

# **COURSE HANDOUT OF ARTICULATORY PHONETICS**

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By Dr. HEMAIDIA Mohamed, for 1<sup>st</sup> Year, L. students, 1<sup>st</sup> & 2<sup>nd</sup> Semester  
2020-2021, Faculty of Letters & Languages, Department of Letters &  
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## **ENGLISH ARTICULATORY PHONETICS**

For  
First Year English Students

**By Dr. HEMAIDIA Mohamed**

Holder of a doctorate in Linguistic & Phonetics of English

**Time Allotted to Phonetics Subject Teaching:**

**First Semester: 21 hours**  
**Second Semester: 21 hours**

**September 2020**

Phonetics  
for  
First Year English

\*L.M.D.\*

PHONETICS  
COURSE  
HANDOUT  
YEARLY  
REPARTITION



English Phonetics for 1st Year English Degree By: Dr. Hemaidia Mohamed



Yearly Repartition

No	Month	Lesson	Phonetic Items	Illustrations	Length
01	October First Week	- Phonetics: definition - Phonetics / Phonology - Sound/phoneme	* Phonetics / sub-branch of linguistics * Phonology/ sub-branch of linguistics	- Study/physical aspect/human speech sounds - Study of the function of sounds in a language or across languages	1h.30
02	October Second Week	Branches of Phonetics	* Articulatory phonetics * Acoustic phonetics * Auditory phonetics	* How sounds are produced * How sounds are transmitted between speaker & hearer * How sounds are perceived by the inner ear & the brain	1h.30
03	October Third Week	Physiological Phonetics	* Physiological Functions / organs of speech	<u>Lungs</u> : keep the human body survive/ remove impurities/send O <sub>2</sub> to blood cells <u>Teeth &amp; tongue</u> : digestion/tasting <u>Nose</u> : smell/clean/humidify air <u>Vocal chords</u> : prevent food/wrong direction	1h.30
04	October Forth Week	Physical Phonetics (1)	* Human Speech Process * Physical function/ organs of speech	<u>Lungs</u> : inhalation/exhalation process <u>Teeth &amp; tongue</u> : articulators <u>Nose</u> : resonator <u>Mouth</u> : resonator <u>Vocal chords</u> : Phonation process	1h.30
05	November First Week	Physical Phonetics (2)	* Respiration process * phonation process * resonation process * articulation process	* inhalation/exhalation * action of the vocal chords * action of the cavities: pharynx/mouth/ nose * action of the articulators	1h.30

No	Month	Lesson	Phonetic Items	Illustrations	Length
06	November Second Week	Articulatory phonetics	<ul style="list-style-type: none"> <li>* Active articulators</li> <li>* Passive articulators</li> <li>* State of the velum</li> </ul>	AA: lips, tongue, soft palate (velum) PA : teeth, alveolar ridge, hard palate a) Raised / for oral sounds b) Lowered / for nasal sounds	<b>1h.30</b>
07	November Third Week	English Vowels	* Daniel Jone's vowel quadrilateral (Cardinal Vowel diagram)	<ul style="list-style-type: none"> <li>- in terms of common features</li> <li>* height (vertical dimension)</li> <li>* backness (horizontal dimension)</li> <li>* roundedness (lip position)</li> <li>- close/open</li> <li>- front/back</li> <li>- half close/half open</li> <li>- central vowels</li> </ul>	<b>1h.30</b>
08	November Forth Week	Description of Vowels Criteria to describe a vowel	<ul style="list-style-type: none"> <li>* Height of the tongue</li> <li>* Part of the tongue</li> <li>* Shape of the lips</li> <li>* Length of the vowel</li> <li>* State of the velum</li> <li>* State of the vocal chords</li> <li>* State of the tongue</li> </ul>	<ul style="list-style-type: none"> <li>- raised/ lowered</li> <li>- front/ center/ back</li> <li>- spread/ neutral/ rounded</li> <li>- short/ long</li> <li>- raised/ lowered</li> <li>- for vibration</li> <li>- tense/ lax</li> </ul>	<b>1h.30</b>
09	December First Week	<b>(1) Front vowels</b> / i: /, / ɪ /, / e /, / æ /	<ul style="list-style-type: none"> <li>* / i: / : long vowel / front close / spread lips</li> <li>* / ɪ / : above half close / short / spread lip / short vowel</li> <li>* / e / : short vowel/ between half open &amp; half close / loosely spread lips</li> <li>* / æ / : short vowel/ below half close / neutral lip opening</li> </ul>	<ul style="list-style-type: none"> <li>* cheese, canteen, reason, sea, complete,</li> <li>- Long: [ i: ] __ see, seed, seen</li> <li>- Reduced [ ɪ ] __ seat, feet, piece, fierce</li> <li>* sit, fifth, with, rich, build</li> <li>- city, rhythm, symbol</li> <li>* set, bed, went, many, Thames</li> <li>- dead, head, breath</li> <li>* sat, hand, lamp, rash, marry</li> <li>- plait, plaid</li> </ul>	<b>1h.30</b>

No	Month	Lesson	Phonetic items	Illustrations	Length
10	December Second Week	(2) Central Vowels /ɜ:/, /ə/, /ʌ/	<ul style="list-style-type: none"> <li>* /ɜ:/: long vowel/ between half close &amp; half open / neutrally spread lips</li> <li>* /ə/: central vowel / neutral lip / short vowel</li> <li>* /ʌ/: short vowel/ above fully open / neutral lip opening</li> </ul>	<ul style="list-style-type: none"> <li>* bird, first, girl, myrtle</li> <li>- Long /ɜ:/ ___ fur, burn, bird, urge</li> <li>- Reduced [ɜ] ___ first, earth, worse</li> <li>* possible, gentlemen, woman, oblige</li> <li>- suppose, particular, mother, doctor</li> <li>* sun, cut, dull, son, come, among, done,</li> <li>- month, colour, monkey</li> </ul>	<b>1h.30</b>
11	December Third Week	(c) Back vowels /ɑ:/, /ɒ/, /ɔ:/, /ʊ/, /u:/	<ul style="list-style-type: none"> <li>* /ɑ:/: long vowel/ between the centre and the back /fully open</li> <li>* /ɒ/: fully open position/ short vowel</li> <li>* /ɔ:/: long vowel / medium lip rounding/ between half open &amp; half close</li> <li>* /ʊ/: short vowel/ above half close/</li> <li>* /u:/: long vowel/ back close vowel / rounded lips</li> </ul>	<ul style="list-style-type: none"> <li>* pass, after, bath, tomato, father, branch</li> <li>- Long /ɑ:/ ___ bar, far, farm, large, hard</li> <li>- Reduced [ɑ] ___ part, last, raft, lark, arch</li> <li>* dock, god, holiday, sorry, gone</li> <li>* cord, horse, sword, born, saw, lawn</li> <li>- Long /ɔ:/ ___ saw, war, born, board</li> <li>- Reduced [ɔ], as in: sort, ought, horse</li> <li>* put, full, sugar, cushion, butcher, wolf, woman, bosom</li> <li>* food, soon, moon, spoon, who, move</li> <li>- Long /u:/ ___ two, blue, food, move</li> <li>- Reduced [u] ___ boot, fruit, hoof, group</li> </ul>	<b>1h.30</b>
12	January Second Week	English Diphthongs	<ul style="list-style-type: none"> <li>* Centering diphthongs</li> <li>- Ending in /ə/: /ɪə/, /eə/, /ʊə/</li> <li>- Ending in /ɪ/: /eɪ/, /aɪ/, /ɔɪ/</li> <li>* Closing diphthongs</li> <li>- Ending in /ʊ/: /əʊ/, /aʊ/</li> </ul>	<ul style="list-style-type: none"> <li>* deer, dear, tear/ care, rare, share / endure, cure, sure</li> <li>* make, lady, waste/ time, write, bite / noise, voice, boil, point</li> <li>* so, old, home, folk / house, sound, out</li> </ul>	<b>1h.30</b>

No	Month	Lesson	Phonetic items	Illustrations	Length
13	January Third Week	English Triphthongs	<ul style="list-style-type: none"> <li>* Closing vowels + /ə/</li> <li>- eɪ+ə = eɪə</li> <li>- aɪ+ə = aɪə</li> <li>- ɔɪ+ə = ɔɪə</li> <li>- əʊ+ə = əʊə</li> <li>- aʊ+ə = aʊə</li> </ul>	<ul style="list-style-type: none"> <li>* eɪə ___ layer, player, mayor</li> <li>* aɪə ___ higher, fire, liar</li> <li>* ɔɪə ___ loyal, royal</li> <li>* əʊə ___ lower, mower</li> <li>* aʊə ___ power, flower, shower</li> </ul>	1h.30
14	January Forth Week	English Consonants	<ul style="list-style-type: none"> <li>* Classification of English Consonants</li> <li>- Place of articulation</li> <li>- Manner of articulation</li> <li>- Voicing</li> <li>- Table of consonants</li> </ul>	<ul style="list-style-type: none"> <li>Bilabial, labiodentals, dental, alveolar, post-alveolar, palate-alveolar, palatal, velar, glottal</li> <li>- plosives, fricatives, affricates, nasals, laterals, approximants</li> <li>- voiced / voiceless</li> </ul>	1h.30
15	February First Week	English Plosive consonants (1) *Description*	<ul style="list-style-type: none"> <li>* Bilabial plosives</li> <li>* Alveolar plosives</li> <li>* Velar plosives</li> <li>* Glottal plosive</li> </ul>	<ul style="list-style-type: none"> <li>- / p, b /</li> <li>- / t, d /</li> <li>- / k, g /</li> <li>- / ʔ /</li> </ul>	1h.30
16	February Second Week	English Plosive consonants (2)	<ul style="list-style-type: none"> <li>* A More Focus</li> <li>- Variants</li> <li>- Phonemic &amp; phonetic transcription</li> </ul>	<ul style="list-style-type: none"> <li>- Voicing: Fortis / lenis plosives</li> <li>- Aspiration / ejection</li> <li>- Unaspiration</li> <li>- Length of preceding vowels</li> <li>- Glottal stop reinforcement</li> <li>- Devoicing of / w, j, l, r / after / p, t, k /</li> <li>- / P, b / nasal / lateral resonance</li> <li>- Silent / p, b /</li> </ul>	1h.30
17	February Third Week	English Fricative consonants (1) *Description*	<ul style="list-style-type: none"> <li>* Labio-dental fricatives</li> <li>* Dental fricatives</li> <li>* Alveolar fricatives</li> <li>* palato-alveolar fricatives</li> <li>* Glottal fricative</li> </ul>	<ul style="list-style-type: none"> <li>- / f, v /</li> <li>- / θ, ð /</li> <li>- / s, z /</li> <li>- / ʃ, ʒ /</li> <li>- / h /</li> </ul>	1h.30

No	Month	Lesson	Phonetic items	Illustrations	Length
18	February Forth Week	English Fricative consonants (2)	* A More Focus - Variants - Phonemic & phonetic transcription	- Voicing: Fortis / lenis fricatives - Length of preceding vowels - Assimilation of /v/ into /f/ - Elision of /v/ in unaccented form of 'of' & 'have' - Elision of /θ, ð/ in certain words - Influence of alveolar fricative on dental fricative in rapid speech	1h.30
19	March First Week	English Affricates	* Post alveolar * palato-alveolar - A more focus	- /tr, dr/ - /tʃ, dʒ/ - Voicing: Fortis / Lenis affricates	1h.30
20	March Second Week	English Nasal Consonants (1) *Description*	* Bilabial nasal * Alveolar nasal * Velar nasal * Syllabic nasals	- / m / - / n / - / ŋ /	1h.30
21	March Third Week	English Nasal Consonants (2)	* A More Focus - Variants - Phonemic & phonetic transcription	- Assimilation of /m/ & /n/ as labio-dental /m/ as in: infant [ɪmfənt] - Partial devoicing of /m/ & /n/ after initial /s/: smoke' [sməʊk], 'snake' [sneɪk] - Assimilation of /n/ into [m] before a following bilabial, as in one mile [wʌm 'maɪl], gone back [gɒm 'bæk]	1h.30



No	Month	Lesson	Phonetic items	Illustrations	Length
22	April Second Week	English Laterals	<ul style="list-style-type: none"> <li>- Clear lateral</li> <li>- Dark lateral</li> <li>- Syllabic Lateral</li> </ul>	<ul style="list-style-type: none"> <li>- [ l ]</li> <li>- [ ɫ ]</li> <li>- [ l̥ ]</li> <li>- Devoiced lateral after initial /p, t, k /</li> <li>- Dark lateral after a vowel before a consonant / in word-final position</li> <li>- Syllabic lateral after stop consonants</li> </ul>	1h.30
23	April Third Week	English Approximant consonants (1) *Description*	<ul style="list-style-type: none"> <li>- Labio-velar semi-vowel</li> <li>- Unrounded palatal semi-vowel</li> <li>- Post-alveolar approximant</li> </ul>	<ul style="list-style-type: none"> <li>- / w /</li> <li>- / j /</li> <li>- / r /</li> </ul>	1h.30
24	April Forth Week	English Approximant consonants (2)	<ul style="list-style-type: none"> <li>* A More Focus</li> <li>- Variants</li> <li>- Phonemic &amp; phonetic transcription</li> </ul>	<ul style="list-style-type: none"> <li>* Shape of the lips for both /w/ &amp; /j/</li> <li>- /w/ voiced initially &amp; intervocalically</li> <li>- Devoiced [ w̥ ] after initial /t, k/</li> <li>- Slightly devoiced after initial /sk/</li> <li>- /j/ is voiced initially &amp; following voiced consonants</li> <li>- Completely devoiced after initial /p, t, k, h/</li> <li>- Slightly devoiced after /sp, st, sk/</li> </ul>	1h.30

25	May First Week	English Approximant consonants (3)	<ul style="list-style-type: none"> <li>* A More Focus</li> <li>- Variants</li> <li>- Phonemic &amp; phonetic transcription</li> </ul>	<ul style="list-style-type: none"> <li>- /r/ is fully voiced initially &amp; in intervocalically</li> <li>- /r/ link with following word beginning with a vowel</li> <li>- Devoiced [ɹ] following fortis accented plosives</li> <li>- devoiced after /sp, st, sk/</li> <li>- Fricative [r] after alveolar plosive /d/</li> <li>- Alveolar tap [ɾ]</li> <li>- Alveolar flap [ɾ]</li> <li>- Intrusive [ɹ]</li> <li>- Linking [ɹ]</li> </ul>	1h.30
26	May Second Week	Syllable Structure (σ)	<ul style="list-style-type: none"> <li>* Kind of syllables:</li> <li>- Monosyllabic</li> <li>- Disyllabic</li> <li>- Trisyllabic</li> <li>- Polysyllabic</li> <li>- Parts of the syllable</li> <li>- Onset</li> <li>- Nucleus</li> <li>- Coda</li> <li>* Rime / rhyme</li> <li>- Body</li> <li>- Tone</li> </ul>	<ul style="list-style-type: none"> <li>- stay</li> <li>- paper</li> <li>- important</li> <li>- interesting</li> <li>- <b>stream</b> /str/</li> <li>- <b>mate</b> /eɪ/</li> <li>- <b>mean</b> /n/</li> <li>* nucleus and coda ‘<b>start</b>’ /a:t/</li> <li>- onset and nucleus ‘<b>please</b>’ /pli:z/</li> <li>- Syllable as a whole ‘<b>lend</b>’ /lend/</li> </ul>	1h.30

<b>No</b>	<b>Month</b>	<b>Lesson</b>	<b>Phonetic items</b>	<b>Illustrations</b>	<b>Length</b>
<b>27</b>	<b>May Third Week</b>	<b>Word Stress</b>	- 2 syllable word  - 3 syllable word	* In Verbs - In Adjectives - In Nouns  * In Verbs - In Nouns	1h.30
<b>28</b>	<b>May Forth Week</b>	<b>General Revision</b>	- General Revision	- Syllable structure - Word Stress	1h.30

- 1) This course is written in **126** (one hundred and twenty six) **pages**
- 2) These pages carries **04** (four) **Sections**
- 3) These units are divided into **21** (twenty one) **lessons**
- 4) Each lesson is dealt with in **02** (two) **hours**
- 5) All lessons are dealt with in **42** (forty two ) **hours**, as scheduled in the **Canvas** of **1<sup>st</sup>** year '**License**'
- 6) The 42 hours cover 28 (twenty eight) **weeks**
- 7) The time allotted to the achievement of this phonetics course is divided into **21** (twenty one) **hours** in the first semester & **21** (twenty one) **hours** in the second semester, which provides a total of **42** (forty two) **hours** in all.

COURSE HANDOUT  
OF  
PHONETICS

GENERAL OUTLINE

# COURSE HANDOUT OF ARTICULATORY PHONETICS

## General Outline

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FIRST YEAR  
ENGLISH  
PHONETICS  
COURSE  
DESCRIPTION  
&  
OBJECTIVES



## FIRST YEAR ENGLISH PHONETICS COURSE

### DESCRIPTION & OBJECTIVES

This course puts the stress on both theoretical and practical aspects of vowels and consonants in phonetics. It is meant to familiarize Foreign learners of RP English, mainly students at the university level with all aspects of human speech sounds: how these sounds are produced using the different speech organs ‘articulatory phonetics’, their physical properties while they travel in the air from speaker’s mouth to listener’s ear ‘acoustic phonetics’, and the way they are perceived and recognized by the inner ear and the brain ‘auditory phonetics’. The different lessons are intended to enable learners to learn about human speech process and the journey in which the airstream goes through from the lungs until it gets its final shape by the different articulators before it is sent out from either the nasal and oral cavities, or the oral cavity alone. These lessons also deal with how phonetic knowledge can help learners acquire correct pronunciation of RP English vowels and consonants through the study of broad (phonemic) and narrow (phonetic) transcriptions of sounds. The study includes the articulation of each sound according to its occurrence in the different environments in the utterance (initially, medially, finally). The sounds are examined in both words in isolation, at word boundaries, or in phrases. Points in Phonotactics are also dealt with in this course. They encompass consonant clusters, syllable structure and word stress, which form important parts of prosodic features of speech (supra-segmental phonology). Practice activities are provided at regular intervals to ensure, consolidate and extend what has been learnt. In order to save time and effort for learners, elucidated words, accompanied by their phonemic transcriptions are presented nearly after each illustrated linguistic point to ease their understanding. Finally, samples of tests are given: this includes different activities meant for summative and formative evaluation of what has been dealt with in phonetics during the first and second semester of the academic year. A sample correction of an official examination is then given as a final work for the evaluation of students’ papers.

Though these original views and observations crystallize in both the material and its presentation, much of the information given is derived from the numerous sources quoted in the bibliography. The drawings representing human speech consonant sounds, for example, are taken from Ward’s ‘**The phonetics of English**’ (1972). Except for the English triphthongs, the vowel diagrams are taken from Gimson’s ‘**An Introduction to the Pronunciation of English**’(1989).

PHONETICS  
&  
HUMAN  
SPEECH  
MECHANISM

# Phonetics for first year English degree (L.M.D)

## SECTION ONE

- \* RP English Accent
- \* Phonetics and Phonology
- \* Organs of Speech
- \* Speech Mechanism
- \* Physical & Physiological Function of Speech Organs

### Lesson one

#### The Notion of RP English Accent

**RP ‘Received pronunciation’** English, also referred to as ‘the standard variety of English’ is the regionally neutral middle-class accent of English. This means that by hearing this accent one does not know where in the UK the speaker is from. So, they might be from London, Birmingham, Manchester, Liverpool, Yorkshire, or anywhere. This accent is not from a particular place. It is also called ‘Queen’s English’ because people assume that the Queen Elisabeth speaks with this typically British accent. It is the accent used by news presenters on BBC; although certain sounds, mainly in terms of vowels are not pronounced by some speakers according to the norms that govern RP English. It is also referred to as ‘Oxford English’ where this accent is used in Great Britain and is most widely taught in language schools all around the world. It is worth mentioning that RP is spoken by only three percent (3%) of the whole UK population.

**Characteristics of RP English:** RP English is spoken in clipped and precise tones using clipped consonants and elongated vowels (having sharp sounds and clear pronunciation). It seems a quite serious accent. It is the accent spoken by the upper-class category, *‘the accent mostly associated with the upper crust’*, Daniel J 1917. RP is widely understood and used as the world lingua-franca. Its main characteristic is defined as ‘non-regional dialect’, which does not tolerate any regional variation. Contrary to other regional accents which change over time, RP English is fixed; although some of its speakers very often introduce some changes that have taken place at the level of vowel sounds in certain regional accents into RP English. Most importantly is that one cannot identify the social, regional, and cultural background of an RP speaker

## Lesson two

### PHONETICS SUBJECT

**Phonetics is the branch of linguistics that is composed of**

**(1) Phonetics** /fə'netɪks/ is the subfield of linguistics that deals with (studies) the physical properties (aspects/characteristics) of human sounds (phones/voices), and the processes of their physiological production. The minimal linguistic unit in phonetics is the speech sound 'phone' in a language.

The field of phonetics is divided into three sub-disciplines based on the research questions involved on how humans plan and execute movements to produce speech; how different movements affect the properties of the resulting sound; and how humans convert sound waves to linguistic information. This can be summarized as follows:

**1. Articulatory Phonetics** is concerned with the articulation of human speech sounds (how sounds are produced), i.e., the position, shape and movement of the different articulators (speech organs, such as the tongue, lips, the vocal cords, etc. It studies the voicing, places of articulation and manners of articulation (V.P.M) of sounds. In general, what a person does to produce the different speech sound utterances.

**2. Acoustic Phonetics** is concerned with the physical properties of the sound waves, such as frequency & harmonies (resulting from the disturbance of air by some kind of movement). These disturbances of air are called sound waves. Acoustic Phonetics is what goes on between the speaker and the listener. We can hear, feel, touch, and measure the movement of speech sounds, i.e., energy in movement.

**3. Auditory Phonetics** is concerned with speech perception. (how sounds are Perceived, interpreted and understood by the inner ear and the brain). This is referred to as a neuro-physical process. It entails the study of the relationship between speech stimuli and the listener's response to such stimuli. The auditory perception includes sound loudness, pitch, sound quality, and length.

In a nutshell, phonetics broadly deals with two aspects of human speech: the production process \_\_ how humans produce sounds, and the process of perception \_\_ the way human speech is understood. Languages with oral-aural modalities such as English produce speech orally (using the oral cavity 'mouth') and perceive speech aurally (using the ears).

