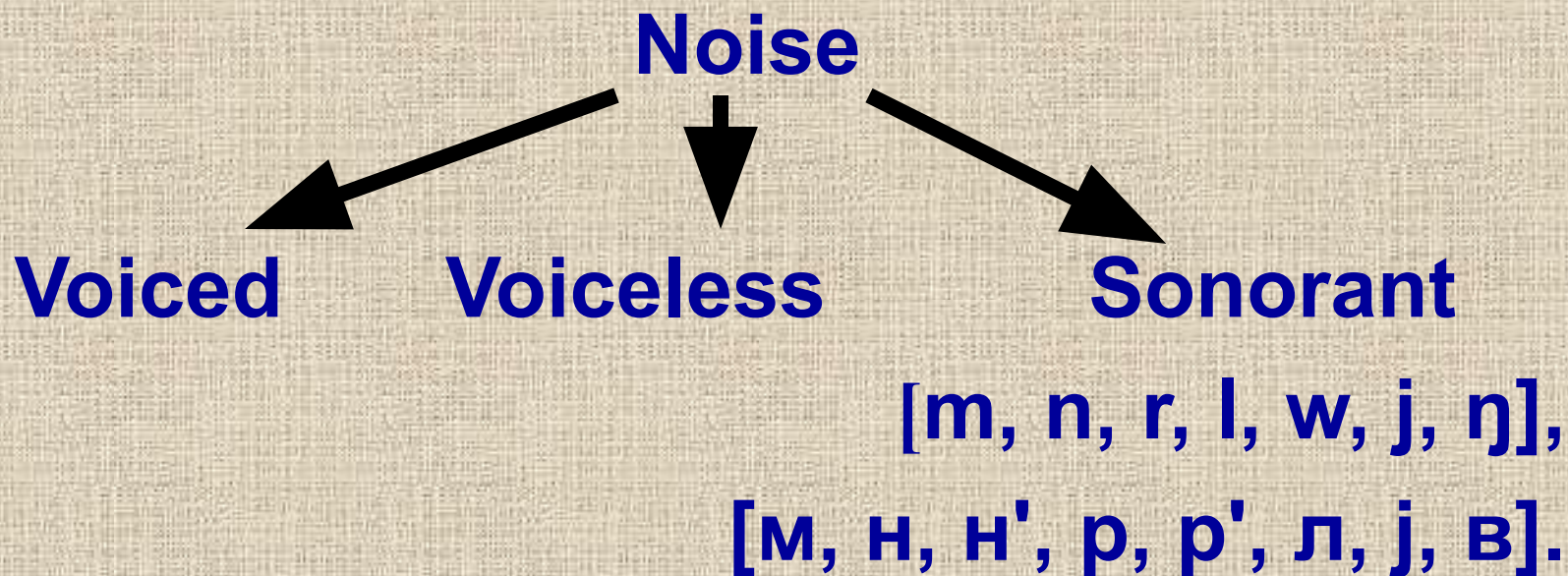
In English

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', κ, x];
- 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 928 1300 982">dieresis</p> <p data-bbox="1078 1025 1392 1079">epenthesis</p> <p data-bbox="1078 1122 1392 1176">metathesis</p> <p data-bbox="1078 1219 1402 1273">substitution</p> <p data-bbox="1078 1302 1261 1356">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