**(2) Phonology** /fə'nɒlədʒi/ is grounded in phonetics and is a subfield of linguistics that studies the sound system of a specific language or different languages. It describes the way sounds function within a given language or across languages. In other words, phonology is the abstract study of sounds and how these sounds are combined to convey meaning. The minimal functional distinctive unit of phonology is **the phoneme** /'fəʊni:m/. It is the mental representation of a speech sound or different sounds (no physical reality). It is a meaningful unit having a contrastive function (it is responsible for the change of meaning). It is a unit of sound that can distinguish one word from another in a particular language. For example, if we substitute the consonant phoneme /f/ for /r/ in a word like 'rat' /ræt/, it would result in 'fat' /fæt/. Similarly, the sound pattern /sɪn/ 'sin' and /sɪŋ/ 'sing' are two separate words distinguished by substituting one phoneme, /n/ for /ŋ/. In this situation, when two words differ in meaning through the contrast of a single phoneme, these words form what is referred to as a 'minimal pair'.

Speech sounds that differ but do not create a change in meaning in words are known as '**allophones**' /ælə'fəʊnz/ of the same phoneme. Allophones are the different realizations of the same phoneme in particular phonetic environments. They may be free and vary in the articulation of different speakers of languages or dialects, although this articulation would have no effects on word meaning.

Phonemes usually fall into two classes: consonants and vowels. Differences in words may depend on differences between these classes in different environments. Phonemes are conventionally placed between slashes in transcription / /, whereas speech sounds (phones) are placed between square brackets [ ].

Examples of the contrast of phonemes in different environments are as follows:

#### **In monosyllabic words:**

- 1. Initially:** 'bat' /bæt/ and 'rat' /ræt/ differ in only one consonant, i.e., /b/ and /r/. (initial phonemes are in contrast)
- 2. Medially:** 'hit' /hɪt/ and 'hat' /hæt/ differ in only a vowel, i.e., /ɪ/ and /æ/. (medial phonemes are in contrast)
- 3. Finally:** 'ring' /rɪŋg/ and 'rink' /rɪŋk/ differ in only one consonant, i.e., /g/ and /k/. (final phonemes are in contrast).

#### **In disyllabic words:**

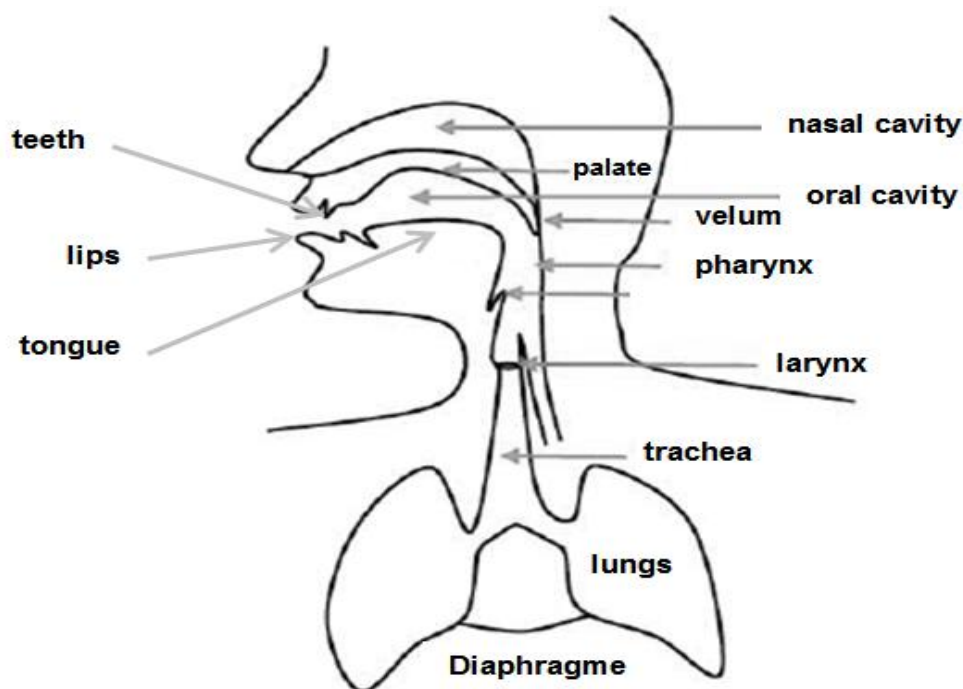
- 1. Initially:** 'harden' /hɑ:dən/ and 'garden' /gɑ:dən/ differ in only one consonant, i.e., /h/ and /g/ (Initial phonemes are in contrast)
- 2. Medially:** 'rider' /raɪdə/ and 'writer' /raɪtə/ differ in only a vowel, i.e., /ɪ/ and /e/. (medial phonemes are in contrast)
- 3. Finally:** 'riddle' /rɪdl/ and 'ridden' /rɪdn/ differ in only one consonant, i.e., /l/ and /n/ (final phonemes are in contrast).

## Lesson three

### Organs of Speech

#### Human Speech Process

Speech does not start in the lungs as some may think, but in the brain as soon as the message is thought of in the mind. Hence, some commands will be executed by the different speech organs to produce the different utterances. After this mental operation, all the organs, as shown in the figure below, contribute to the production of human speech sounds using the expelled airstream from the lungs ‘pulmonic egressive airstream’. The lungs, helped by the diaphragm, pull in and push out the air, which goes out via the trachea, and then it is submitted to the first obstruction in the larynx, as soon as it passes through. Inside the larynx, the air passes by the vocal chords, which, if they vibrate, make the sound voiced. Afterward, the air goes up through the pharynx and then escapes via either the oral and nasal cavities or the oral cavity only.



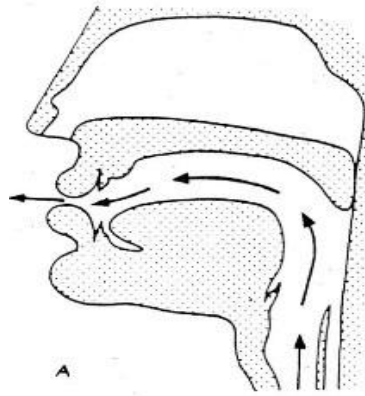
**Human's Organs of Speech**

#### Vocabulary:

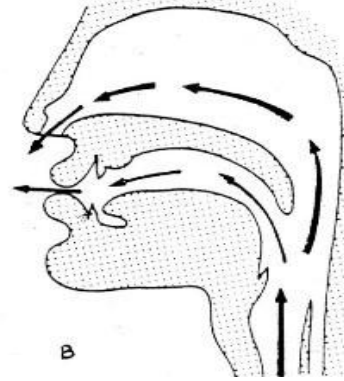
**‘lungs’** /lʌŋz/: two large sponge-like organs which serve as air reservoir and energy sounds

**‘diaphragm’** /daɪəfræm/: a large sheet of muscle lying between the lungs and the stomach

**‘trachea’** /trəˈkiə/: a large tube extending from the larynx to the bronchial tubes and conveying air from the lungs; windpipe



**A) Production of oral sound**



**B) Production of nasal sound**

### **Physiological functions of some speech organs**

The different organs of speech involved in speech production have other functions: the lungs and the diaphragm are involved in the breathing process. The diaphragm, the major muscle of respiration, contracts to enlarge the chest cavity and creates a vacuum that pulls the air into the lungs. The lungs make the body survive by transferring oxygen to the blood cells and muscles, remove impurities, and send out Carbon dioxide and other waste gases that the body does not need. The nasal cavity whose first function is to allow air to get through the respiratory system, cleans, heats, and humidifies /hju'mɪdɪfaɪz/ the air that is breathed in. The teeth and the tongue are used in digestion (chewing & tasting food), yet, the vocal chords have to be closed to prevent food from going down the wrong way 'respiratory passage'.

### **Physical function of the different speech organs (summary)**

Any speech manifestation is the result of quick and complicated chains of events on the part of the speaker. For example, an utterance such as 'She's so clever' involves a number of activities made by the different speech organs. How is the human speech sound produced, then?

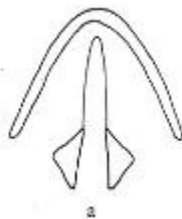
1) The first step is considered a psychological operation. It occurs in the brain. The nervous system transmits the message to the different organs of speech which will immediately act and create acoustic disturbances in the air.

2) Sounds of nearly all languages are made with an egressive pulmonic breath, i.e., the air coming from the lungs. These organs contract to produce the flow of air when we breathe in and out 'respiration process (1)', so that air travels upward to the vocal tract (oral or nasal cavity) via the trachea, and then to the larynx which is located behind the prominence in man's throat called 'Adam's apple'. The larynx contains two small bands of elastic tissue called the 'vocal chords'

responsible for regulating the amount of air coming from the lungs ‘phonation process (2)’. In doing so, the vocal chords can have the following positions:



**1. tightly together**



**2. apart**



**3. lightly together**

**a)** They can be brought together firmly so that they completely cover the top of the trachea (windpipe) for the glottal stop /ʔ/ as in: ‘work’ /wɜ:ʔk/; ‘football’ /fuʔbɔ:l/

**b)** They can be drawn apart to make a space between them (known as the glottis) through which the air can pass freely: this is their usual position in a time of rest for voiceless sounds like /p/ and /k/ in ‘park’ /pa:k/.

**c)** They can be brought together lightly ‘gently’ so that the air from the lungs will be able to force them apart for a moment, but they will return to the closed position; then the air will force them apart again, and they will close again, and so on. This is for voiced sounds; as /d/ in ‘harder’ /ha:də/.

After passing through the vocal cords with or without vibrations, the outgoing breath goes through the pharynx, which is a tube situated immediately above the larynx to connect the latter with the oral and nasal cavity (resonators), where this breath is given another shape ‘resonation process (3)’ for oral, nasal or nasalized sounds, the case of vowel articulation before nasal sounds. The pharynx is usually classed as an articulator. The best-known language that has consonants with the pharyngeal place of articulation is Arabic. Examples of that are the consonants /h/ (Voiceless **pharyngeal** fricative), as in ‘حليب’ /h / (ح) /hali:b/ ‘milk’; and ‘عين’ /ʕ / (ع) /ʕajn / ‘eye’.

The **soft palate** ‘velum’ is a thin soft sheet of muscle situated at the upper back part of the mouth in front of the back wall of the pharynx. Its main function is to separate the oral cavity from the nasal cavity; i.e., it creates a tight seal between the two cavities. The velum can have two positions:

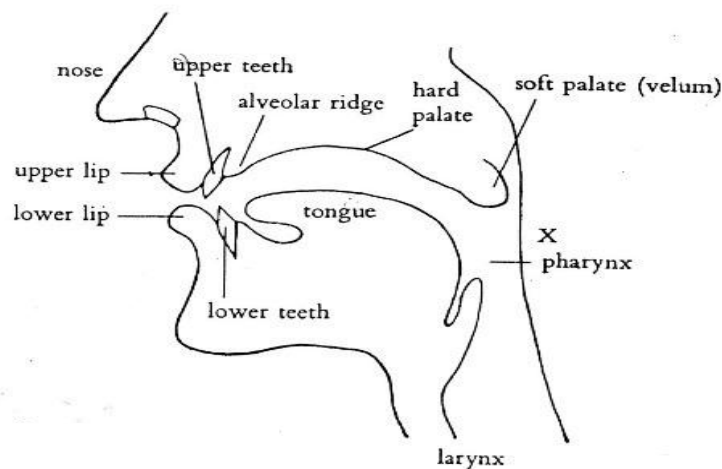
**1. Lowered**, where it remains away from the back wall of the pharynx. In this case, the air passes through the nasal cavity, while the mouth passage remains closed a little moment before it opens, and the air escapes from both cavities for the final articulation of the nasal sounds /m, n, ŋ /.



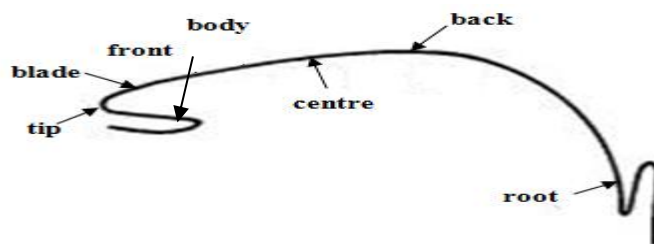
**2. Raised**, so as to press against the posterior back wall of the pharynx. In this case, the nose passage remains closed for a moment to prevent air from going through the nasal cavity; hence, it passes through the oral cavity ‘mouth’ producing oral sounds which include all sounds except the nasal ones mentioned above.

The last stage of sound production occurs in the mouth where it takes its final shape. After being shaped by the resonators (the 3 cavities: pharynx, mouth, nose), the airstream is obstructed at different points in the mouth. This obstruction varies between complete and partial according to the kind of consonant sound to be articulated ‘articulation process (4)’. The different articulators which provide the sound with its final shape are of two kinds:

- a) **Active articulators:**
  - 1) lips (lower/upper lips)
  - 2) tongue (tip, blade, front, part/body, centre, back/dorsum)
  - 3) soft palate (velum)
- b) **Passive articulators:**
  - 1) teeth (organs’ contact is mainly with the upper teeth)
  - 2) alveolar ridge /tooth ridge
  - 3) hard palate



**Active and Passive Articulators above the Larynx**



**Different Parts of Tongue**

RP ENGLISH  
VOWELS

## SECTION TWO

### Describing & Classification of Vowels

- \* English Front Vowels
- \* English Central Vowels
- \* English Back Vowels
- \* English Diphthongs

### Lesson 01

#### RP English Vowels

#### Describing & Classifying Vowels

In ordinary speech, a **vowel** is a voiced sound in which the air passes through the mouth in a continuous stream without any obstruction and narrowing that would produce audible friction (phonetic definition). In other words, a vowel is produced with an open vocal tract so that no build-up of air pressure at any point above the glottis.

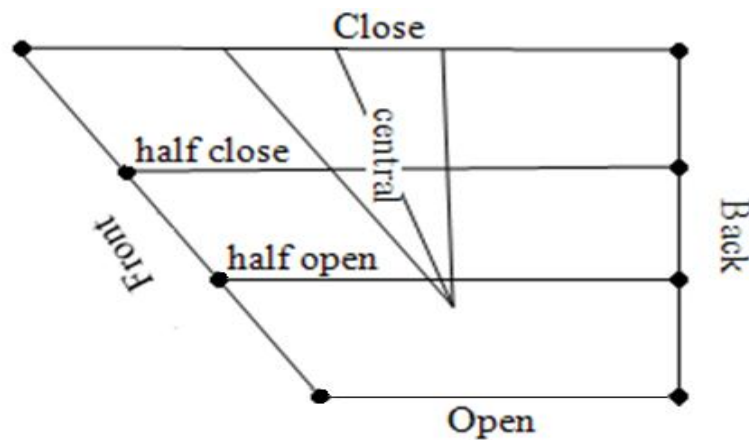
The word ‘vowel’ comes from the Latin word ‘*vocalis*’, meaning ‘speaking’, because in most languages words and speech, in general are not possible without vowels. Vowel is commonly used to mean both the ‘vowels’ and ‘written symbols’ that represent them.

Phonologically, vowels refer to those speech sounds that occupy the syllable central position; i.e., they form the most important part ‘nucleus/peak’ of the syllable.

It is worth noting the conflict between the phonetic and phonological definition of ‘vowel’. The approximant /j/ and /w/ illustrate this conflict: both are produced without much constriction in the vocal tract (so, phonetically they seem to be vowel-like), but they occur on the edge of syllables, such as at the beginning of the English words ‘yes’, and ‘wet’ (thus, phonologically, they are consonants).

## Classification of vowels

**Daniel Jones**, English Phonetician (1881 –1967) developed the Cardinal Vowel System (an imaginary scale for measurement) to describe vowels in terms of common features; height (vertical dimension), backness (horizontal dimension), and roundedness (lip position). These three parameters are indicated in the schematic IPA vowel diagram. This diagram referred to as ‘**the vowel quadrilateral**’ is a four-sided chart used as a reference for the description of vowels. In other words, it accounts for the range of vowels that the human vocal apparatus can make. Thus, the basis of the cardinal vowel system is physiological



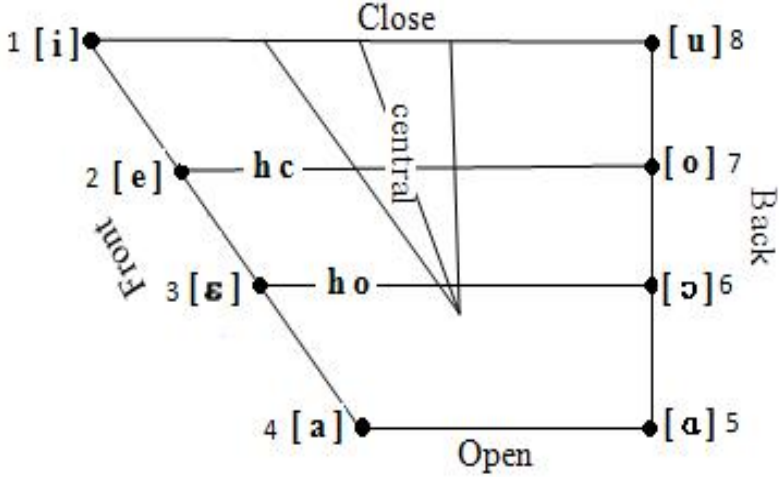
The parts of the tongue, the position and the shape of lips determine the quality and the shape of vowels. This can be summarized as follows:

**a)** The front of the tongue is raised as close as possible to the palate without friction being produced, for cardinal vowel [ **i** ].

**b)** The whole part of the tongue is as low as possible in the mouth with very slight raising at the extreme back, for cardinal vowel [ **a** ].

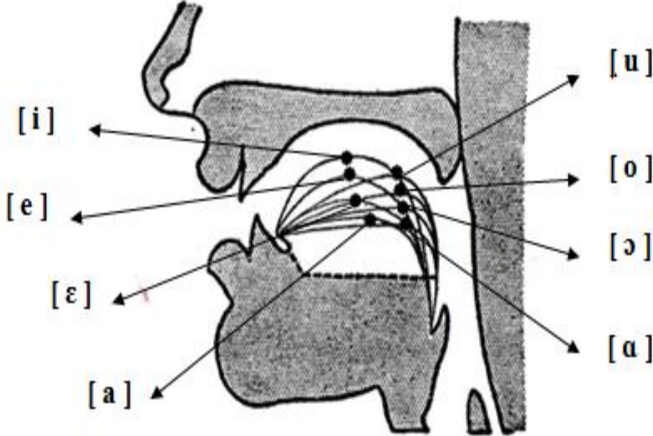
\* Starting from [ **i** ] position, the front of the tongue is lowered gradually, the lips remaining spread or neutrally open and the soft palate raised. The lowering of the tongue is stopped gradually at three points at which the vowel qualities are seen. From an auditory point of view, there is an equidistant point ‘same distance’ between the symbols [ **e** **æ** **a** ], which are assigned to these vowel values.

\* The back of the tongue is raised from [a] position, the lips are changed progressively from a wide-open shape to a closely rounded one, and the soft palate remains raised. These auditory equidistant points are established from the lowest to the highest position. Their symbols are: [ɔ o u]. Thus, there are **eight (8)** cardinal vowels illustrated on the diagram as follows:



\* Between Cardinal vowels 1 & 4, there are cardinal vowels 2 & 3. Between 5 & 8, there exist 6 & 7. There are equidistant points between all these cardinal vowels.

The tongue positions of the eight primary cardinal vowels can be illustrated in the following figure:



**Positions of the Eight Primary Cardinal Vowels  
(Tongue illustration)**

## Criteria needed in the description of vowels

When describing a vowel, the following criteria are needed:

### 1) Height of the tongue: whether **raised** or **lowered**

**For example:** Front of the tongue raised towards almost to close position of the hard palate (near cardinal vowel no **1**, for /i:/, as in ‘sea’, ‘feel’, ‘read’)

### 2) Part of the tongue: **front**, **center**, **back**

**a) Front vowels** occur when the front of the tongue is raised toward the hard palate.

**b) Central vowels** occur when the center of the tongue is raised toward the hard palate.

**c) Back vowels** occur when the back of the tongue is raised toward the soft palate.

### 3) Shape of the lips (the opening formed by the lips): the lips can have three shapes:

**a) spread:** the corners of the lips are moved away from each other, as for a smile, as in / i: / in ‘heal’, ‘ease’

**b) neutral:** the lips are not noticeably rounded or spread, as in / a: / in ‘calm’, ‘father’

**c) rounded:** the corners of the lips are brought together towards each other, with the lips pushed forward, as in / u: / in ‘shoes’, ‘move’

### 4) Length of the vowel: **short**, or **long**

### 5) State of the velum: always **raised**

### 6) Action of the vocal chords: for **vibration**

### 7) State of the tongue: **tense**, or **lax**

In general, **tense** vowels are closer than their **lax** counterparts. Tense vowels are sometimes claimed to be articulated with a more advanced *tongue root* than lax vowels, hence, tense vowels are longer in duration than lax vowels.

In other words, tense vowel sounds tend to be longer and stronger than lax vowel sounds. If a word ends with a voiced sound, then the vowel preceding it is tense, or it tends to be longer and stronger. If a word ends with a voiceless consonant, then the vowel preceding it tends to be more lax or relaxed.

**Observation:** Criterion no **07** does not create opposition. It is just the way the tongue is felt, i.e., it can be **tense** (contracted) or **lax** (not contracted)

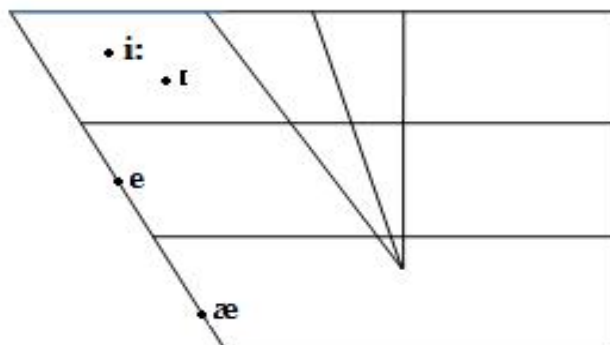
### 8) Contact between the **tongue rims** and the **upper molars** (is made by accident)

## Lesson Two

### Front Vowels

#### Description

(2) Front vowels / i: /, / ɪ /, / e /, / æ /



a) / i: /

**Examples:** \_\_ **i**, as in: machine, fatigue, suite, urine, bedim, centime  
\_\_ **ie**, as in: piece, shield, believe, retrieve, thief, achieve, sieve, retrieve  
\_\_ **ei**, as in: seize, receive, ceiling, receipt, deceive, caffeine  
\_\_ **ea**, as in: repeat, reveal, cease, please, increase, beans, lead, appeal  
\_\_ **ee**, as in: freedom, fees, redeem, canteen, feed, freedom, bleeding, eel  
\_\_ **e**, as in: these, be, economic, cede, be, equal, evil, cedar, edam, elongate  
\_\_ **ey**, as in: key

**Note:** / i: / in 'quay', 'people', 'Beauchamp' /'bi:tʃəm/ (Gimson 1989: 101)

Long: [ i: ] \_\_ read, freeze, breathe, flee, please, fees

Reduced [ ɪ ] \_\_ meet, least, lease, reef, beach

**Compare [ i: ] & [ ɪ ]** \_\_ feed, feet; seize, cease; lead, leak

**Note1:** Any long vowel is usually reduced before a fortis/voiceless consonant.

**Note2:** Any reduced long vowel is marked by omitting one point from the two which mark the vowel length [ V· ]

#### Vocabulary:

'bedim' /bɪ'di:m/: cause to become dim (less bright/faint)

'quay' /ki:/: a long platform beside the sea or a river where boats can be tied.