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

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

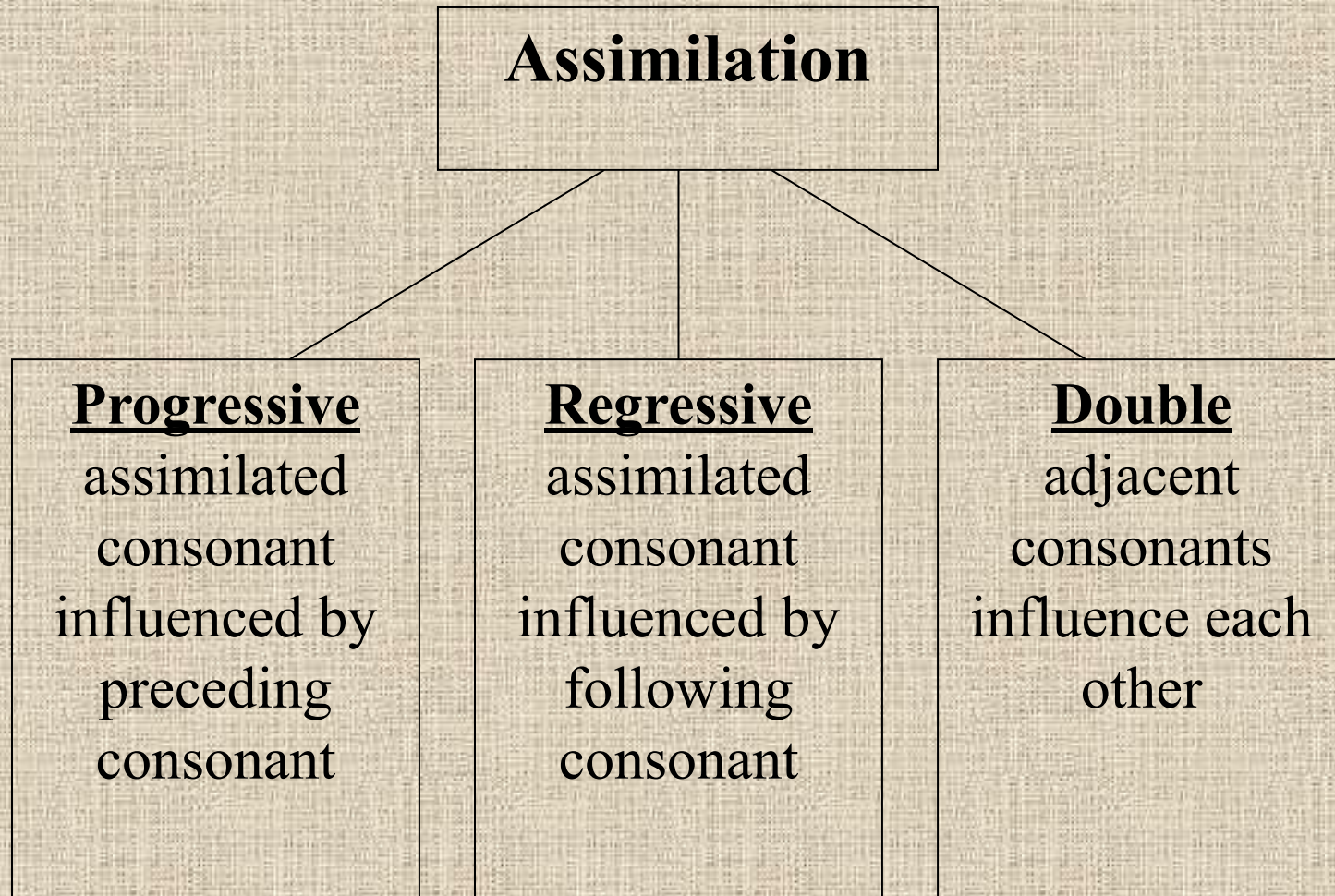
Partial

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

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graph TD; A[REDUCTION] --> B[QUANTITATIVE  
reduction of the length of a vowel observed without changing its quality]; A --> C[QUALITATIVE  
quality of a vowel is changed]; A --> D[ZERO  
omission of a vowel or a consonant];
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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

Depends on the stress	Depends on the initial sound	Depends on the final sound
<ul style="list-style-type: none"><li data-bbox="150 596 421 649">• Stressed<li data-bbox="150 878 486 931">• Unstressed	<ul style="list-style-type: none"><li data-bbox="724 596 989 649">• Covered<li data-bbox="724 878 1047 931">• Uncovered	<ul style="list-style-type: none"><li data-bbox="1246 596 1439 649">• Close<li data-bbox="1246 878 1433 931">• Open