'Beauchamp' /'bi:tʃəm/: name of habitation of several places in France.

'cede' /si:d/: give up (power or territory)

'eel' /i:l/: a kind of snake-like fish

'Edam' /'i:dəm/: a yellow pressed cheese from the Netherlands, made in balls

**Description: 1-** The long vowel / i: / is articulated with the front of tongue raised to the position approximately below fully close position. **2-** The lips are widely spread with narrow jaw opening **3-** The tongue is tense with the side rims making a firm contact with the upper molars. This contact is made by accident. / i: / is described as a ‘high, front, unrounded, long vowel’

**Note:** When closed by the ‘dark’ [ ɫ ], /i:/ becomes diphthongal ( a schwa /ə/ is inserted between /i:/ and ‘dark [ ɫ ], as in: ‘feel’ [ fi:(ə)ɫ ]; ‘zeal’ [ zi:(ə)ɫ ]; ‘heel’ [ hi:(ə)ɫ ]; ‘deal’ [ di:(ə)ɫ ].

## b) / ɪ /

**Examples:** \_\_\_ i, as in: pit, bid, sister, twitch, activity, pick, stick, until, unfit, ethics  
\_\_\_ e, as in: judges, reaches, sorted, response, deceive, believe, shouted  
\_\_\_ ie, as in: bodies, cities, babies, remedies, forties, sorties, bundies  
\_\_\_ a, as in: image, damage, surface, senate, separate, private, intimate  
\_\_\_ y, as in: crystal, mystery, lyrics, oxygen, styptics, glyptic

**Note:** the /ɪ/ exists in words like: ‘build’, ‘Sunday’ (end of days of the week), ‘business’, ‘women’, ‘minute’, ‘England’ (Gimson 1989: 103)

### Compare:

[ i: ] & [ ɪ ] \_\_\_ green, grin; steal, still; leave, live  
[ i: ] & [ i̯ ] \_\_\_ least, list; sleep, slip; each, itch; leap, lip  
[ i: ] & [ i̯ ] \_\_\_ seed, seat; leave, leaf; league, leak  
[ ɪ ] & [ i̯ ] \_\_\_ kid, kit; lid, lit; rabid, rabbit; fig, fish

**Note 1:** Any short vowel is usually reduced before a voiced consonant.

**Note 2:** Any reduced short vowel is marked with a short [ ʌ ] on it.

### Vocabulary:

‘lyrics’ /'lɪrɪks/: the words of a song

‘styptics’ /'stɪptɪks/: a substance capable of stopping bleeding when applied to a wound

‘Glyptic’ /'glɪptɪk/: of or concerning carving or engraving

**Description: 1-** The short vowel / ɪ / is pronounced with the part of tongue nearer to the centre than to the front, raised just above half-close position with the jaw narrowly open **2-** The lips are loosely spread. **3-** The tongue is lax (compared with the tension for /i:/) with the side rims making a light contact with the upper molars. / ɪ / is described as a ‘high, front, unrounded short vowel’.



## Variants of /ɪ/

An alternation between the schwa /ə/ and /ɪ/, mainly in unaccented syllables is used among RP English speakers. Thus, the representing symbol /ɪ̯/ is mostly found in both phonemic and phonetic transcriptions.

a) In word-final position, /ə/ takes the place of /ɪ/:

- e.g. **\_ity**: /-əti/ instead of /-ɪti/ as in: **dignity**, **quality**, **extremity**, **quantity**
- \_itive**: /-ətɪv/ instead of /-ɪtɪv/ as in **additive**, **genitive**, **sensitive**
- \_ily**: /-əli/ instead of /-ɪli/ (especially after /r/) as **angrily**, **primarily**, **readily**, **hungrily**
- \_ate**: is usually pronounced as /-ət/ rather than /-ɪt/ as in **private**, **climate**, **private**, **approximate**, **accurate**
- \_ible**: /-əbl/ instead of /-ɪbl/ as in **adorable**, **inevitable**, **payable**, **excitable**
- \_em**: /-əm/ instead of /-ɪm/ or /-em/ as in **poem**, **anthem**, **system**

b) Sometimes, both /ɪ/ & /ə/ are heard in RP speakers' speech.

- e.g. **\_ess**: /-ɪs/ or /-əs/ as in **loudness**, **brightness**, **senseless**, **sadness**, **harshness**
- \_ace**: /-ɪs/ or /-əs/ as in **necklace**, **menace**, **surface**, **palace**
- e.g. **\_age**: pronounced mostly as /-ɪdʒ/ as in **damage**, **garbage**, **advantage**

**Note:** In some French loan words such as **barrage**, **camouflage**, the 'age' is pronounced as /a:(d)ʒ/

**\_et**: is pronounced as /-ɪt/ especially following /k, g, tʃ, dʒ/ as in **rocket**, **basket**, **target**, **widget**, **gadget**, **garret**

**Note:** the endings **\_let**, **\_ret** often have /-ət/, as in **bracelet**, **secret**, **claret**, **garret**

**\_be**: /ɪ/ is more common than /ə/, as in **because**, **between**, **behalf**; yet /ə/ is more common than /ɪ/ in words like **believe**, **belong**, **behave**.

## c) /e/

- Examples:**
- \_a**, as in: **many**, **Thames**, **marine**, **ate**
  - \_ai**, as in **said**, **again**, **against**, **saith**
  - \_ay**, as in **says** /sez/, but **not** in 'say' /seɪ/
  - \_e**, as in: **fed**, **red**, **wet**, **set**, **let**, **met**, **pet**, **set**, **net**, **wetly**, **restless**, **wretch**
  - \_ea**, as in: **dead**, **health**, **breath**, **wealth**, **dealt**
  - \_ei**, as in **Leicester**
  - \_ie**, as in **friend**
  - \_u**, as in: **bury**

- Compare:** /ɪ/, /e/
- \_pit**, **pet**; **knit**, **net**; **till**, **tell**; **lit**, **let**
  - [ɪ̯], [i̯], [e̯] **\_neat**, **knit**, **net**; **reach**, **rich**, **wretch**
  - [i:], [ɪ], [e] **\_feel**, **fill**, **fell**; **read**, **rid**, **red**; **feed**, **fid**, **fed**

**Vocabulary:**

‘**Thames**’ /temz/: a river in Southern England that flows through London to the North Sea  
‘**saith**’ /seθ/: old use of ‘says’ with 3<sup>rd</sup> person singular; this verb is also used in the Bible  
‘**wretch**’ /retʃ/: a poor, unhappy, or possibly unlucky person

**Description: 1-** The vowel / e / is articulated with the front of the tongue raised between half-open and half-close positions with medium jaw opening **2-** The lips are loosely spread, but lightly wider apart than for / ɪ /. **3-** The tongue rims make a light contact with the upper molars. / e / is described as a ‘mid front, unrounded short vowel’.

#### d) / æ /

**Examples:** \_\_ a, as in: cat, bad, back, carry, jacket, happen, marry, ramble, statue  
\_\_ ai, as in: plait, plaid

**Compare:** / ɪ /, / e /, / æ / \_\_ shit, shed, shad; lit, led, lad; mid, med, mad; kid, ked, cad  
[ ɪ ], [ e ], [ æ ] \_\_ bid, bed, bad; big, beg, bag; tin, ten, tan  
[ ɪ ], [ e ], [ æ ] \_\_ miss, mess, mass; pit, pet, pat; writ, ret, rat

**Note:** [ æ : ] ( before /b, d, g, dʒ/ ), as in: cab, bad, bag, badge and [ æ ] ( before /p, t, k, tʃ/, as in: cap, bat; back; batch

#### Vocabulary:

‘**ramble**’ /ræmbəl/: a long walk for enjoyment often in the country  
‘**plait**’ /plæt/: form of hair into a plait/plexus)  
‘**plaid**’ /plæd/: a type of cloth usually made of wool  
‘**ked**’ /ked/: any of various blood-feeding often wingless flies of the family Hippoboscidae /hipɒ'bɒskədəɪ/ that are parasitic on sheep, deer, and other animals  
‘**cad**’ /kæd/: usually a man who behave dishonourably, especially towards a woman  
‘**writ**’ /rɪt /: a form of written command in the name of a court or other legal authority to act, or abstain from acting, in some way  
‘**ret**’ /ret/: abbreviation of the word ‘retired’

**Description: 1-** The short vowel / æ / is articulated with the mouth slightly more open than for / e /. **2-** The front of the tongue is raised just below half-close position, with the side rims making a very slight contact with the back upper molars. **3-** The jaw is widely open and the lips are neutrally spread. / æ / is described as a ‘front open unrounded short vowel’.

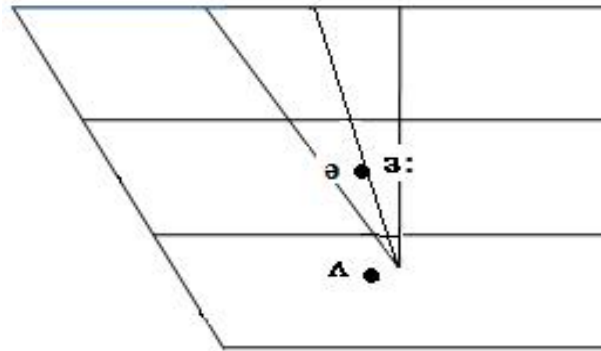
**Note:** The short vowel /æ/ appears to be lengthened in RP English, mainly before the lenis/voiced consonants /b, d, g, dʒ, m, n/ (dab, cad, bag, badge, ram, man). It seems to be equivalent in quality to the long vowels /i:, a:, ɔ:, ɜ:/. However, like all short vowels, it is reduced before any fortis/voiceless consonants.

## Lesson Three

### Central Vowels

#### Description

(3) Central vowels: / ə /, / ɜ /, / ʌ /



a) / ɜ: /

**Examples:** \_\_\_ **ir**, as in **bird**, **dirt**, **firm**, **skirt** **first**, **girl**, **thirty**, **thirsty**, **birthday**, **gird**  
\_\_\_ **ea**, as in: **earth**, **heard**, **learn**, **search**  
\_\_\_ **er**, as in **ear**, **merge**, **her**, **serve**, **berth**, **mercy**, **mercury**, **berserk**, **wert**  
\_\_\_ **ur**, as in **burst**, **fur**, **curd**, **turn**, **church**, **nurse**, **curl**, **burnt**, **purple**  
\_\_\_ **err**, as in: **err**  
\_\_\_ **our**, as in **journey**, **courtesy**, **scourge**  
\_\_\_ **urr**, as in: **purr**  
\_\_\_ **W + or**, as **word**, **world**, **work**, **worse**, **worthy**, **worship**, **worm**  
\_\_\_ **yr**, as in: **myrtle**

**Note:** / ɜ: / in 'colonel' /kɜ:nl/

Long [ ɜ: ], as in: fur, burn, bird, urge

Reduced [ ɜ ] , as: in first, earth, worse, church

**Compare** [ɜ:] , [ɜ], as in heard, hurt; bird, birth; third, thirst; hers, nurse; Thursday, thirsty; curve, surf

#### Vocabulary:

'**berth**' /bɜ:θ/: a place where a ship can stop and be tied up, as in a harbour

'**Berserk**' /bɜ:'sɜ:k/: mad with violent anger

'**err**' /ɜ:/: to make an error or mistake

'**courtesy**' /'kɜ:təsi/ : showing of politeness in one's attitude and behaviour towards others.

'**scourge**' /skɜ:dʒ/: hist. a whip (piece of leather) used as an instrument of punishment

'**myrtle**' /'mɜ:tl/: a kind of tropical tree

'**purr**' /pɜ:/: to utter a low, continuing murmuring sound expressive of contentment or pleasure.

'**worm**' /wɜ:/: a small thing creature with no backbone or limits like silkworms

**Description: 1-** The long vowel /ɜ:/ is a central vowel articulated with the centre of the tongue raised between half-close and half-open. **2-** No firm contact is made between the tongue and the upper molars. **3-** The jaw is medially open and the lips are neutrally spread. /ɜ:/ is described as a ‘mid, central, unrounded, long vowel’.

**Variants:** / ɜ: / is sometimes reduced to [ ə ] in unaccented syllables. In the words: ‘amateur’, /'æmətɜ:/ and pennyworth /'penɪwɜ:θ/, the stress is on the first syllable, thus the /ɜ:/ is changed into [ə]; the result would be: ['æmətə] and /'penɪwəθ/.

### b) / ə /

**Examples:** \_\_\_ / ə / may be spelt with most vowel letters and their combinations.

- e.g. \_\_\_ **i**, as in: possible, edible, animal, family, pencil, experiment, decimal, dilemma  
\_\_\_ **e**, as in: gentlemen, wonder, wonderful, enemy, problem, system, veteran  
\_\_\_ **a**, as in: woman, gentleman, dilemma, balloon, again, pleasant, banana, adopt  
\_\_\_ **o**, as in: obtain, oblige, observe, obscure, obedient, salmon, gallon, parrot  
\_\_\_ **u**, as in: suppose, support, album, circumstance, survive, medium, stadium  
\_\_\_ **ar**, as in: particular, beggar, Trafalgar, popular, collar, scholar, muscular  
\_\_\_ **e**, as in: problem, celebrate, enemy, synthesis, system, symmetry, remedy  
\_\_\_ **er**, as in: mother, danger, stranger, bearer, bigger, robber, passenger, power  
\_\_\_ **or**, as in: demeanor, actor, protractor, enamel, warrior, collector, devisor  
\_\_\_ **ou**, as in: famous, gorgeous, spacious, enormous, advantageous, conscious  
\_\_\_ **our**, as in: colour, behaviour, endeavour, savour, favour, neighbour, harbour  
\_\_\_ **ure**, as in: figure, departure, creature, closure, caricature, culture, literature  
\_\_\_ **y**, as in: syringe, analysis, Pennsylvania, synonymous, sibyl, Cyrillic

It should be noted that schwa / ə / is normal in common unaccented weak forms of such words like: a, an, the, to, for, but, and, etc.

### Vocabulary:

‘edible’ /'edəbəl/ to be eaten ; eatable

‘dilemma’ /də'lemə/: a difficult choice to be made between two courses of action, both undesirable

‘salmon’ /'sæmən/: a type of large fish with silvery skin which lay eggs

‘warrior’ /'wɔ:riə/: especially in ancient times, a brave or experienced soldier or fighter

‘savour’ (v) /seɪvə/: to taste good food or drink and enjoy it completely

‘sibyl’ /sɪbəl/: a woman in ancient times supposed to utter the oracles (revelations) and prophecies of god

‘Cyrillic’ /sə'ɪɪlɪk/: alphabet used by many Slavic Peoples

**Description:** 1- / ə / is a quick, relaxed, neutral, central vowel in which the vocal tract is in its neutral position. 2- It frequently occurs in unaccented syllables. 3- The lips are in their neutral position 4- The tongue is raised between half-open and half-close, and the jaw is completely relaxed 5- Its quality varies depending on the adjacent consonant sounds; for example, in the vicinity of velar consonants /k, g/ and /ŋ/, the tongue may be slightly more raised and retracted, as in: ‘long ago’ /lɒŋ ə’gəʊ/. However, in word-final position, the schwa may be articulated in half-open position as in builder, Colchester, banana, etc. / ə / is described as a ‘mid, central, unrounded, short vowel’.

**Note:** Sometimes, there is an alternation between the schwa / ə / and the short vowel /ɪ/. This is found in dictionaries in the symbol form of /ɪ̯/, as in the word ‘sincerity’ /sɪn’serəti/

### c) /ʌ/

**1) Examples:** \_\_ u, as in: cut, fun, dull, humble, hunter, punk, sunny, uncultured  
 \_\_ o, as in: none, some, among, monetary, month, colourful, monk, London  
 \_\_ oo, as in: blood, flood  
 \_\_ ou, as in: country, southern, double, couple, trouble, enough, younger  
 \_\_ oe, as in: does

**Compare:** /æ/, /ʌ/ \_\_ hat, hut; stamp, stump; match, much, catch, cutch  
 [ə], [ɜ:], [ʌ̃], [ʌ], \_\_ curt, curd; cut, cud; birth, bird; bud, but; dirt, dirge  
 Dutch, drudge

### Vocabulary:

**‘punk’** /pʌŋk/: a worthless person (often used as a general term of abuse)

**‘stump’** /stʌmp/: the bottom part of a tree left projecting from the ground after most of the trunk has fallen or been cut down

**‘cutch’** /kʌtʃ/: a kind of green tea

**‘dirge’** /dɜ:dʒ/: a slow sad song sung over a dead person

**‘drudge’** /drʌdʒ/: to do hard, humble, or uninteresting work

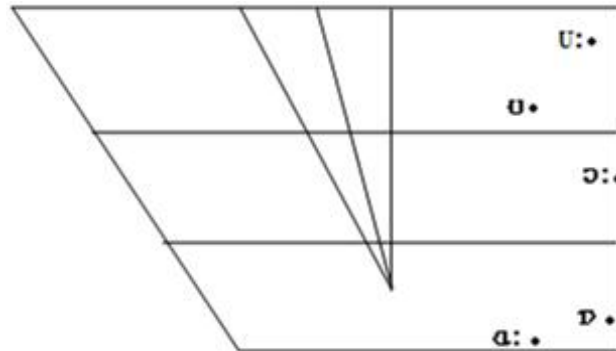
**Description:** 1) The short vowel /ʌ/ is articulated with the jaws considerably separated 2) The lips become neutrally open 3) The centre of the tongue is raised just above the fully open position 4) In the process, no contact is being made between the tongue and the upper molars 5) /ʌ/ does not occur in final open syllables. /ʌ/ is described as an ‘open, central, neutral, unrounded, short vowel’.

## Lesson Four

### Back Vowels

#### Description

(3) Back vowels: /ɑ:/, /ɒ/, /ɔ:/, /ʊ/, /u:/



a) /ɑ:/

**Examples:** \_\_ a, as in: after, arsenal, glance, glass, half, impala, banal, dancer  
\_\_ ar, as in: part, march, card, farther, carpenter, darkness, arsenal  
\_\_ ear, as in: heart, hearth, hearty  
\_\_ er, as in: clerk, Derby, sergeant  
\_\_ al, as in: calm, palm, half, calf, salve  
\_\_ au, as in: aunt, laugh

**Note:** /ɑ:/ in 'vase', and in recent borrowings from French in which the French -oir [wa:], e.g. 'reservoir'

Long [ɑ:], as in: card, starve, large, hard, banal, garage (Fr. loan word), calm

Reduced [ɑ], as in: March, last, heart, lark, start, park, glass

**Compare:** [ɑ:], [ɑ̃] \_\_ hard, heart; cars, class; starve, staff; Marge, match  
[ɑ̃], [ɑ̃] \_\_ heart, hut; march, much; park, puck; barb, buck  
[ɑ:], [ɑ̃] \_\_ card, cud; hard, hub; cars, cub; bard, bud, barb, bub

#### Vocabulary:

'impala' /ɪm'pɑ:lə/: a kind of large brownish graceful African deer-like animal

'hearth' /hɑ:θ/: the area around the fire in one's home, esp. the floor of the fire place

'salve' /sɑ:v/: oily paste to be put on a cut, or a wound to help the forming of the new skin

'Marge' /mɑ:ʒ/: a margin or edge

'cud' /kʌd/: food that has been swallowed and brought up again to the mouth from the first stomach of certain animals, such as sheep and cows, etc., for further chewing

'hub' /hʌb/: the central part of a wheel

'cub' /kʌb/: the young of a fox, bear, lion or other carnivorous mammals

'bard' /bɑ:d/: a poet

'bub' /bʌb/: an aggressive or rude way of addressing a boy or man

**Description: 1)** The long vowel /ɑ:/ is articulated with the jaws considerably separated. **2)** The lips become neutrally open. **3)** The tongue is in its fully neutral position. **4)** In the process, no contact is being made between the tongue and the upper molars. /ɑ:/ is described as an 'open, back, neutral, unrounded, long vowel'.

### b) /ɒ/

#### Examples:

- \_\_\_ a, as in: wash, wad, wander, what, want, watch, quality, wallet, swan
- \_\_\_ au, as in: restaurant, sausage, Austria, Australia, cauliflower, austerity
- \_\_\_ o, as in: shop, sorrow, model, involve, doctor, follow, obvious, policy
- \_\_\_ ou, as in: cough, trough /trɒf/, Gloucester /glɒstə/
- \_\_\_ ow, as in: knowledge, acknowledge

**Compare:** [ɒ], [ɑ:] \_\_\_ cod, card; rod, yard; God, guard; evolve, valve

[ɔ̃], [ɑ:] \_\_\_ pot, part; cough, calf; off, half; sot, smart; loch, larch

#### Vocabulary:

'wad' /wɒd/: a bundle (package) of paper, banknotes, or documents

'trough' /trɒf/: a long narrow boxlike object, esp. for holding water or food for animals

'Gloucester' /'glɒstə/: a cathedral city situated in the South West of England

'sot' /sɒt/: a person who is habitually drunk and unable to think clearly

'loch' /lɒk/: a lake ; a part of the sea enclosed by land

'larch' /lɑ:tʃ/: a tall upright tree with bright green needle-like leaves and hard skin fruit

**Description: 1)** The short vowel /ɒ/ is articulated with wide-open jaws and slight open lip-rounding. **2)** The back of the tongue is in its fully open position. **3)** No contact is made between the tongue and the upper molars. /ɒ/ is described as an 'open, back, rounded, short vowel'.

### c) /ɔ:/

#### Examples:

- \_\_\_ a, as in: fall, talk, salty, water, ball, caller, wallet, smaller
- \_\_\_ ar, as in: towards, reward, award, warless, quart
- \_\_\_ au, as in: daughter, sauce, fault, naughty, caudle, maudlin, gaudy
- \_\_\_ aw, as in: raw, hawk, straw, yawn, strawberry, crawling, drawly, lawless

- \_\_ **oa**, as in: **abroad, broadly, broadcast**
- \_\_ **oar**, as in: **hoard, oar, board, soared, soar, roar, Foard, coarse**
- \_\_ **or**, as in: **short, horn, torn, porch, form, dormitory, cordially, floret**
- \_\_ **ore**, as in: **more, snore, spore, before, shored, adore, cornet, hornet**
- \_\_ **oor**, as in: **moor, floor, spoor, coordinate, microorganism, doorway**
- \_\_ **ou**, as in: **sought, ought, fought, wrought**
- \_\_ **our**, as in: **court, four, source, pouring, courtesy**

**Note 1:** /ɔ:/ in 'sure' /ʃʊə/ ; 'poor' /pʊə/ or with /ʊə/ 'sure' /ʃʊə/ or 'poor' /pʊə/

**Note 2:** /ɔ:/ does not occur before /ŋ/

Long [ɔ:], as in: saw, war, born, board, dawn

Reduced [ɔ], as in: sort, ought, horse, chalk, quart

**Compare:** [ɔ:], [ɔ] \_\_ saw, sort; war, wart; board, bought; saws, sauce

[ʊ], [ɔ:] & [ɔ], [ɔ] \_\_ cod, cord; don, dawn; stock, stork

[ʊ], [ɔ], [ɔ], [ɔ:] \_\_ not, nod, north, northern

### Vocabulary:

'hawk' /hɔ:k/: a kind of large bird which catches other birds and small animals with its feet

'wrought' /rɔ:t/: (of metals) beaten out or shaped by hammering

'gaudy' /gɔ:di/: a celebratory reunion dinner or entertainment held by a college

'quart' /kɔ:t/: a unit of liquid capacity equal to a quarter of a gallon of two pints

'floret' /'flɔ:rət/: one of the small flowers making up a composite flower head

'moor' /mɔ:/: make fast (a boat) by attaching it by cable or rope to the shore or to an anchor

'oar' /ɔ:/: a long pole with a flat blade used for rowing a boat

'roar' /rɔ:/: ( of a lion or other large wild animal) utter a full, deep, prolonged cry

**Description: 1)** The long vowel /ɔ:/ is articulated with medium lip-rounding. **2)** The back of the tongue is raised between half-open and half-close positions. **3)** No contact is being made between the tongue and the upper molars. /ɔ:/ is described as a 'mid, back, rounded, long vowel'.

### d) /ʊ/

**Examples:** \_\_ **u**, as in: **pull, sugar, cushion, bullring, butcher, fulfill**

\_\_ **o**, as in: **wolf, woman, bosom, Wollongong** /'wʊləŋgɒŋ/

\_\_ **oo**, as in: **good, rook, wood, wool, look, took, hooker, wooden, childhood**

\_\_ **ou**, as in: **group, could, should, would, courier**

\_\_ **or**, as in: **Worcester** /'wʊstə/; **worsted** (cloth) /'wʊstɪd/

**Compare:** [ʊ], [ɔ:] \_\_ could, cord; wood, ward; should, shored; pull, palled

[ʊ], [u] \_\_ could, foot; hood, hook; good, put



## Vocabulary:

**‘Wollongong’** /ˈwɒləŋɡɒŋ/: a seaside city located in the Illawarra region of New South Wales, Australia

**‘Worcester’** /ˈwɜːstə/: is a cathedral city in Worcestershire /ˈwɜːstəʃə/, England, 136 km North West of London

**Description: 1)** The short vowel /ʊ/ is articulated with the part of the tongue nearer to the centre than to the back, which is raised just above half-close position. **2)** The tongue has a lax state (compared with the tenser /uː/. **3)** No firm contact is being made between the tongue and the upper molars. /ʊ/ is described as a ‘high, back, rounded, short vowel’.

### e) /ʊː/

**Examples:** \_\_\_ **oo**, as in: mood, school, food, cartoon, blooming, rooster, poodle, loosen  
\_\_\_ **o**, as in: do, who, two, prove, lose, whom, move, lose, improve, remove  
\_\_\_ **ou**, as in: group, soup, troupe, wound, through, route, crouton, routine  
\_\_\_ **u**, as in: rude, June, accuse, beautiful, abuse, induce, illusion, include  
\_\_\_ **ew**, as in: chew, crew, flew, screw, shrewd, brewery, cashew  
\_\_\_ **ue**, as in: blue, flue, fluent, cruelly, pursue, queue, revue, rescue, subdue  
\_\_\_ **ui**, as in: juice, cruise, bruit, recruit, bruise, suitcase, sluice, suitor  
\_\_\_ **oe**, as in: shoe, canoe  
\_\_\_ **ooe**, as in: cooed, mooed, tattooed, wooed  
\_\_\_ **iew**, as in: view, review, interview, viewpoint

**Note:** In many cases of the spelling u, eu, ew, ue, ui, /ʊː/ is preceded by /j/, e.g. music, duke, new, few, hue, argue, nuisance, beauty; in some words, both /ʊː/ and /jʊː/ are heard, e.g. ‘suit’ /sjuːt/ or /suːt/, ‘enthusiasm’ /ɪnˈθjuːziæzəm/ or /ɪnˈθuːziæzəm/.

Long [ʊː], as in two, blue, food, move

Reduced [ʊ], as in boot, fruit, hoof, group, douche, hoop

**Compare** [ʊː], [ʊ] \_\_\_ shoe, shoot; rude, root; lose, loose; use (v), use (n); nude, newt  
Jews, juice

[ʊː], [ʊ] \_\_\_ food, good; pool, pull

[ʊ], [ʊ̯] \_\_\_ boot, foot; loop, look

[ʊː], [ʊ] ; [ʊ], [ʊ̯] \_\_\_ food, foot; hood, hook

**Note:** /ʊː/ does not normally occur before [ŋ]

**Description: 1)** RP long vowel /ʊ:/ is a back close vowel, with a raising relaxed tongue. **2)** The articulation of /ʊ:/ is tense compared with that of /ʊ/. **3)** No firm contact is made between the tongue and the upper molars. The lips tend to be closely rounded and centralized. /ʊ:/ is described as a ‘high, back, rounded, long vowel’.

### **Vocabulary:**

**‘poodle’** /pu:dl/: a type of dog with thick curling hair, usually cut in special shapes

**‘crouton’** /krʊ:tɒn/: (French) a small square piece of bread toasted or cooked in fat and eaten in soup

**‘shrewd’** /ʃru:d/: well-reasoned and likely to be right; clever in judgment

**‘brewery’** /'brʊ:əri/ a place where beer is made

**‘cashew’** /kæʃu: ; kəʃu:/: an edible kidney-shaped nut, rich in oil and protein

**‘subdue’** /səb'dju:/: overcome, quieten, or bring under control

**‘bruise’** /brʊ:z/: an injury appearing as an area of discoloured skin on the body, caused by a blow or impact rupturing underlying blood vessels

**‘sluice’** /slʊ:s/: a sliding gate or other device for controlling the flow of water, especially one in a lock gate

**‘cooed’** /ku:d/: past of ‘coo’(of a pigeon or dove): make a soft murmuring sound

**‘moored’** /mʊ:d/: past of ‘moo’ deep vocal sound of a cow

**‘tattooed’** /tæ'tu:d/: past & pp. of ‘tattoo’: mark (a person or part of the body) with an indelible design by inserting pigment into punctures in the skin

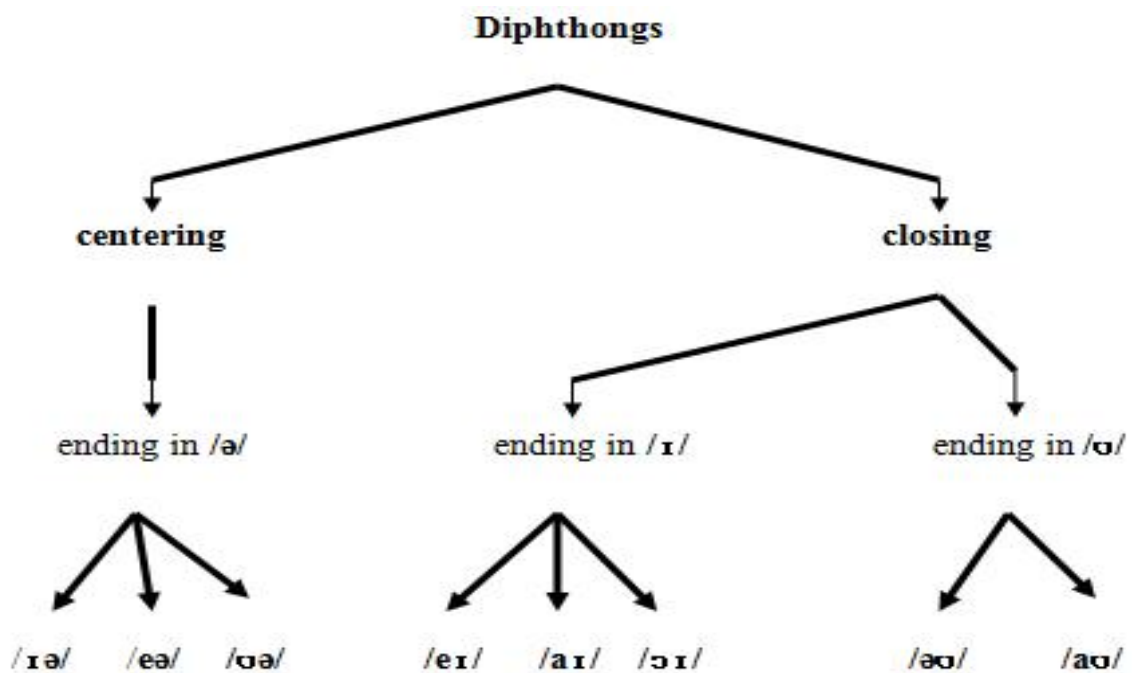
**‘wooed’** /wu:d/:past of ‘woo’; try to gain the love of someone, typically a woman, especially with a view to marriage.

# Lesson Five

## English Diphthongs

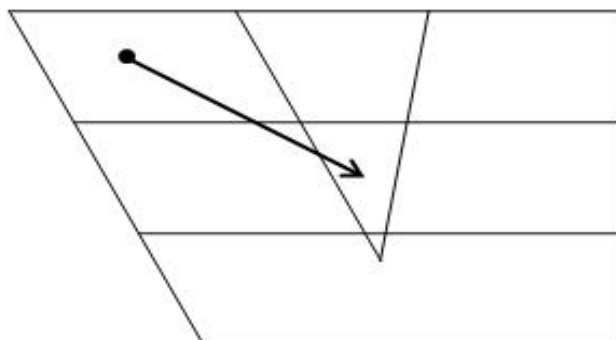
### Description

RP English has eight (08) diphthongs. A diphthong /'dɪfθəŋ; dɪp\_/ is a sequence of two adjacent vowel sounds within the same syllable. It is also known as a gliding vowel; i.e., it consists of a movement or glide from one vowel to another, and is made by one impulse of breath. Diphthongs contrast with monophthongs where the tongue does not move and the syllable contains only a single vowel which remains constant and does not glide 'a pure vowel'. In terms of length, diphthongs are like long vowels. The most important thing to know about all diphthongs is that the first part is longer than the second one. Diphthongs are sometimes referred to as 'compound vowels', 'complex vowels' or 'moving vowels'. The sound change that turns a monophthong into a diphthong is referred to as 'diphthongization'. An example of that is the short vowel /ɒ/ which turns into the diphthong /ɔɪ/ by adding the closing front short vowel /ɪ/; and the vowel /ə/ which turns into /əʊ/ by adding the short back rounded vowel /ʊ/, and so for all the rest. What is worth mentioning is that all RP English diphthongs are of the 'falling' type; i.e., the prominence is put on the beginning of the sound. The English eight diphthongs are divided into five closing diphthongs and three centering ones. They are structured as follows:



1) **Centering diphthongs** towards the /ə/ (schwa) vowel, as the symbols indicate.

a) /ɪə/



**Examples:** \_\_ **eer**, as in: deer, veer, leer, peered, cheering, career, charioteer, profiteer  
\_\_ **ear**, as in: near, year, fear, theater, appear, gear, smear, weary, disappear  
\_\_ **ere**, as in: here, sere, adherence, atmosphere, sphere, severe, cashmere  
\_\_ **eir**, as in: weird, Madeira  
\_\_ **ier**, as in: burier, fierce, healthier, flakier, heavier, merrier, worrier  
\_\_ **iu**, as in: medium, premium, stadium, podium  
\_\_ **ia**, as in: media, Celia, podia, Claudia, Numidia, onomatopoeia  
\_\_ **eo**, as in: theory, theological, theoretical,  
\_\_ **ea**, as in: idea, ideal, real, beard, realism  
\_\_ **ir**, as in: fakir  
\_\_ **eu**, as in: museum

**Note 1:** year /jɪə/ or /jɜ:/

**Note 2:** hero /hɪərəʊ/, feral /fɪərəl/

Long [ɪːə] \_\_ dear, here, mere, idea, real, cheer, beard

Reduced [ɪə] \_\_ pierce, fierce

**Compare** [ɪːə], [ɪə] \_\_ fears, fierce

### **Vocabulary:**

‘**veer**’ /vɪə/: a sudden change of direction

‘**charioteer**’ /tʃæriə'tɪə/: a chariot driver

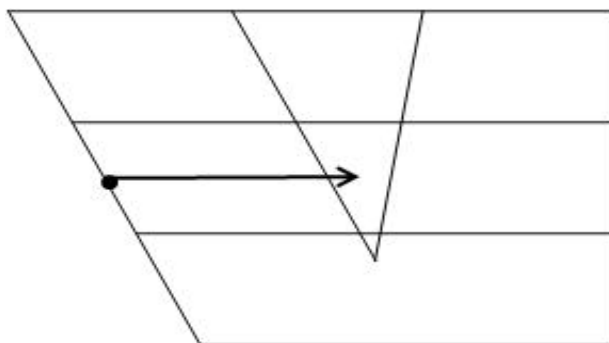
‘**smear**’ /smɪə/: a spot made by an oily or sticky material as ink

‘**sere**’ /sɪə/: (especially of vegetation) dry or withered

‘**onomatopoeia**’ /ɒnəmə'tɒpɪə /: The formation of a word from a sound associated with what is named

**Description: 1)** The diphthong of RP English /ɪə/ starts from the area below close position used for /ɪ/, and then the tongue moves in the direction of the more open variety of /ə/. **2)** The lips are neutral throughout, with a slight movement from spread to open.

**b) /eə/**



**Examples:** \_\_ are, as in: dare, rare, share, square, welfare, prepare, hardware, careless  
 \_\_ ar, as in: Mary, precarious, scarcely, sectarian, egalitarian, declarer  
 \_\_ air, as in: air, fair, pair, chair, fairly, aircraft, armchair, laird, despair  
 \_\_ ear, ea, as in: bear, pear, wear, tear (v), bugbear, whereas  
 \_\_ ere, as in: therefore, anywhere, therein  
 \_\_ eir, as in: theirs, heir, heirloom

**Note1:** with /eə/ aorist /'eəɾɪst/ ; aerobridge /'eəɾɒbrɪdʒ/

**Note2:** No cases of /eə/ + [ɪ]

Long [e:ə] \_\_ fair, bare, share, laird, pair, there, chairs, cared

Reduced [eə] \_\_ scarce

**Compare** [e:ə], [eə] \_\_ scares, scarce

**Vocabulary:**

**'precarious'** /prɪ'keərɪəs/: unsafe; not firm or steady; dependent on chance ; uncertain

**'egalitarian'** /ɪgælə'teərɪən/: holding or showing the belief that all men are equal & should have equal rights and advantages

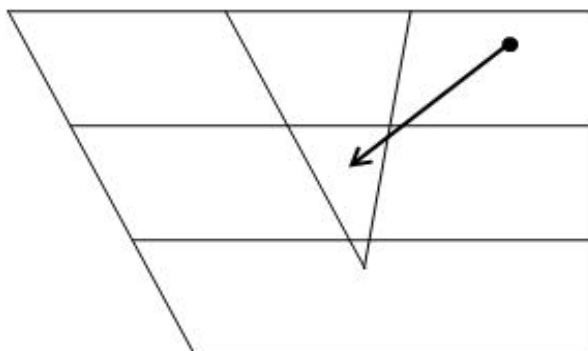
**'laird'** /leəd/: (in Scotland) a person who owns a large estate

**'bugbear'** /'bʌgbeə/: a cause of concern, perhaps without reason; a cause of obsessive fear, irritation, or loathing

**'heirloom'** /'eəlo:m/: a valuable object that has belonged to a family for several generations

**Description:** 1) The diphthong /eə/ starts in the half-open front position, and moves in the direction of the centre towards the /ə/. This is very clear when the diphthong is final in the cases of a syllable closed by a consonant and in an open syllable. 2) During the realization of /eə/, the lips are neutrally open.

c) /ʊə/



**Examples:** \_\_\_ **oer**, as in: **doer**  
 \_\_\_ **oor**, as in: **poor, moor**  
 \_\_\_ **our**, as in: **tour, dour**  
 \_\_\_ **ua**, as in: **truant, usually**  
 \_\_\_ **ue**, as in: **fluent, cruelty**  
 \_\_\_ **ur**, as in: **curious, spurious, during, purity, security**  
 \_\_\_ **ure**, as in: **pure, endure, cure, sure**

**Note:** /ʊə/ in: jewel /'dʒʊ:əl/

### Vocabulary:

**'moor'** /mʊə/: a wide, open raised area of land, covered with rough grass or low bushes, that is not farmed because of its bad soil

**'dour'** /dʊə/: hard and cold in one's manner; unfriendly ; unsmiling

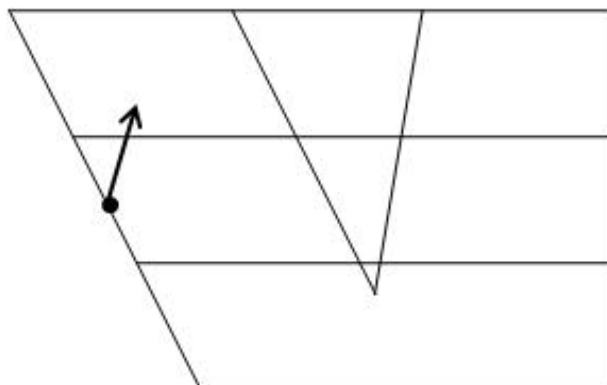
**'spurious'** /'spʊəriəs/: not being what it purports to be; false or fake

**'endure'** /ɪn'dʒʊə/ suffer (something painful or difficult) patiently

**Description:** 1) The diphthong /ʊə/ glides from the back tongue position of /ʊ/ towards the centre where /ə/ forms the end-point of all three centering diphthongs. 2) The lips are somewhat rounded at the beginning of the glide to become neutrally spread as the glide progresses.

## 2) Closing Diphthongs towards /ɪ/.

### a) /eɪ/



**Examples:** \_\_ a, as in: state, narrate, female, patient, wasteful, inhalator, information  
\_\_ ai, as in: waist, main, wait, aim, again, complain, failure, faithful, straight  
\_\_ ay, as in: may, lay, away, always, railway, birthday, nowadays, Norway  
\_\_ ei, as in: eight, veil, sleigh, beige, weigh, rein, vein, neigh, feign, neighbour  
\_\_ ey, as in: they, prey, whey, hey, grey, convey, survey, purvey, abeyance  
\_\_ ea, as in: great, steak, break, breaker  
\_\_ au, as in: gauge /geɪdʒ/  
\_\_ ao, as in: gaol /geɪl/

**Note:** halfpenny /'heɪpni/ ; cocaine /kə'keɪn/ ; eh /eɪ/

Long [e:ɪ] \_\_ aim, main, they, lay, beige, grey, convey

Reduced [eɪ] \_\_ state, narrate, eight, waist, steak, great, break

**Compare** [e:ɪ] , [eɪ] \_\_ played, plate ; ray, race ; way, waist ; save, safe

[ɛ] , [eɪ] \_\_ pet, pate ; chess, chase ; best, baste ; less, lace

[e] , [e:ɪ] \_\_ led, lade ; fell, fail ; red, raid ; men, main

### Vocabulary:

**'inhalator'** /ɪnhə'leɪtə/: a device for inhaling something, especially oxygen ; a respirator

**'sleigh'** /sleɪ/: a vehicle which slides along snow on two metal blades, esp. for carrying people and for pulling by a horse

**'neigh'** /neɪ/: the long and loud cry that a horse makes

**'feign'** /feɪn/: 1- pretend to be affected by(a feeling, state, or injury) 2- to invent (an excuse, reason, etc)

**'gauge'** /geɪdʒ/: an instrument or device for measuring the magnitude, amount, or content of something, typically with a visual display of such information

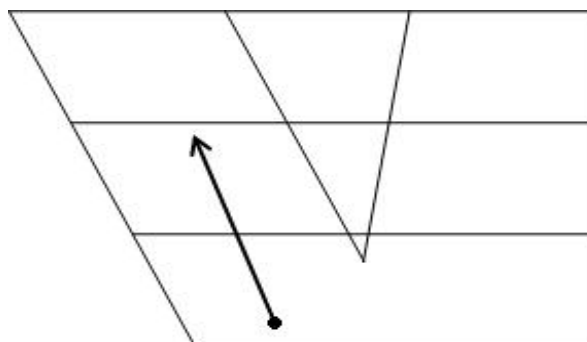
**'gaol'** /dʒeɪl/: prison ; jail ; imprisonment

‘eh’ / eɪ/: used to represent a sound in speech in a variety of situations, mainly to ask for something to be repeated or explained

**Description: 1)** The diphthong /eɪ/ glides from slightly below half-close front position and moves in the direction of below close position towards /ɪ/. **2)** The lips are spread throughout.