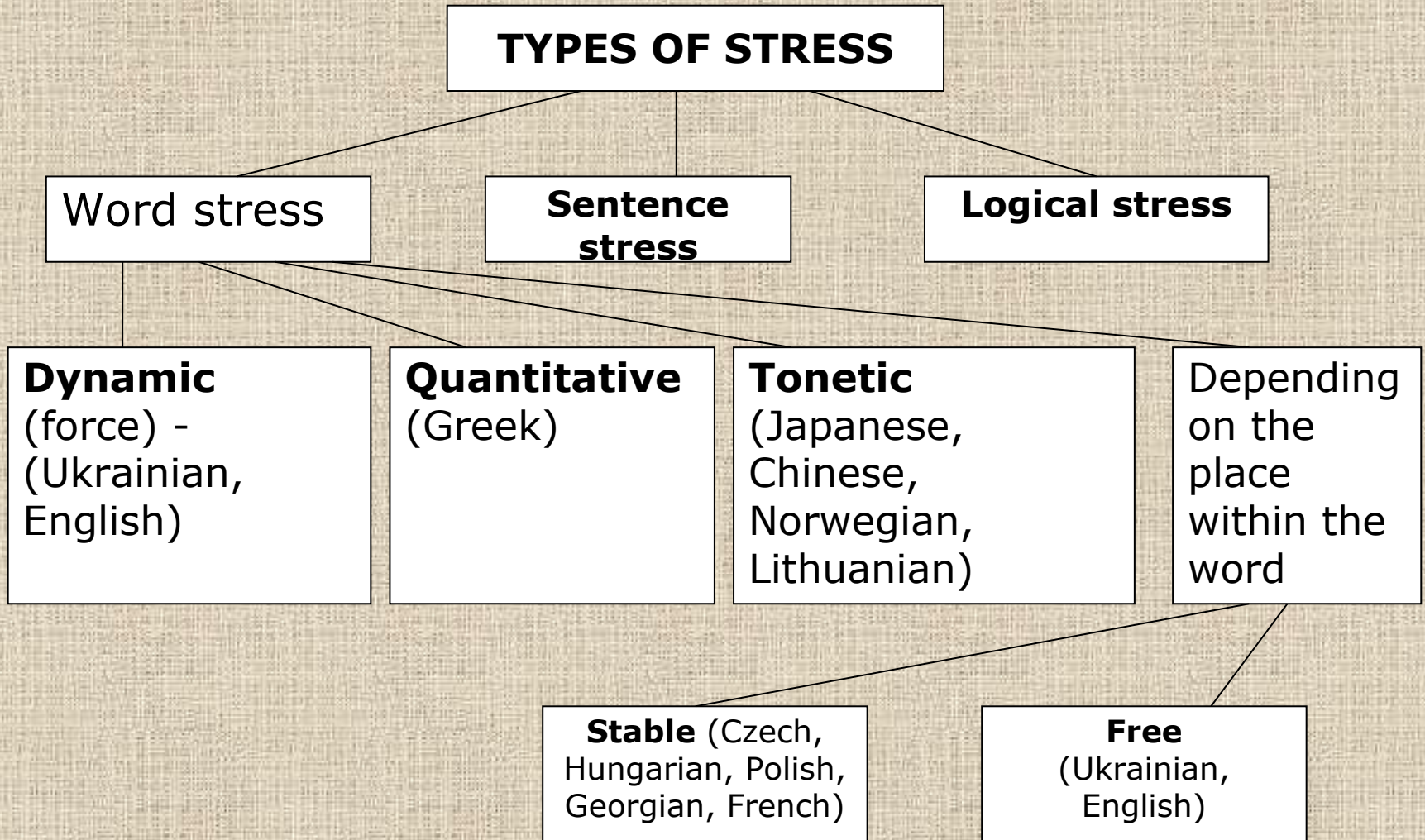
SYLLABLE

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

Word-stress

ENGLISH	UKRAINIAN
<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_ˌnunci'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.