**Note:** Before dark [ɪ], the [ɪ] turns into the [ə] as in ‘fail’ [feɪ(ɪ)əɪ], yet it keeps its quality before clear [ɪ], as in failure [ˈfeɪljə],

**b) /aɪ/**



**Examples:** \_\_ **i**, as in: rite, dime, sine, bite, dive, riding, climate, kiting, slider, writing  
\_\_ **y**, as in: try, cry, dry, type, style, psychic, hyponymy, psychology  
\_\_ **igh**, as in: high, light, knight, fight, slight, fighter, nightmare, frightening  
\_\_ **eigh**, as in: height  
\_\_ **ie**, as in: die, lie, pie, tried, pie, tied, flies, tried, fried, skied  
\_\_ **ye**, as in: dye, rye  
\_\_ **ei**, as in: either  
\_\_ **ai**, as in: aisle  
\_\_ **ye**, as in: bye

**Note:** /aɪ/ in eye

Long: [a:ɪ] \_\_ time, sine, die, mine, ride, hide, eyes

Reduced [aɪ] \_\_ sight, kite, fight, like, ice, ripe, type

**Compare** [a:ɪ], [aɪ] \_\_ mile, mice, kind, kite ; eyes, ice ; finding, fighting

**Vocabulary:**

‘rite’ /raɪt/: a religious ceremony or act

‘dime’ /daɪm/: a ten-cent coin

‘hyponymy’ /haɪˈpɒnəmi/: subordination

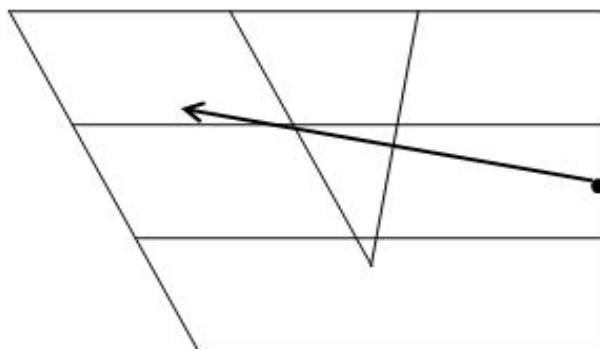
‘knight’ /naɪt/: (in former times) a noble soldier on horseback serving a ruler



**Description: 1)** The diphthong /aɪ/ starts at a point just behind the front open position and glides towards the position of /ɪ/. **2)** The tongue is raised to a level below the position of the cardinal vowel [e]. **3)** The lips change from a neutral to a loosely spread shape.

**Note:** Before dark [ɪ], the [ɪ] turns into the [ə] as in ‘file’ [fa(ɪ)əl], yet it keeps its quality before clear [ɪ], as in piling [paɪlɪŋ]

c) /ɔɪ/



**Examples:** \_\_ **oi**, as in: **spoil**, **voice**, **point**, **moist**, **avoid**, **rejoin**, **noisy**, **toilet**, **boisterous**  
 \_\_ **oy**, as in: **boy**, **toy**, **royal**, **destroy**, **cowboy**, **enjoy**, **loyalty**, **employ**, **coyness**  
 \_\_ **uoy**, as in: **buoy**

Long: [ɔ:ɪ] \_\_ **boy**, **noise**, **avoid**, **join**, **spoil**, **boil**, **employ**, **destroy**

Reduced: [ɔɪ] \_\_ **voice**, **moist**, **joist**, **choice**

**Compare** [ɔ:ɪ], [ɔɪ] \_\_ **noise**, **choice** ; **void**, **voice** ; **joys**, **Joyce**

### Vocabulary:

**‘moist’** /mɔɪst/: slightly wet, damp or humid

**‘boisterous’** /bɔɪstərəs/: (of a person) noisy, energetic, and cheerful ; rowdy

**‘coyness’** /kɔɪnəs/: (especially in a woman or her behaviour) the quality to be prettily modest or humble in the presence of others so as to attract attention

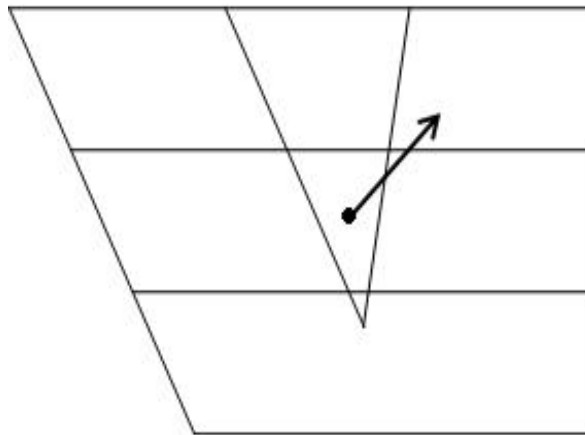
**‘buoy’** /bɔɪ/: a floating object fastened to the bed of the sea to show ships where there are rocks

**Description: 1)** For the diphthong /ɔɪ/, the tongue glide begins at a point between the back half-open and open positions and moves in the direction of /ɪ/. **2)** The tongue moves from back to the front. **3)** The lips start as open rounded, then changes into neutral shape.

**Note:** Before dark [ɪ] the [ɪ] often changes into the [ə] as in e.g. boil [bɔɪ(ɪ)əɪ]; yet it keeps its quality before clear [ɪ], as in spoiling ['spɔɪlɪŋ].

### 3) Closing diphthongs towards /ʊ/:

#### a) /əʊ/



**Examples:** \_\_ **o**, as in: **so**, **Rome**, **fold**, **bold**, **homeless**, **folder**, **colder**, **clothes**, **imposing**  
 \_\_ **oa**, as in: **soak**, **loam**, **foals**, **loader**, **download**, **croaker**, **roaming**, **goading**  
 \_\_ **oe**, as in: **toe**, **doe**, **sloe**, **foe**, **hoe**, **aloe**, **woe**  
 \_\_ **ou**, as in: **soul**, **though**, **shoulder**  
 \_\_ **ow**, as in: **throw**, **know**, **bowl**, **widow**, **blowing**, **slower**,

Note: /əʊ/ in mauve ; brooch ; beau ; sew ; don't ; won't (Gimson 1989: 134)

Long: [ə:ʊ] \_\_ go, toe, home, road, pose

Reduced: [əʊ] \_\_ goat, rope, oak, post, both

**Compare** [ə:ʊ], [əʊ] \_\_ robe, rope ; toes, toast ; grows, gross ; road, wrote ; cold, colt

#### **Vocabulary:**

**'soak'** /səʊk/: make or allow something to become thoroughly wet by immersing it in liquid

**'loam'** /ləʊm/: a fertile soil of clay and sand containing humus ; mud

**'croaker'** /'krəʊkə/: are creatures such as frogs which make a deep low noise

**'roaming'** /'rəʊmɪŋ/: move about or travel aimlessly, especially over a wide area

**'goading'** /'gəʊdɪŋ/: provoking or annoying someone so as to stimulate some action or reaction from his part

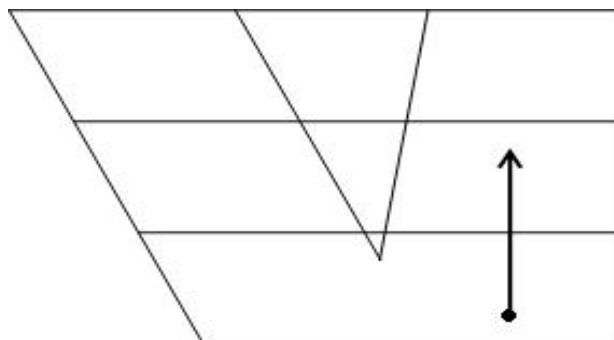
**'sloe'** /sləʊ/: a small bitter kind of plum with dark purple skin that is the fruit of the blackthorn

**'aloe'** /ə'ləʊ/: a kind of a tropical Asian tree

**'woe'** /wəʊ/: great sorrow or distress

**Description: 1)** The diphthong /əʊ/ begins at a mid-position between half-close and half-open and moves towards /ʊ/. **2)** The lips start as neutral for the first part /ə/ and then change to round for the second segment /ʊ/.

**b) /aʊ/**



**Examples:** \_\_ **ou**, as in: **doubt, cloud, plough, house, sound, shouted, clouding, louder**  
 \_\_ **ow**, as in: **how, town, fowl, allow, crowded, download, flowering, however**

Long: [a:ʊ] \_\_ **cloud, plough, allow, town, loud, owl, foul,**

Reduced: [aʊ] \_\_ **house, shout, about, south, mouse, mouth (n)**

**Compare** [a:ʊ], [aʊ] \_\_ **allows, mouse ; found, fount ; house (v), house (n) ; loud, lout**

### **Vocabulary:**

**‘fowl’** /faʊl/: a domestic cock or hen

**‘owl’** /aʊl/: any of several types of night bird with large eyes, supposed to be very wise

**‘cowl’** /kaʊl/: a loose head covering for the whole of the head but not for the face, esp. worn by monks

**‘fount’** /faʊt/: the place where something begins or comes from like (a spring of water)

**‘lout’** /laʊt/: a rough awkward man or boy with bad manners

**Description: 1)** The diphthong /aʊ/ starts at a point between the back and front open positions, slightly more fronted than the position for /a:/, and then moves in the direction of /ʊ/. **2)** The tongue is raised at the half-close level. **3)** The lips change from a neutrally open to a weakly rounded position.

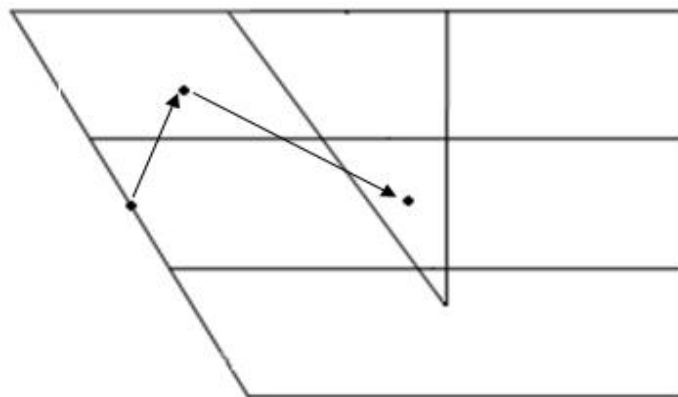
**Note:** In all diphthongs, full length is characterized by adding / : / to those followed by lenis/voiced consonants, as in: ‘ride’ [ra:ɪd] as compared to ‘write’ [raɪt]



## Triphthongs and smoothing

In RP English, when a diphthong is followed by schwa /ə/ ‘triphthong’, or possibly by /ɪ/ in unstressed syllables, a series of changes may take place, known as ‘smoothing’. In the same articulation, a diphthong may turn into a monophthong, which is either a long vowel or a short one. This takes place by dropping the second element and lengthening slightly the first element, as the case of /aɪ/ which turns into [a:]; /əʊ/ ⇨ [ɜ:]; /aʊ/ ⇨ [ɑ:]; and /eɪ/ ⇨ [ɛ:]. In the same process, the following schwa may become non-syllabic, and the diphthong is formed with the preceding monophthong. Sometimes, this diphthong can itself be monophthongized. As a result, the original sequence of /aʊ/+ə/ can end up as [ɑ:]; and /aɪ/ + ə/, as [a:]; thus, the word ‘higher’ /haɪə/ can be articulated as [ha:] and ‘flour’ /flaʊə/ as [flɑ:]. The RP form of the word ‘shower’ is /ʃaʊə/, yet in ordinary speech, it is often uttered as [ʃaə], forming two syllables in a sequence of two vowels ‘a diphthong’, or a monophthong [ʃa:]; similarly the word ‘fire’ /faɪə/ can be reduced to [faə] or [fa:]. In all these cases, one may deal with what we call vowel shift which leads to what is referred to as monophthongization.

### 1) a) /eɪə/



**Examples:** \_\_ **ayer**, as in: **prayer, layer, player, slayer**  
\_\_ **yor**, as in: **mayor, conveyor, purveyor**  
\_\_ **aya**, as in: **betrayal, Himalayas, layabout, jambalaya**  
\_\_ **eya**, as in: **conveyance**  
\_\_ **ayo**, as in: **bayonet**  
\_\_ **ei**, as in: **reification**  
\_\_ **ao**, as in: **Laodicean**  
\_\_ **ia**, as in: **via, liars, friable, diastema, diabolic, dialectal, adiabatic maniacal,**  
\_\_ **io**, as in: **lion, diocese, pioneer, violin, biotechnology,**

**Compare:** [eɪ], [eɪə] \_\_ pray, prayer; lay, layer; slay, slayer

**Description: 1)** In the articulation of the triphthongs /eɪə/, the tongue moves from slightly below half-close front position in the direction of below close position towards /ɪ/, then to the centre where /ə/ forms the endpoint. **2)** The lips change from spread to neutral position.

### Smoothing of [eɪə]

**Note:** In RP English, in the case study of the triphthongs [eɪə], it can be noted that it is not always fully pronounced since the second element, which is [ɪ] is very often weakened considerably or left out completely. Hence, [eɪə] is uttered as the diphthong [eə] or as the long vowel [ɜ:], and that sounds very natural among native speakers of English. Similarly, the word ‘slayer’ /sleɪə/ is pronounced as [sleə] or [slɜ:], and ‘prayer’ /preɪə/ as [preə] or [slɜ:].

### Vocabulary:

‘**slayer**’ /sleɪə/: killer, esp. violently

‘**purveyor**’ /pɜ:veɪə/: a seller or firm that supplies food to a large group

‘**layabout**’ /leɪə'baʊt/: a person who habitually does little or no work

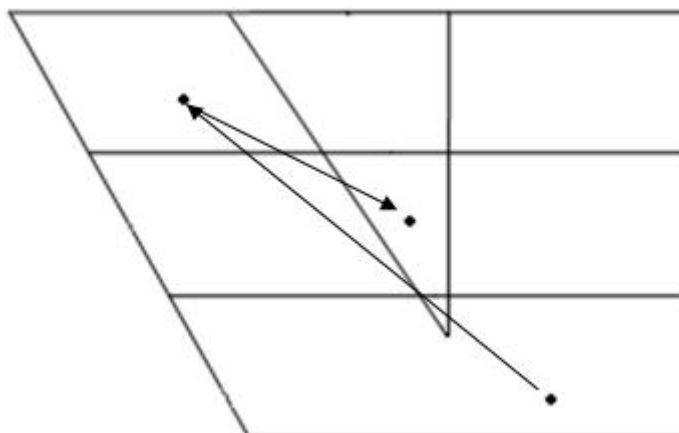
‘**conveyor**’ /kən'veɪə/: a person or thing that transport goods or anything-else

‘**bayonet**’ /'beɪənət\_:\_et/: a long knife fixed to the end of a soldier’s gun (rifle)

‘**reification**’ /reɪəfɪ'keɪʃən/: the act of representing an abstraction as a physical thing; objectification

‘**Laodicean**’ /leɪə'dəsi:n/: a person with a halfhearted attitude toward religion or politics

### c) /aɪə/



**Examples:** \_\_\_ire, as in: fire, admire, aspire, satire, esquire, require, empire, entire  
 \_\_\_ia, as in: liar, trial, viable, diary, dialogue, reliance, diagnosis, triangle  
 \_\_\_ier, as in: fiery, hierocracy, hierophant, hierarchy, supplier,  
 \_\_\_ie, as in: diet, variety, scientific, dietitian, varietal, societal  
 \_\_\_yer, as in: flyer, lyre, dryers, fryers  
 \_\_\_io, as in: lion, zwitterions, Orion, iodine, calliope  
 \_\_\_ir, as in: iron, Epirus

**Compare:** [aɪ], [aɪə] \_\_\_ high, higher; lie, lyre; fly, flyer; try, trial; pie, empire

**Description: 1)** In the articulation of the triphthongs /aɪə/, the tongue starts at a point just behind the front open position and glides towards the position of /ɪ/, and then it is raised to the centre where /ə/ forms the endpoint. **2)** The lips change from an open to a neutral shape.

### Vocabulary:

‘**satire**’ /sæ'taɪə/: (usu. in literature, theatre or work of art), the use of humour, irony; exaggeration, or ridicule to expose and criticize people's stupidity or vices.

‘**esquire**’ /ɪs'kwɑɪə/: a title appended (added) to a lawyer's name

‘**viable**’ /'vaɪəbl/: capable of working successfully; feasible

‘**fiery**’/'faɪəri/: consisting of fire or burning strongly and brightly

‘**hierophant**’ /'haɪərəfænt/: a person, especially a priest in ancient Greece, who interprets sacred mysteries or esoteric (mystic) principles

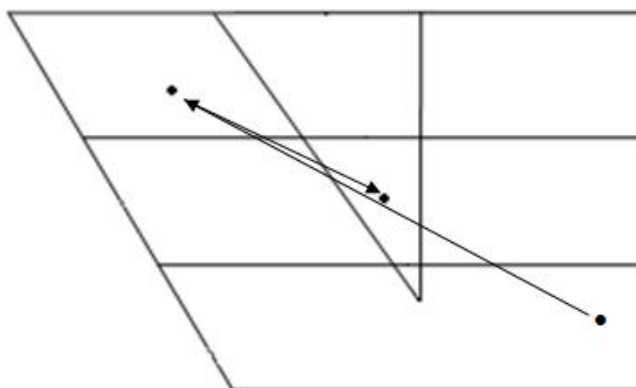
‘**iodine**’ /aɪə'di:n/: the chemical element of atomic number 53, a nonmetallic element forming black crystals and a violet vapour

‘**calliope**’/kə'laɪəpi:/: a keyboard instrument resembling an organ but with the notes produced by stream whistles, used chiefly on showboats and in travelling fairs

### Smoothing of /aɪə/

**Note:** In RP English, the full articulation of the triphthong [aɪə] sounds unnatural by the natives. Like other Triphthongs, [aɪə] is not always fully pronounced since the second two elements, which are [ɪə] are left out completely and replaced by the long vowel [a:]. Hence, [aɪə] is uttered as [a:]. The word ‘fire’ /faɪə/ is pronounced as [fa:]; and ‘require’ /rɪ'kwɑɪə/ as [rɪ'kwa:].

## d) [ɔɪə]



**Examples:** \_\_ **oy**, as in: **loyal**, **coyer**, **royal**, **joyous**, **enjoyable**, **annoyance**, **flamboyant**  
\_\_ **oi**, as in: **coir**, **uncoil**, **Illinoisan**,

**Compare:** [ɔɪ], [ɔɪə] \_\_ **Roy**, **royal**; **joy**, **joyous**; **enjoy**, **enjoyable**; **coin**, **uncoil**

**Description: 1)** In the articulation of the triphthongs /ɔɪə/, the tongue starts at a point between the back half-open and open positions and moves in the direction of /ɪ/, and then it is lowered to the centre where /ə/ forms the endpoint. **2)** The lips change from a rounded to a neutral shape.

### Vocabulary:

**‘coyer’** /kɔɪə/: (esp. with reference to a woman) making a pretense of shyness or modesty that is intended to be alluring ; timid ; shy ; bashful

**‘flamboyant’** /flæm'boɪə/: (of a person or their behaviour), tending to attract attention because of their exuberance, confidence, and stylishness

**‘coir’** /kɔɪə/: fiber from the outer husk (skin) of the coconut, used for making ropes and matting

**‘uncoil’** /ʌŋ'kɔɪə/: solve ; resolve ; fix ; settle

**‘Illinoisan’** /ɪlə'nɔɪə/: of or relating to characteristics of the US state of Illinois or its inhabitants

**‘Roy’** /rɔɪ/: a city in northeastern Utah, a Southwestern suburb of Ogden, population 35.672.

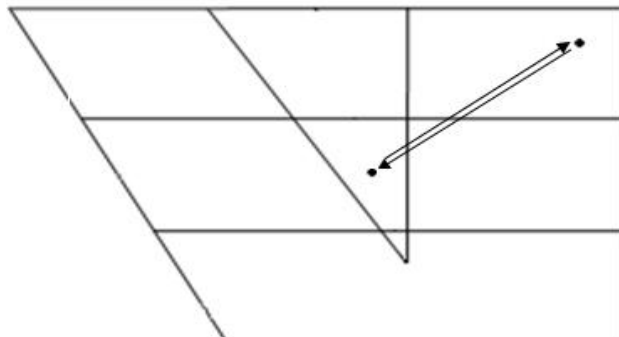
### Smoothing of /ɔɪə/

The smoothing of the triphthong /ɔɪə/ is somehow controversial. Contrary to the other types of triphthongs, it happens less frequently. For only some people, the /ɔɪə/ is not totally pronounced when the second element /ɪ/ is left out for the sequence /ɔə/ to remain instead. Hence, /ɔɪə/ is



uttered as [ɔə]. The word 'loyal' /ləɪəl/ is realized as [ləɪəl]; similarly, the word 'coin' /kɔɪn/ is uttered as [kɔɪn].

## 2) a) /əʊə/



**Examples :** \_\_ ower, as in: grower, slower, lower, mower, widower, borrower

**Compare:** [əʊ] , [əʊə]: grow, grower ; low, lower ; slow, lower ; widow, widower

### Vocabulary:

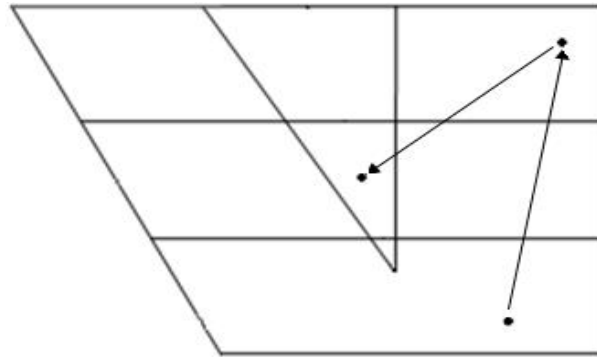
**'mower'** /'məʊə/: a machine for cutting grass in gardens, having blades that turn round as it moves ; reaper ; binder

**Description: 1)** In the articulation of the triphthongs /əʊə/, the part of tongue begins at a mid-position between half-close and half-open and moves towards /ʊ/, and then glides back in the direction of the centre for /ə/ as an endpoint. **2)** The lips start as neutral for the first part /ə/, change to round for the second segment /ʊ/, and then change back to their neutral shape.

### Smoothing of /əʊə/

What is worth mentioning is that /əʊə/ is very often realized as the monophthong [ɜ:]. The vowel /ʊ/ is left out for the sequence [əɪ] to take place instead, which is the same as [ɜ:]. Hence, /əʊə/ is uttered as [ɜ:]. The word 'slower' /sləʊə/ is pronounced as [slɜ:]; similarly, the word 'widower' /wɪ'dəʊə/ is uttered as [wɪ'dɜ:].

e) /aʊə/



**Examples :** \_\_ower, as in: power, flower, shower, powerful, glowering  
\_\_owe, as in: dowel, vowel,  
\_\_ou, as in: foul  
\_\_our, as in: flour, hour, lour, glour, stourbridge,  
\_\_owa, as in: coward, dowager  
\_\_owr, as in: dowry,

**Note:** bow and scrape /'baʊən(d)əskreɪp/ (in context) ; gaur /gaʊə/

**Compare:** [aʊ] , [aʊə]: how, hour ; shout, shower ; town, tower ; powder, power

**Description: 1)** In the articulation of the triphthongs /aʊə/, the body of tongue starts at a point between the back and front open positions and then moves in the direction of back close for /ʊ/ before it is lowered towards the centre for /ə/ as an endpoint. **2)** The lips change from a neutrally open to a strongly rounded position, and then to the neutral position.

**Vocabulary:**

**'glowering'** /'glaʊərɪŋ /: have an angry or sullen look on one's face ; scowl

**'dowel'** /daʊəl/: a peg of wood, metal, or plastic without a distinct head, used for holding together components of a structure

**'lour'** /laʊəl/: to look in a dissatisfied bad-tempered manner ; frown

**'stourbridge'** /'staʊəbrɪdʒ /: a market town in the West Midlands county of England

**'dowager'** /'daʊədʒə/: a widow with a title or property derived from her late husband

**'dowry'** /'daʊəri/: property or money brought by a bride to her husband on their marriage

**'bow and scrape'** /'baʊən(d)əskreɪp/: to make a deep bow with the right leg drawn back (thus 'scraping' the floor), left hand pressed across the abdomen, right held aside

**'gaur'** /gaʊə/: a large wild ox native to India and Malaysia

### Smoothing of /aʊə/

The triphthongs /aʊə/ is often realized as the monophthong [a:]. This use sounds natural among the native speakers of British and American English alike. The diphthong /ʊə/ is left out for the lengthening of /a/ to occur instead. Hence, /aʊə/ is uttered as [a:]. The word 'flower' /flaʊə/ then is realized as [fla:]; similarly, the word 'hour' /aʊə/ is uttered as [a:]. In some cases, the triphthong /aʊə/ might be produced as [aə] by dropping only the monophthong /ʊ/, so that the word 'tower' is realized as [taə], without lengthening the /a/.

*Note:* the smoothing of triphthongs sometimes results in new homophones. This is the case for /aʊə/ and /aɪə/, which might be produced as [aə], thus the words 'tower' and 'tyre' both get the same phonetic realization; i.e., [taə]. This can bring some confusion, mainly if the listener is not aware of this linguistic phenomenon.

RP ENGLISH

CONSONANTS

## SECTION THREE

### English Consonants

#### English Consonant Phonemes

- \* Classification of English Consonants (VPM)
  - Voicing
  - Place of Articulation
  - Manner of Articulation
- \* Phonemic/Phonetic Transcription

### Lesson One

## English Consonant Phonemes

### Articulation

Unlike vowels which are all free voiced sounds, **consonant sounds** are those made with obstruction of air at the level of the vocal tract. This obstruction may be complete or partial. Complete, when the two organs make a blockage so as the stream of air is compressed for a short time before it is released. Partial, when the two organs are sufficiently approaching each other to let the air escape through a narrowing they make.

Phonologically speaking, consonants are those segments that play the role of syllable margin; i.e., they occupy the edges of the syllable. They never occupy the centre of the syllable, which is left to another category of sounds namely vowels.

### Classification of Consonants

With the three parameters: voicing, place of articulation and manner of articulation (**V.P.M**), it is possible to identify (almost) all the phonemic consonants of **RP** English.

### Place of Articulation

Also known as ‘point of articulation’, where the contact ‘obstruction’ is made by an active and a passive articulator at the level of the vocal tract. The nine places of articulation are:

1. **Bilabial** consonants: lower lip with upper lip: /p, b, m, w/
2. **Labiodental** consonants: Lower lip with upper teeth: /f, v/
3. **Interdental / dental** consonants: Blade of tongue with upper teeth: /θ, ð /
4. **Alveolar** consonants: Front of tongue with the alveolar ridge: /t, d, s, z, n, l/

5. **Post-alveolar** consonants: Body of tongue with the part behind the alveolar ridge: /tr, **dr**, r /
6. **Palato-alveolar** consonants: Part of tongue and tongue-rims with central palate/ hard palate: /ʃ, **ʒ**, tʃ, **dʒ** /
7. **Palatal** consonant: back of tongue is raised against the central palate (the middle part of the roof of the mouth): /j/
8. **Velar** consonants: Back of tongue with soft palate: /k, **g**, ŋ/
9. **Glottal** consonants: the 2 actions of the vocal chords in producing the two sounds /ʔ, **h**/ inside the glottis

### Manner of Articulation

The process by which the moving column of air is shaped is called the manner of articulation.

These are six manners of articulation in RP English:

1. Plosives: / p, t, k, **b**, **d**, **g**, ʔ / (also called “**oral stops**”)
2. Fricatives: / f, **v**, θ, **ð**, s, **z**, ʃ, **ʒ**, h /
3. Affricates: / tʃ, **dʒ**, tr, **dr** /
4. Nasals: / **m**, **n**, **ŋ** / (also called “**nasal stops**”)
5. Lateral: / l /
6. Approximants: / **w**, **j**, **r** /

**Voicing:** Phonation process of speech

In the larynx, voicing introduces vibration into the resonating column of air. The vocal chords take three positions: **1-** apart **2-** lightly together and **3-** tightly together. (as mentioned earlier). In the following table of consonant phonemes, the voiced sounds are in ‘**bold-faced**’ font; however, the voiceless sounds are in ‘light-faced’ font.

<b>Place of articulation</b>	<b>bilabial</b>	<b>labio-dental</b>	<b>inter/dental</b>	<b>alveolar</b>	<b>Post-alveolar</b>	<b>Palato-alveolar</b>	<b>palatal</b>	<b>velar</b>	<b>glottal</b>
Manner of articulation									
Plosives	p <b>b</b>			t <b>d</b>				k <b>g</b>	ʔ
Fricatives		f <b>v</b>	θ <b>ð</b>	s <b>z</b>		ʃ <b>ʒ</b>			h
Affricates					tr <b>dr</b>	tʃ <b>dʒ</b>			
Nasals	<b>m</b>			<b>n</b>				<b>ŋ</b>	
Lateral				<b>l</b>					
Approximants	<b>w</b>				<b>r</b>		<b>j</b>		

**Chart representing the English consonant phonemes**

## Lesson Two

### Phonetic Transcription

**Narrow** versus **Broad** transcription

**Phonetic transcription** aims to transcribe the phonology of a language. It may also be used to go further and specify the precise phonetic realization of the different phonemes. In all systems of transcription, we may therefore distinguish between two types of transcription: broad transcription and narrow transcription.

**1) Broad transcription** indicates only the most noticeable phonetic features of an utterance. It is often found in a dictionary. One particular form of ‘broad transcription’ is **phonemic transcription**, which disregards all allophonic differences and represents only the phonemic structure. The transcribed phonemes are put between two slashes / / . For example, the word ‘important’ is transcribed phonemically as /ɪm'pɔ:tənt/.

**2) Narrow transcription** encodes more information about the phonetic variations of the specific allophones (different realizations of the same phoneme) referred to as ‘sounds/phones/allophones’ in the utterance. This kind of transcription that aims to provide as much information as possible about the sounds that actually occur in a given context is called **phonetic transcription**. Such a transcription is conventionally put in square brackets [ ]. Various diacritics or additional symbols can be used to make the difference between broad & narrow transcription. For instance, while the phoneme /p/ is represented by the symbol /p/, its aspirated allophone will be rendered by the same symbol followed by a small [ <sup>h</sup> ], i.e., [p<sup>h</sup>], while the unaspirated one by [p<sup>̄</sup>], mainly after initial /s/ [sp<sup>̄</sup>]. The chosen symbol to represent the phoneme will always be the one representing its most widespread allophone. This accounts for the fact that the unaspirated rather than the aspirated allophone of /p/ is represented by its symbol. [p<sup>̄</sup>].

To make a distinction between the two transcriptions, for example, one particular pronunciation of the English word ‘little’ may be transcribed using the IPA as /'lɪtəl/ or ['lɪt̚l̩]; the broad, phonemic transcription, placed between slashes, indicates merely that the word ends with the phoneme /l/, but the narrow, allophonic transcription, placed between square brackets, indicates that this final /l/ (is dark (velarized) [ ɫ ] and in the same time syllabic; i.e., the back of tongue is drawn far up towards the velum ‘soft palate’.

**Note:** An **utterance** is the smallest unit of speech. It is a continuous piece of speech beginning and ending with a clear pause. In other words, it is something uttered (spoken) followed by silence or a change of the speaker. It could be anything from “Ugh!” to a full sentence.

## Lesson Three

### Articulation of a plosive sound

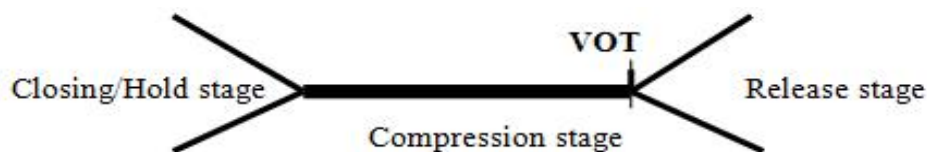
**Plosives**, also known as (**oral stops**) are sounds in which there is a complete closure in the mouth so that the air is blocked for a fraction of a second; the pressure increases behind the place where it is blocked and then released with a small burst of sound called ‘plosion’ (it sounds like a very small explosion). The blocking (stop) is usually done using the tongue, the lips, or the vocal cords (in the larynx).

1) In the articulation of the plosive sounds, three (3) phases can be distinguished:

**a) The closing/hold stage:** the airway closes so that no air can escape. In this case, the articulating organs move together to form the obstruction.

**b) The compression stage:** during which lung action compresses the air (causing a slight pressure to build up). This stage may or may not be accompanied by voice.

**c) The release or explosion stage:** during which the closure is opened (the organs forming the closure part rapidly). The released airflow produces a sudden impulse causing an audible sound (burst), i.e., a plosion.



**Voice onset time (VOT)** is a feature that characterizes all oral stop consonants ‘plosives’. It is known as the time which passes between the release of the stop consonant and the onset ‘beginning’ of voicing (the vibration of the vocal chords). Three main phonation types of stops can be examined at the level of their VOT ‘Voiced Onset Time’:

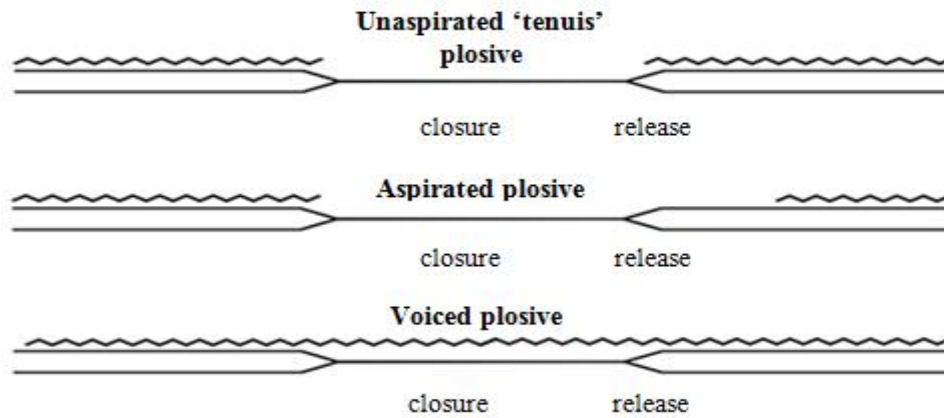
**a) Unaspirated voiceless stops’ tenuis’ stops,** which have their VOT at or near zero. This means that the voicing of the following sonorant, namely ‘vowels’ begins at or near zero when the stop is released. The following word contains an unaspirated voiceless stop: ‘speak’ [sp<sup>̥</sup> i ʔk’]

**b) Aspirated stops** which are followed by a sonorant have their VOT in a great amount. This is referred to as ‘positive VOT’ and is a practical measure of aspiration: the longer the VOT, the stronger aspiration. An example of that is the following word: ‘important’ [ɪm<sup>h</sup> p<sup>h</sup> ɔ:tənt’]

**c) Voiced stops** have a VOT less than zero. It is referred to as ‘negative VOT’. This means

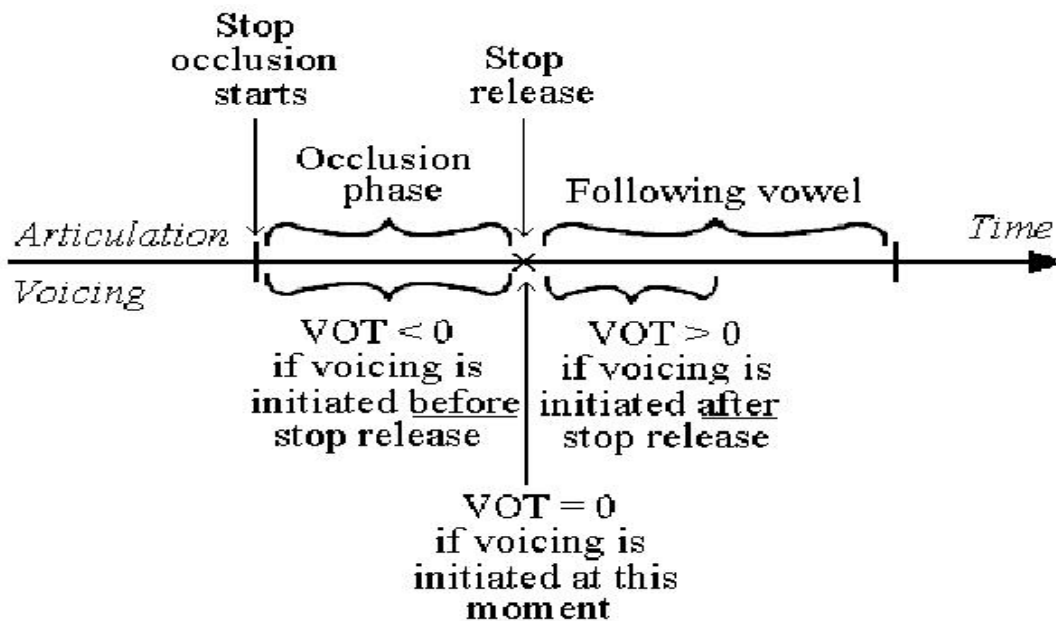


that the vocal chords start vibrating before the stop sound is released. This voicing differs according to its situation in the environment: ‘partially voiced’ initially; ‘fully voiced’ in medial position and ‘devoiced’ in word-final position. The following words containing the voiced alveolar stop /d/ illustrate the point: ‘dam’ [dæm]; bedding [bedɪŋ]; road’ [rə:ʊd].



### Measuring Articulatory Voice Onset Time (VOT)

The following intellectual chart was made by Caroline Traube (2005), through which she presents voice onset time as a parameter of speech that designates the time interval between consonant onset and the onset of the periodical vocal chords vibration.



By Caroline Traube (2005 :105)

## Lesson Four

### English Plosive Consonants

/ p, b, t, d, k, g, ʔ /

#### Description of sound production

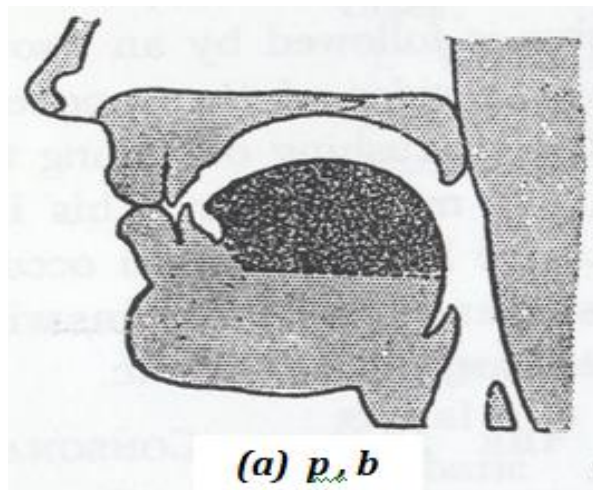
Phonetically speaking, a plosive, also known as a ‘stop’ or ‘oral occlusive’, where the blockage is not in the nasal passage, is a consonant in which the vocal tract is blocked (the organs of speech make a stricture when approaching each other) for the airflow to cease completely for a moment. This constriction ‘occlusion’ may be made by the lips for /p/ and /b/; the tip or blade of tongue for /t/ and /d/; the back of tongue ‘dorsum’ for /k/ and /g/ and the glottis for /ʔ/.

**Place of articulation:** 1) bilabial / p, b / , 2) alveolar / t, d / , 3) velar / k, g /  
4) glottal / ʔ /

#### Manner of Articulation

##### (1) /p, b/

For bilabial /p, b/, the soft palate ‘velum’ is raised to touch the pharynx’s back wall and shuts off the nasal cavity. The two lips meet to form a complete closure followed by compression of air just behind it. The vocal chords may strongly or partially vibrate for /b/ during the compression stage according to its situation in the utterance, i.e., initially, medially, or finally. In the release stage, the lip closure gets open and the air escapes with force creating a ‘burst’ called plosion.



/ **p** / \_\_ fortis ; (spelt: **p**, **ph**)

Word initial \_\_ **p**arty, **p**it, **p**unk, **p**eople, **p**asta, **p**ort, **p**ortfolio, **p**ajamas

Word medial \_\_ **i**mportant, toupee, **t**opmost, **p**aper, ‘shepherd’ /ʃepəd/, **i**mpossible

Word final \_\_ **l**eap, **t**ype, **t**ip, **r**ope, **c**ope, **d**evelop, **s**tereotype

/ **b** / \_\_ lenis ; (spelt, **b**)

Word initial \_\_ **b**ase, **b**ullet, **b**andit, **b**eautiful, **b**oarding, **b**aseball

Word medial \_\_ **a**bstain, **u**nbearable, **r**ubber, **r**ainbow, **R**obinson,

Word final \_\_ **r**obe, **d**rib, **s**tab, **g**rab, **d**rab

**Compare:** /**p**/ and /**b**/ \_\_ park, bark ; pat, bat ; pet, bet ; pert, bird ; port, board

\_\_ **i**mpark, **e**mbark ; **c**omport, **o**nboard ; **s**uperb, **s**uburb

\_\_ **s**nap, **s**cab ; **r**ope, **r**obe ; **d**rip, **d**rib ; **s**toop, **r**ube

### Vocabulary:

‘**p**unk’/pʌŋk/: a worthless person ; (adj.) in poor or bad conditions

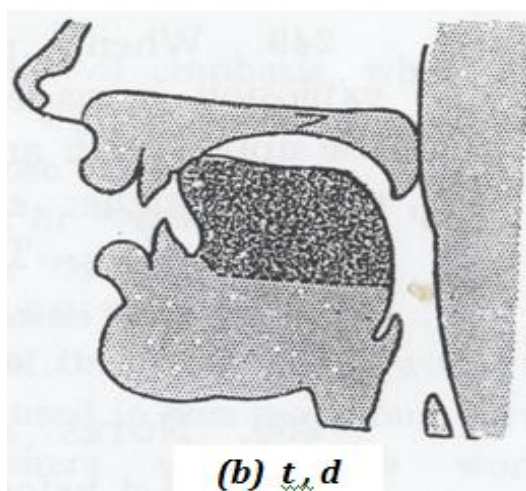
‘**d**rib’/drɪb/: a drop of liquid; droplet

‘**d**rab’/dræb/: a slovenly woman ; lacking brightness or interest ; drearily dull

‘**d**rip’/drɪp/: a small drop of liquid ; a weak and ineffectual person

### (2) /t, d/

For alveolar /**t**, **d**/, the soft palate ‘velum’ is raised to touch the back wall of the pharynx and hence shuts off the nasal cavity. The tip and rims of tongue and the upper alveolar ridge and side teeth form a complete closure followed by compression of air just behind it. The vocal chords may strongly or partially vibrate for /**d**/ during the compression stage according to its situation in the utterance. In the release stage, the tongue closure gets open and the air escapes with force creating a burst of air



/ t / \_\_ fortis ; (spelt: **t**, **tt**, **th**, **d**)

Word initial \_\_ **t**ale, **t**eam, **T**hames, **t**omato, **T**uesday, **t**winkle, **t**ea-shirt, **t**ackle, **t**asty

Word medial \_\_ intake, **t**asty, **suttee**, **nutt**y, **undert**ake, **entit**le

Word final \_\_ **l**ight, **figh**t, **writ**e, **insigh**t, **rat**e, **look**ed /lɒkt/, **gener**ate, **highligh**t

/ d / \_\_ lenis ; (spelt, **d**, **dd**)

Word initial \_\_ **d**ouble, **dir**ty, **del**iver, **diz**zy, **dooms**day, **dally**, **dan**ger

Word medial \_\_ **wid**ow, **wind**ow, **daddy**, **hid**ing, **endur**e, **endeav**our

Word final \_\_ **rod**, **odd**, **hired**, **unfol**d, **god**, **told**, **sold**, **called**, **breed**, **seed**

**Compare:** /t/ and /d/ \_\_ **t**op, **d**rop; **t**ap, **d**ap; **t**ip, **d**ip; **t**runk, **d**runk; **t**ear, **d**eer

\_\_ **u**ntie, **i**ndie; **b**itten, **b**idden; **S**aturday, **S**unday

\_\_ **w**rote, **r**oad; **h**ear**t**, **h**ard; **c**our**t**, **c**ord; **n**ote, **n**ode

### **Vocabulary:**

‘**suttee**’/sʌti:/: widow ; relict

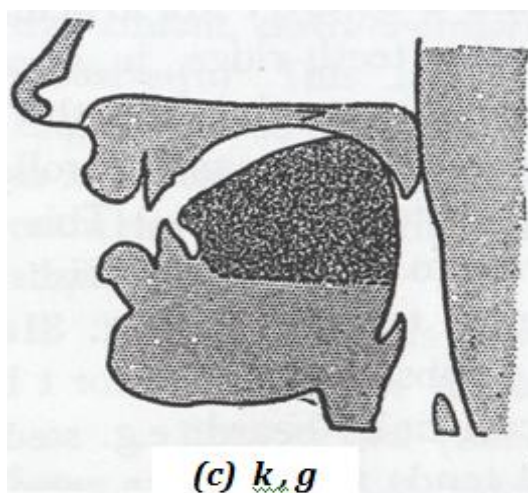
‘**dizzy**’/dɪzi/: having or involving a sensation of spinning around and losing one’ s balance

‘**dally**’/dæli/: act or move slowly

‘**breed**’/bri:d/: cause (an animal) to produce offspring, typically in a controlled and organized way

### (3) /k, g/

For alveolar /k, g/, the soft palate is raised to touch the pharynx’s back wall and shuts off the nasal cavity. The back of tongue moves to the soft palate and makes a complete closure followed by compression of air just behind it. The vocal chords may strongly or partially vibrate for /g/ during the compression stage according to its situation in the utterance. In the release stage, the tongue closure gets open and the air escapes with force creating a burst of air.



/ k / \_\_ fortis ; (spelt: **k**, **c**, **cc**, **ch**, **q**)

Word initial \_\_ **k**idney, **q**uite, **c**areless, **ch**aos, **q**uickly, **c**areful, **C**atty

Word medial \_\_ unt**k**en, un**k**indly, fore**c**ast, **ac**cording, un**d**ertaken, in**c**orporate

Word final \_\_ ba**k**, ta**k**, st**o**rk, un**l**ike, qu**a**ke, la**k**e, fa**k**e, shr**in**k, cha**k**

/ g / \_\_ lenis ; (spelt: **g**, **gg**)

Word initial \_\_ **g**uilty, **g**host, **g**lorious, **g**lobe, **g**lutting, **g**lad, **g**lamour, **g**reedy

Word medial \_\_ **b**igger, **b**ingo, **d**ragon, **b**urger, **w**agon, **l**ugg**ag**e, **t**ar**g**et, **b**egin

Word final \_\_ **r**ug, **t**ag, **l**eg, **g**round**h**og, **f**og, **b**ull**do**g, **v**ag**u**e, **i**ce**berg**, **E**din**bu**rg

**Compare:** /k/ and /g/ \_\_ cop, god; cat, gad; kill, gill; crump, grump; curl, girl

\_\_ making, begin; darken, dragon; staking, dragging

\_\_ leak, league; sack, sag ; smock, smog ; brick, brig

### Vocabulary:

**‘glutting’**/'glʌtɪŋ/: supply or fill to excess; overload

**‘dally’**/'dæli/: act or move slowly

**‘gad’**/'gæd/: go around from one place to another, in the pursuit of pleasure or entertainment

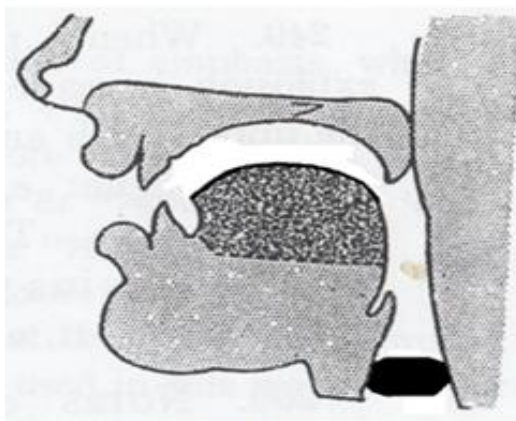
**‘crump’**/'krʌmp/: make a loud sound, esp. by exploding bomb or shell

**‘leak’**/'li:k/: (of a container) accidentally loose contents, esp. liquid or gas through a hole or a

**‘sag’**/'sæg/: sink downward underweight or pressure or through lack of strength

### (4) /ʔ/

For the articulation of the glottal /ʔ/, the obstruction to the airstream is formed by the closure of the vocal chords when they are tightly together and hence interrupt the passage of air into the supra-glottal organs. Silence characterizes the compression stage of its articulation. Then the air pressure below the glottis is released by the sudden separation of the vocal chords. The plosive is voiceless and must be assigned to the ‘fortis’ category, especially when reinforcing a voiceless plosive in word-final position.



(d) ?

**Usage:** What is worth to mention is that the glottal plosive is not a significant sound in the RP system (**Gimson 1989: 168**) though it is frequently used by PR English speakers. Generally, this sound finds its occurrence as a syllable boundary marker, when the initial sound of the second syllable is a vowel; or in the case of the reinforcement of final fortis plosives /**p, t, k**/ and even post-alveolar affricate /**tʃ**/. The glottal plosive can squarely substitute final / **t** /. This, of course, depends on its use by the different speakers. In case of the final consonant cluster /-sk/, the glottal stop /ʔ/ is articulated just before /s/, thus, the word ‘task’ is uttered as [t<sup>h</sup>a:ʔsk<sup>h</sup>].

In brief, the following are the most important features of the glottal stop:

- 1-** It is occlusive made by obstructing the airstream in the vocal tract with no nasal resonance.
- 2-** It is voiceless which means that its production is without the vibration of the vocal chords; since they are tightly together preventing any vibration.
- 3-** It is considered an oral consonant as the airstream escapes through the ‘oral’ cavity only.
- 4-** It is produced with an egressive pulmonic airstream (from the lungs)

# Lesson Five

## English Plosives

### Allophones / Variants

1- The difference between all plosive consonant sounds is in terms of voicing: this can be calculated in the release stage of each one. /p/, /t/, /k/ are voiceless, /b/, /d/, /g/ are voiced. /ʔ/ is a voiceless glottal plosive made in the larynx. The overall distinctive features of the two sections are classified as follows:

$$\left\{ \begin{array}{l} + \text{ stop} \\ + \text{ oral} \\ \pm \text{ voice} \end{array} \right\}$$

The glottal stop /ʔ/, lacking its opposition can be classified under the same arrangement; i.e.,

$$\left\{ + \text{ stop} + \text{ oral} - \text{ voice} \right\}$$

2- Plosives may be bilabial /p, b/ 'pitiful' /p'ɪtɪfəl/, 'bark' /bɑ:k/, alveolar /t, d/ 'task' /tɑ:sk/, 'dirty' /dɜ:ti/ or velar /k, g/ 'cartoon' 'ka:'tu:n/, 'guardian' /'gɑ:dɪən/. The other kind of plosive is the glottal stop /ʔ/. The word 'football' can be pronounced without interruption in the middle as in /fʊtʔɔ:l/, or with a complete closure of the glottis instead of /t/: /'fʊʔbɔ:l/.

3- Force of articulation: /p, t, k/ are pronounced with more muscular energy and stronger breath effort than /b, d, g/. /p, t, k/ are known as relatively strong or 'fortis'; /b, d, g/ are known as relatively weak or 'lenis'. (fortis/lenis as **phonological** categories)

4- a) The English voiceless plosives are aspirated initially in accented 'stressed' syllables; i.e., (the plosion is accompanied by a puff of air) in initial position as in: 'pin' [p<sup>h</sup>ɪ n], 'tin' [t<sup>h</sup>ɪn], 'kin' [k<sup>h</sup>ɪn]; or medial position as in: 'important' [ɪm'p<sup>h</sup>ɔ:t'ənt], intelligent [ɪn't<sup>h</sup>elɪdʒənt], incorporate [ɪn'k<sup>h</sup>ɔ:pəreɪt].

b) This aspiration is relatively weak when preceding a vowel in unaccented syllables, as in 'polite' [p'ə'laɪt], and in word-final position, as in 'top' [t<sup>h</sup>ɒp]. We say that the consonant is ejective produced with 'glottalic' egressive airstream; i.e., it is made with the air remaining in the mouth, contrary to 'aspiration', which is the burst of air accompanying fortis plosive release

stages in accented syllables, and which comes ‘egressively’ from the lungs. Weak aspiration (ejection) is marked with a kind of apostrophe ( ' ).

c) When / s / precedes /p, t, k/ initially in a syllable, there is practically no aspiration, even when the syllable carries a strong accent. ‘spark’ [sp̄a:k']; ‘upstairs’[ʌp'st̄eəz]; skirt [sk̄ɜ:t'] .

**Compare:** ‘park’ [p<sup>h</sup>a:k'], & ‘spark’ [sp̄a:k'].

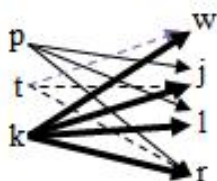
5- When / l, r, w, j / follow initial /p, t, k/, the aspiration is manifested in the devoicing of [ l̥, t̥, k̥ ], as in ‘plate’ [pl̥eɪt'], ‘try’ [t̥ɹaɪ], ‘quiet’ [k̥waɪət'], ‘pure’ [p̥tʃuə].

Voiced [ l, r, w, j ]

Devoiced [ l̥, t̥, k̥ ] or in the form of [ l̥̥, r̥̥, w̥̥, j̥̥ ]

**Note:** the sign [ ] put under the consonants marks the great loss of voicing of the stated sounds after initial /p, t, k/

The combination ‘consonant clusters’ of /p,t,k/ and /w,j,l,r/ can be set as follows:



The result is that: a) initial /p/ can be followed by /j/, /l/ and /r/, as in : pure, play, pride

b) initial /t/ can be followed by /w/, /j/ and /r/, as in : twice, tune, tree

c) initial /k/ can be followed by /w/, /j/, /l/ and /r/, as in : quite, cure, clay, crown

**Note:** In English, /w/ does not occur after initial /p/; similarly /l/ is not permitted after initial /t/. Hence, the consonant clusters /pw/ and /tl/ do not occur in word initial position in accented syllables.

6- Final /p, t, k/ can be reinforced by a glottal closure [ʔ], as in the case of ‘stripe’ [straɪʔp]. ‘smart’ [sma:ʔt], ‘fork’ [fɔ:ʔk], This glottal stop can be placed before the voiceless consonant preceding the final voiceless consonant clusters, as in ‘typed’ [t̥<sup>h</sup>aɪʔpt']; ‘first’ [fɜ:ʔst']; ‘craft’ [kɹa:ʔft']; ‘parked’ [p<sup>h</sup>a:ʔkt'].

**Note 1:** the use of the ‘glottal stop’ before final fortis plosives is optional; it is not ‘compulsory’. The word ‘typed’ can be articulated with the glottal stop: [t̥<sup>h</sup>aɪʔpt'] or without it; i.e., [t̥<sup>h</sup>aɪpt'].



**Note 2:** there is no opposition made with the glottal stop [ʔ], which is regarded as a voiceless consonant.

7- The length of the different vowels (short, long, diphthongs) in syllables differs greatly before the preceding consonants: syllables closed by fortis consonants /**p, t, k**/ are shorter than those which are open (ending in vowels), or closed by lenis consonants, as in: ‘hat’ [hæʔt], ‘smart’ [smɑ:ʔt], ‘wrote’ [rəʊʔt], as compared with ‘had’ [hæd], ‘hard’ [hɑ:d], & ‘road’ [rə:ʊd]

**Note: a-** Reduced/shortened short vowels are marked with a small ( <sup>v</sup> ) put on all short vowels which are followed by fortis consonants, except on the ‘Schwa’ / ə /, because it is itself a quick relaxed neutral reduced vowel which allows unstressed syllables to be said in a quick manner.

**b-** Followed by fortis consonants, long vowels are reduced and marked with the omission of the lower point which exists in the form of ‘colon’ that characterizes the length of long vowels ( : ).

Thus, there remains only the upper point; i.e., ( <sup>˙</sup> ).

**c-** No mark is added to the reduced diphthongs which would keep the same symbol. It is the colon / : / put between the two vowels in the fully long diphthong which makes the difference. The distinguishing example of this case is the articulation of the word ‘wrote’ [rəʊʔt] as compared to ‘road’ [rə:ʊd].

**8- a)** The /**p**/ has no audible release when followed by another plosive, as in: captain [ˈkʰæptʰən]/, ‘wiped’ [ˈwaɪptʰ]. The release of the second plosive is greatly heard.

**b)** The /**p**/ gets a nasal resonance when followed by a nasal consonant, as in: ‘topmost’ [tɒpˈmɒst], ‘happen’ [ˈhæpən], ‘cheap meat’ [tʃi:pˈmi:t].

**c)** The /**p**/ gets a lateral resonance when followed by a lateral consonant, as in: ‘apple’ [æpəl], ‘couple’ [ˈkʰʌpəl], ‘please’ [pli:z].

**d)** No audible /**p**/ in certain words: ‘pneumatic’ [nju:ˈmætɪk], ‘psychology’ [saɪkˈɒlədʒi], re’ceipt [ri:si:t], ‘cupboard’ [ˈkʰʌbəd].

**Note:** In the word ‘cupboard’ the influence of the audible release stage of the second plosive /**b**/ makes the preceding plosive /**p**/ inaudible.

9- When /**p, b**/ are followed by the labio-dental sounds /**f, v**/, the stop is made by a labio-dental rather than a bilabial closure, as in: ‘obvious’ [ˈɒbviəs], or in context: ‘cup full’ [kʌpˈfʊl]. The labiodental plosives are marked as [ **p<sub>ɸ</sub>** ] and [ **b<sub>ɸ</sub>** ].

**Note:** ‘in context’ means the assimilation of two sounds occurring in the margins of two words; i.e., within two-word boundaries, as the case for ‘cup full of water’ [kʌp fʊl əv 'wɔ:tə], and ‘robe very nice’ [rə:ʊb, veri 'naɪs].

**10- a)** The lenis sounds /b, d, g / are fully voiced when they occur intervocalically ‘between two vowels’, as in the words ‘leader’ [li:də]; ‘eager’ [i:gə]. ‘labour’ [leɪbə], or in context ‘to be’ [tə bi:]; ‘grab in’ [græbɪn]; ‘God is’ [gɒd ɪz]; ‘bag on’ [bæg ɒn].

**b)** Following or preceding silence, /b, d, g / may be partially voiced initially, as in: ‘bill’ [bɪl], ‘dam’ [dæm], ‘game’ [geɪm]

**c)** Completely devoiced / voiceless, as in: ‘rob’ [rɒb], ‘bad’ [bæd], ‘frog’ [frɒg].

**11- a)** /b/ is lost in word final position, after the bilabial nasal /m/ as in ‘climb’ [klaɪm], ‘lamb’ [læm] ‘comb’ [kʰəʊm].

**b)** /b/ has no audible release when followed by another plosive, as in ‘obtain’ [əb'theɪn], ‘rubbed’ [rʌbɪd], subconscious [sʌb'kʰɒnʃəs], object [ɒb'dʒɪktə].

**c)** /b/ gets a nasal resonance when followed by a nasal consonant, as in: ‘submerge’ [səb'mɜ:dʒ], ‘ribbon’ [ 'rɪbən ]; ridden [ 'rɪdn ]. During the production of /p/ and /b/ followed by the nasal consonants /m, n/, the soft palate is lowered to a greater or lesser extent, allowing the airstream to pass through the nasal cavity, hence a nasalized plosive is heard in the process.

**d)** /b/ gets a lateral resonance when followed by a lateral consonant, as in: ‘bubble’ [ bʌbəl ], ‘blow’ [ bləʊ ].

**12)** /k/ has no audible release when followed by another plosive, as in ‘object’ [ ɒb'dʒɪkt ]; attract [ ə'trækt ].

**13)** Word final /t/ and /d/ are assimilated to [tʃ] and [dʒ], before /j/ initial in the following word, as in: ‘next year’ [nekstʃjɜ:]; ‘would you’ [wu dʒ jə]. In this case /j/ has an effect on the preceding sounds /t/ and /d/, and hence changes the two sounds into /tʃ/ and /dʒ/. This is referred to as ‘regressive assimilation’

## FORTIS / LENIS PLOSIVES

### PRACTICE

**(1) 1-** Circle the words that contain a bilabial plosive:

tomb, peace, bomb, rubber, supper, letter, order, done, bigger, tongue, daddy

2- Circle the words that contain an alveolar plosive:

bomb, utter, said, butter, rapid, organ, ton, built, glass, lacked, dirty, shirt, ride

3- Circle the words that contain a velar plosive:

organ, bulb, open, skin, gain, biker, hid, bread, guide, curtain, cartoons, pig, pick

4- Circle the words that contain a fortis plosive:

bead, set, buy, go, crow, girl, door, but, dirty, paper, gate, dog, going, doll

5- Circle the words that contain a lenis plosive:

apple, bar, goat, queen, car, door, tour, sad, gas, gun, write, rode, stupidity

6- Circle the words that contain a strongly aspirated plosive:

sky, bell, car, time, spy, slate, dime, poor, forty, attack, import, stick, pie

7- Circle the words that contain a weakly aspirated plosive:

supper, park, lucky, letter, cool, time, happy, apart, soup, neck

8- Circle the words that contain an unaspirated plosive:

scar, key, store, stay, tone, pie, stone, cold, spy, steak, take, span, slate

9- Circle the words that contain a fully long vowel or diphthong:

tripe, seat, tribe, seed, failure, water, league, leak, paper, labour, bound

10- Circle the words that contain a reduced (shortened) long vowel or diphthong:

tribe, warder, water, labour, tripe, seat, leak, seed, ride, write, rate

11- Circle the words that have a plosive released through another plosive:

captain, bets, good boy, actor, locked, bottle, ripe cheese

(2) a- Initially in stressed syllable, /p, t, k/ are strongly aspirated, i.e., the plosive is accompanied by a puff of air called 'aspiration'. [ p<sup>h</sup>, t<sup>h</sup>, k<sup>h</sup> ]

*Examples:* suppose [            ], intelligent [            ], account [            ]

b- Initially in unstressed syllables, /p, t, k/ are weakly aspirated before a vowel. The fortis plosives are also weakly aspirated in final positions. The sound is 'ejective / implosive'.

[p', t', k' ]

*Examples:* supper [            ], lucky [            ], tip [            ], night [            ]

c- After /s/, /p, t, k/ are unaspirated. [ p<sup>=</sup>, t<sup>=</sup>, k<sup>=</sup> ]

*Examples:* spy[            ], stay[            ], sky[            ] steaming[            ]

d- When /l, r, w, j/ follow initial /p, t, k/, the aspiration is manifested in the devoicing of /l, r, w, j/; the symbols are as follows: [ l̥, r̥, w̥, ç ]

*Examples:* please [            ], try [            ], quiet [            ], Pure [            ]

e- Final /p, t, k/ can be reinforced by a glottal closure (stop) /ʔ/ in syllable final position.

*Examples:* type [            ], smart [            ], shock [            ], skirt [            ]

f- the /p/ is silent in certain words.

*Examples:* psychology [            ], psychiatric [            ], receipt [            ]

g- Syllables closed by fortis consonants /p, t, k/ are shorter than those which are open or closed by lenis consonants.

**1- Before final fortis consonants:**

*Examples:* 1- (closed by a short vowel): top [            ], hat [            ], duck [            ]

a- (closed by a long vowel): cheap [            ], first [            ], fork [            ]

b- (closed by a diphthong): tape [            ], wrote [            ], shout [            ],

**2- Before final lenis consonants:**

*Examples:* 1- (closed by a short vowel): rob [            ], had [            ], bag [            ]

a- (closed by a long vowel): barber [            ], hard [            ], league [            ]

b- (Closed by a diphthong): tribe [            ], found [            ], vague [            ]

h- The /b/ gets a nasal resonance when followed by a nasal consonant.

*Examples:* carbon [            ], submerge [            ], ebon [            ]

i- The /b/ gets a lateral resonance when followed by a lateral consonant.

*Examples:* couple [            ], blame [            ] blow [            ]

j- The /b/ is fully voiced inter-vocally (between 2 vowels).

*Examples:* rubber [            ], labour [            ], harbour [            ]

k- When /p, b/ are followed by the labio-dental /f, v/, the stop is made by a labio-dental rather than a bilabial closure. [p̪], [b̪]

*Examples:* helpful [            ], obvious [            ]

l- The /p, b/ have no audible release before another plosive consonant. The release of the second plosive is greatly heard.

*Examples:* September [            ], obtainable [            ], subdivide [            ]

m- The /k/ has no audible release when followed by another plosive, as in 'interact'

*Examples:* [            ]; actor [            ]

**Place of Articulation:**

(3) 1- For /p/ and /b/, the active articulator is.....and the passive articulator is .....

2- For /k/ and /g/, the active articulator is .....and the passive articulator is .....

3- For /t/ and /d/, the active articulator is .....and the passive articulator is .....

4- For /ʔ/ .....

(04) Give the VPM of the following sounds

Consonant	Voicing	Place of articulation	Manner of articulation
/p/			
/t/			
/k/			
/b/			
/d/			
/g/			
/ʔ/			

(05) The following words contain several plosives. They are given in spelling and in transcription. Can you pronounce them?

- 1- potato /pə 'teɪtəʊ /    2- topic /'tɒpɪk/    3- petticoat /'petɪkəʊt/  
 4- partake /pa: 'teɪk/    5- cupboard /'kʌbəd/    6- decapitated / dɪ'kæpɪteɪtɪd/  
 7- pocket /'pɒkɪt/    8- about /ə'baʊt/    9- carpet /'kɑ:pɪt/  
 10- bodyguard /'bɒdɪgɑ:d/    11- tobacco /tə'bækəʊ/    12- decode /dɪ:'kəʊd/

(06) Write in letters the following transcribed words:

- 1- /dɪ 'beɪt/ .....    2- /beɪkt/.....    3- /'kɒpɪd/ .....  
 4- /'dedɪkeɪtɪd/ .....    5- /'æpɪtaɪt/.....    6- /'fɒrɪst/.....  
 7- /klaɪm/.....    8- /'saɪkɪk/.....    9- /'prɪtɪ/.....

(07) Transcribe the following words phonetically: (Use all the *diacritics* needed).

- 1- doctor [            ]    2- paper [            ]    3- ridiculous [            ]  
 4- tomb [            ]    5- speed [            ]    6- clay [            ]  
 7- target [            ]    8- fight [            ]    9- school [            ]  
 10- have to [            ]    11- of cats [            ]    12- of dogs [            ]

(08) Provide the correct pronunciation of the final 'ed' in the following regular verbs:

parked, divided, arrived, sneezed, started, washed, watched, frightened, married  
 needed, walked, shouted, hurried, roomed, ruined, reminded, remembered, talked

/d/	/t/	/ɪd/

## Lesson Six

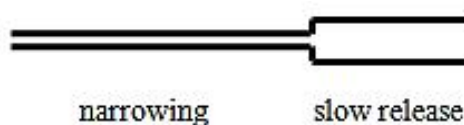
### English Fricative Consonants

/f, v, θ, ð, s, z, ʃ, ʒ, h/

#### Description of sound production

**Fricatives** are oral sounds made as a result of approaching the two organs close together. This means that the two organs used in the contact are held sufficiently very near each other (but not to cause a firm contact) to make a narrowing through which the escaping airstream produces a hissing noise/sound called ‘friction’.

**In other words:** The soft palate is raised to touch the back wall of the pharynx. The two articulators are gently brought together and air is pushed through a narrowing. The result is a hissing noise called ‘friction’. The contact can be made by lower lip with the upper teeth for / **f, v** /; the blade of tongue with the bottom edge of the upper teeth for / **θ, ð** /; the front of tongue with the alveolar ridge for / **s, z** /; and the body of tongue and the tongue rims with the part just behind the alveolar ridge for / **ʃ, ʒ** /. However, the glottal fricative / **h** / differs, to some extent, in the manner of articulation of other fricative consonants in terms of the two organs which are brought sufficiently together. / **h** / is produced inside the larynx in the wide space called ‘glottis’, without the vibration of the vocal chords.



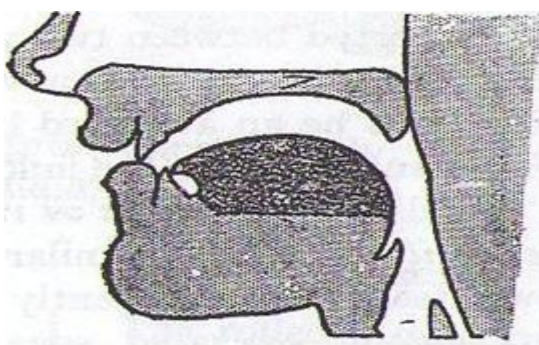
**Place of articulation:** 1) labio-dental / **f, v** / ; 2) dental / **θ, ð** / ; 3) alveolar / **s, z** /  
4) palato-alveolar / **ʃ, ʒ** / ; 5) glottal / **h** /

**Manner of articulation:**

(1) / **f, v** /

**1) Description:** A labio-dental / **f, v** / : (from **labia** *lip* and **dental** *teeth*) fricatives are sounds in which the contact is made by approaching the lower lip and upper teeth to constrict the airflow

coming out of the lungs creating turbulence for the air, but not stopping its passage out of the mouth. In this case, the soft palate ‘velum’ is raised to close the nasal cavity ‘resonator’, so as the air escapes through the mouth. English has two labio-dental fricatives: /f/ in which the vocal chords do not vibrate (voiceless) in all environments, as in: *fight*, *laughter*, and *safe*, and /v/ in which they may or may not vibrate according to its situation in the utterance, as in: *vote*, *reveal* and *save*



a) f, v

/f/ \_\_ fortis (spelt: **f**, **ff**, **ph**, **gh**)

Word initial \_\_ **f**udge, **f**ellow, **f**itness, **f**ill, **f**aker, **ph**one, **ph**ilosophy, **Ph**iladelphia

Word medial \_\_ **a**ffect, **d**efend, **s**elfish, **u**nfair, **i**nfinitesimal, **l**augh**ing**, **a**ffirmation

Word final \_\_ **l**ife, **w**olf, **c**alf, **l**augh, **G**ulf, **s**helf, **e**nough, **s**taff, **s**nuff, **r**ough, **s**taph

/v/ \_\_ lenis (spelt, **v**, **f**, **ph**, **w**)

Word initial \_\_ **v**ast, **v**eil, **v**oice, **v**ideo, **v**alleys, **V**olkswagen, **w**agon (Fr.) /vægən/

Word medial \_\_ **e**ven, **n**ervous, **e**ndeavor, **i**n**v**ite, **n**e**ph**ew, **i**nvalid, **u**n**v**eil

Word final \_\_ **s**t**ar**ve, **o**f, **c**alve, **g**rove, **d**rive, **s**trive, **f**ive, **o**live, **h**ives, **e**nclave

**Compare:** /f/ and /v/ \_\_ fan, van; fast, vast; foul, vowel, ferry, very; fender, vender  
 \_\_ infant, invent; confuse, convince; rifle, rival; snuffle, snivel  
 \_\_ leaf, leave; safe, save; proof, prove; life, live; grief, greave

### Vocabulary:

‘fudge’/fʌdʒ/: a soft candy made from sugar, bitter, and milk or cream

‘in’finitesimal’ /ɪnfɪnɪtəsɪməl/: extremely small

‘veil’/veɪl/: a piece of fine material worn by women to protect or conceal the face

‘strive’/straɪv/: make great effort to obtain or achieve something

‘ferry’/feri/: a boat or ship for conveying (transporting) passengers and goods, especially over a relatively short distance and as a regular service

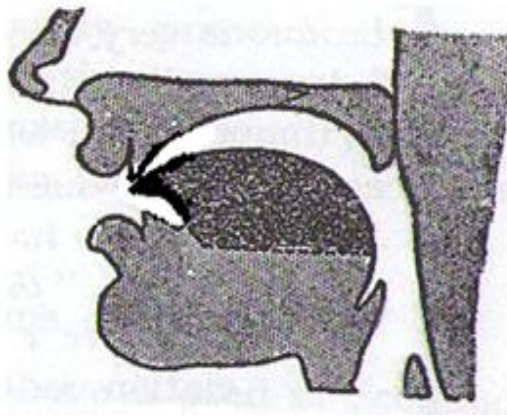
‘fender’/fendə/: a thing used to keep something off or prevent a collision, in particular

‘snuffle’/snɪfəl/: sniff slightly or repeatedly, typically because of a cold or fit of crying

‘greave’/gri:v/: a piece of armor (metal covering) used to protect the skin

(1) /θ, ð/

**2) Description:** A dental/lingua-dental (from **lingua** *tongue* and **dental** *teeth*) fricative is a sound in which the flow of air out of the body is constricted by a near touch of the tongue blade to the bottom edge of the front upper teeth, creating a narrow opening through which the air passes. English has two dental fricatives — voiceless /θ/ as in: *think, worthy* and *bath*, and \_\_voiced /ð/ as in: *this, within*, and *with*. During the articulation process, the vocal chords may strongly or partially vibrate for / ð / according to its situation in the utterance. In the meantime, the velum is raised to remain away from the back wall of the pharynx.



(b) θ , ð

/ θ / \_\_ fortis (always spelt **th**)

Word initial \_\_ **thief, thin, thirsty, thumb, through, thunder, throughout, thermometer**

Word medial \_\_ **ethics, method, author, lengthy, athletics, enthusiasm, anthropology**

Word final \_\_ **heath, smith, breath, path, cloth, north, booth,**

/ ð / \_\_ lenis (always spelt **th**)

Word initial \_\_ **there, then, though, they, their, those, therefore, therein, Theremin**

Word medial \_\_ **breathing, leather, gather, father, although, other, whether, northerly**

Word final \_\_ **with, see**th**e, soo**th**e, lat**h**e, bat**h**e, clo**th**e, breathe, te**th**e, mou**th** (v)**

**Compare:** /θ/ and /ð/ \_\_ ether either; loath, loathe; mouth (n), mouth (v); teeth (n), teethe (v) ; thigh, thy

**Note1:** Sometimes, there are difficulties to find a great number of minimal pairs which differ only by /θ/ & /ð/ in different environments

**Note2:** the substitution of /θ/ for /ð/ and vice-versa do not bring about serious changes in meaning. It may regarded as a kind of distortion in pronunciation only.



## Vocabulary:

‘ethics’ /'eθɪks/: moral principles that govern a person's or group's behaviour

‘heath’ /hi:θ/ : an area of open uncultivated land

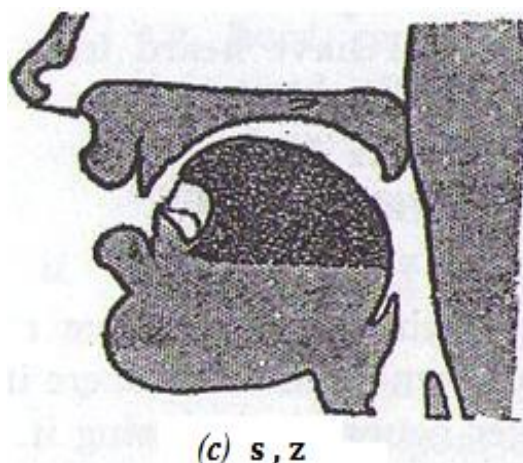
‘seethe’ /si:ð/: (of a liquid) bubble up as a result of being boiled

‘soothe’ /su:ð/: to gently calm (a person or their feelings) ; to make less angry, excited or anxious

‘lathe’ /leɪð/: a machine for shaping wood, metal or other material

## (2) /s , z/

**3) Description:** An alveolar / lingua-alveolar (from **lingua** *tongue* and **alveola**, the ridge just behind the front upper teeth) fricative is a sound in which the flow of air out of the body is constricted by approaching the tongue to the alveolar ridge — the part of roof just behind the upper front teeth, creating a narrow opening through which the air passes. English has two lingua-alveolar fricatives — voiceless /s/ as in *say, racing* and *class*, and /z/ in which the vocal chords may or may not vibrate according to its situation in the utterance, as in: *zebra, razor* and *freeze*.



/s/ \_\_ fortis (spelt **s, ss, c, sc**)

Word initial \_\_ **s**ink, **s**ister, **sc**ience, **s**udden, **s**incere, **ps**ychology, **sy**mbolize,

Word medial \_\_ **s**nieces, **m**essage, **sc**issors, **i**nside, **a**xes, **b**racelet, **c**oncert, **w**histle

Word final \_\_ **s**piece, **l**ass, **p**urse, **s**pice, **c**haos, **b**urse, **r**educe, **f**urious, **e**xercise

/z/ \_\_ lenis (spelt **s, z, zz**)

Word initial \_\_ **z**ap, **z**eal, **z**ine, **z**ero, **z**inc, **z**ebra, **z**ealous, **z**eroed

Word medial \_\_ **z**amazing, **z**reasy, **c**razy, **c**itizen, **f**reezing, **f**uzzy, **b**uzzard, **d**oomsday

Word final \_\_ **s**peas, **j**azz, **r**aise, **c**ruse, **p**lease, **f**osters, **r**ingers, **t**opaz,

**Compare:** /s/ and /z/ \_\_ sink, zinc; insert, desert; rice, rise; price, fries; peace, peas

## Vocabulary:

'lass' /læs/: a young girl

'zeal' /zi:l/: great energy or enthusiasm in pursuit of a cause or an objective

'zine' /zi:n/: a magazine especially a fanzine ( a magazine for fan)

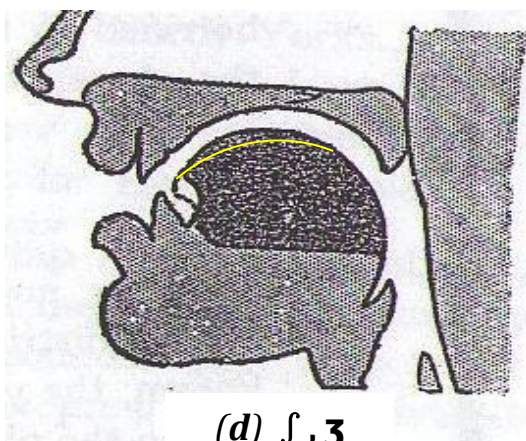
'zeroed' /zi:rəʊd/: Adjust an instrument to zero

'buzzard' /bʌzəd/: a large hawk-like bird of grey with broad wings and a rounded tail

'doomsday' /dʊmzdeɪj/: the last day of the world's day ; judgment day

### (4) /ʃ, ʒ/

4) A palate-alveolar / lingua-palatal (from **lingua** tongue and **palate** the top of the mouth) fricative is a sound in which the flow of air out of the body is constricted by approaching the body of tongue to the hard palate — the central part of the roof behind the alveolar ridge creating a narrow opening through which the air passes. English has two lingua-palatal fricatives — voiceless / ʃ / as in: *shoe*, *pressure*, and *dash*, and / ʒ / in which the vocal chords may or may not vibrate according to its situation in the utterance, as in: *gigolo*, *vision* and *confusion*.



/ ʃ / \_\_ fortis (spelt **sh**, **ch**, **sch**, **s**, **ss**, **ti**, **sci**, **c**, **x**)

Word initial \_\_ **s**chedule, **sh**elf, **sh**oe, **sh**ee**p**, **sh**ield, **s**ugar, **sh**oulders, **sh**outing, **sh**yness

Word medial \_\_ ancient, **f**ashion, **R**ussian, **a**nxious, **c**onscience, **m**achinery, **i**nflation

Word final \_\_ **c**rash, **f**lash, **d**ash, **d**ish, **W**el**sh**, **r**ubbish, **s**elfish, **d**iminish, **d**istinguish

/ ʒ / \_\_ lenis (spelt **si**-, **s**, **z**.)

Word initial \_\_ **g**endarme, **j**us, **g**igue, **g**enre, **j**acquerie, **j**abot

Word medial \_\_ **c**onclusion, **e**xposure, **v**isual, **c**onfusion, **o**ccasion, **m**easurement

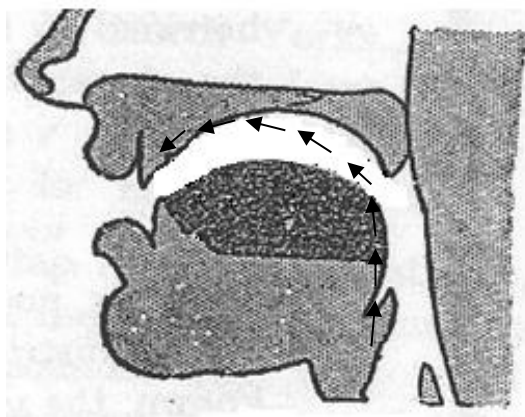
Word final \_\_ **b**eige, **r**ouge, **c**ollage, **p**restige, **m**assage, **m**irage, **g**arage, **s**abotage

**Note 1:** The sound / ʒ / is used initially and finally in French loan words only

**Note 2:** / dʒ / can be used as an alternative to / ʒ / in the two stated environments

(5) /h/

5) A glottal fricative, sometimes referred to as ‘voiceless glottal transition’ is a sound in which the flow of air out of the body passes freely inside the glottis when the vocal chords are apart and create a narrow opening through which this air passes with friction before entering the mouth. English has the voiceless glottal fricative /h/ as in: *happy* and *whose*



(e) /h/

/h/ \_\_ fortis (spelt **h**, **wh**)

Word initial \_\_ **h**eight, **h**ello, **wh**ose, **h**andy, **h**andsome, **wh**oever, **h**owever, **h**umanity

Word medial \_\_ **a**head, **r**ehat, **fo**rehead, **bee**hive, **beh**aviour, **in**halation, **in**habitant,

Word final \_\_ /h/ does not occur word finally.

**Note 1:** In certain words, /h/ is pronounced somewhat like the glottal stop /ʔ/, as in:

**h**onour, **h**onest, **h**eir

**Note 2:** /h/ is silent especially in medial position as in: **gh**ost, **R**hythm, **gh**etto, **R**hubarb, **ex**hilarate, **ex**hibition, **veh**icle, **shep**herd, **Dur**ham, **Bir**mingham

**Vocabulary:**

‘**heir**’/eə/: the person who has the lawful right to receive the property of an older member of the family who dies

‘**Rhubarb**’/’ru:ba:b/: (*inf.*) the sound of many people talking at the same time

‘**Durham**’/’dʌrəm/: A city in Northern England on the River wear. It’s famous for its 11<sup>th</sup> century cathedral

‘**Birmingham**’/’bɜ:mɪŋəm/: an industrial and the second largest city after London. It is located in west central England.

# Lesson Seven

## English Fricatives

### Allophones / Variants

1) Force of articulation: / **f, θ, s, ʃ** / are pronounced with more muscular energy and stronger breath effort than / **v, ð, z, ʒ** /. / **f, θ, s, ʃ** / are known as relatively strong or ‘**fortis**’; / **v, ð, z, ʒ** / are known as relatively weak or ‘**lenis**’. (fortis/lenis as **phonological** categories)

2) The lenis sounds / **v, ð, z, ʒ** / are fully voiced when they occur intervocalically ‘between two vowels’, as in the words ‘river’ [ˈrɪvə]; ‘either’ [ˈaɪðə]; ‘freezer’ [ˈfriːzə]; ‘pleasure’ [ˈpleʒə], or in context ‘leave it’ [liːvɪʔt]; ‘with them’ [wɪðəm]; ‘those are’ [ðəʊzə:].

*Note:* final /**ʒ**/ can rarely be used intervocalically in context because final /**ʒ**/ usually alternates with /**dʒ**/

3) The length of the different vowels (short, long, diphthongs) in syllables differs greatly before the preceding consonants: syllables closed by fortis consonants / **f, θ, s, ʃ** / are shorter than those which are open (ending in vowels) or closed by lenis consonants /**v, ð, z, ʒ**/, as in: ‘tough’ [tʰʌf], ‘teeth’ [tʰiːθ], ‘horse’ [hɔːs], as compared with ‘love’ [lʌv]; ‘teethe’ [tiːð], & ‘cause’ [kɔːz].

*Note: a-* Similar to the case of plosives, the reduced short vowels, long vowels and diphthongs submit the same marks before fortis fricatives.

4) /**ʃ, ʒ**/ never occur in word-final position after a diphthong and in this case, discussion of length is excluded.

5) Word final /**v**/ may assimilate to [f] before a fortis consonant initial in the following word, as in: have to [hæftə], love to [lʌftə], have some [hæfsəm], etc

6) In familiar speech the /**v**/ may be elided in the case of the unaccented form of ‘have’ and ‘of’, as in: ‘a lot of money’ [ə ˈlɒt ə ˈmʌni], and ‘I could have bought it’ [aɪ kəd ə ˈbɔːtɪt]

7) /**f**/ has taken a place in the word ‘lieutenant’ /leɪ ˈtenənt/, yet in American English it is pronounced as /l(j)uː ˈtenənt/.

8) /θ, ð/ offer difficulties of articulation when followed by /s, z/, thus they are sometimes elided, as the case of 'clothes' /klaʊz/, 'months' /mʌns/, or /mʌnts/.

9) In sequence of the type /s, z/ followed by unaccented /ð/, the preceding alveolar articulation may influence the dental fricative in rapid speech. For example: 'Is there any?' [iz zə'reni] ; 'what's the time?' [wɒts zə 'taɪm] ; 'all the way' [ɔ: də 'weɪ] ; 'In the morning' [ɪn nə 'mɔ:nɪŋ].

10) /s/ is often replaced by a weaker articulation of [z], as in the case of 'horse riding' /hɔ:z 'raɪdɪŋ/

11) Word final /s/ and /z/ are assimilated to /ʃ/ and /ʒ/ before /j/, as in: 'miss you' [mɪʃ jə]; 'please you' [pli:ʒ jə]. In this case /j/ has an effect on the preceding sounds /s/ and /z/, and hence change the two sounds into /ʃ/ and /ʒ/. This is referred to as 'regressive assimilation'

12) The lack of words distinguishable by /ʃ/ & /ʒ/ results in possible alternation between these two sounds, as in 'Asia' /eɪʃə, eɪʒə/ ; 'version' /vɜ:ʃən, vɜ:ʒən/.

13) In word final position, where /ʒ/ exists only in French loan words, a variant with /dʒ/ is always possible, as in: 'rouge' /ru:ʒ, ru:dʒ/ ; 'garage' /gæra:ʒ, gæri:dʒ/

## English Fricatives

### Practice

01) Circle the words that contain a labiodentals fricative:

Surface, leisure, laughter, believe, fission, seize, teethe, wives, either

02) Circle the words that contain a dental fricative:

so, lace, although, azure, thick, that, fall, think, theory, vision, ether

03) Circle the words that contain an alveolar fricative:

fool, head, slim, zebra, fish, fees, cats, loath, zero, scarce, fight

04) Circle the words that contain a palate- alveolar fricative:

sure, feeling, veil, loathe, fission, vision, razor, dash, pigeon

05) Circle the words that contain a glottal fricative:

heart, heir, behind, honest, behave, honor, exhaust, unharmed, exhibit, perhaps, ahead, exhilarate, unhappy, inhaled

06) Circle the words that contain a fortis fricative:

fight, large, rich, race, think, this, hard, shoe, eyes, ice, rice

07) Circle the words that contain a lenis fricative:

zeal, sort, thank, though, pleasure, rush, save, laugh, sink, ethics

08) Circle the words that contain a fully voiced fricative:

breather, service, laughing, s serve, teethe, seizes, leisure, pressure

09) Circle the words that contain a fully long vowel or diphthong:

Race, large, laugh, erase, five, search, larch, wreath, writhe

10) Circle the words that contain a reduced (shortened) long vowel or diphthong:

mouse, enlarge, rice, rise, lace, raise, fife, surf, march, search

(2) For each of the following words, write down the phonetic symbol for every consonant that occurs in initial position (as in 1-).

1- park / p /    2- knit / /    3- bet / /    4- chain / /    5- goal / /  
6- June / /    7- mine / /    8- car / /    9- ring / /    10- think / /  
11- spoon / /    12- zero / /    13- water / /    14- yelp / /    15- kilt / /

(3) 1- For /s/ and /z/, the active articulator is.....and the passive articulator is .....

2- For /θ/ and /ð/, the active articulator is .....and the passive articulator is .....

3- For /f/ and /z/, the active articulator is .....and the passive articulator is .....

(2) For /f/ and /v/, the active articulator is .....and the passive articulator is .....

5- For /h/ .....

(4) Provide a *phonemic* transcription to the following words:

see /        /    beats /        /    said /        /    heart /        /    flower /        /  
North /        /    shoe /        /    chalk /        /    fur /        /    hoe /        /  
seen /        /    food /        /    zebra /        /    serve /        /    short /        /

steed /            / pleasure /            / shroud /            / charged /            /  
 teeth /            / lose /            / sneeze /            / church /            / faint /            /  
 tenth /            / breath /            / serve /            / cheese /            / harm /            /  
 breathe /            / freeze /            / wash /            / sward /            / teeth /            /

(5) Transcribe the following words phonetically: (Use all the *diacritics* needed).

- 1- sneeze [            ]    2- please [            ]    3- ridiculous [            ]  
 4- insane [            ]    5- speed [            ]    6- psychology [            ]  
 7- nurse [            ]    8- fight [            ]    9- school [            ]  
 10- have some [            ]    11- have dogs [            ]    12- has got [            ]  
 13- has cats [            ]    14- lot of birds [            ]    15- lot of facts [            ]

(6) Give the VPM of the following sounds:

Consonant	Voicing	Place of articulation	Manner of articulation
/s/			
/h/			
/ʒ/			
/θ /			
/z/			
/ʃ/			
/f/			
/ð/			
/v/			

(7) Useful practice using /θ/ & /ð/ sounds in context:

- \* **This is the third myth that they have thought of together**
- \* **I think my brother visited the theatre this Thursday**
- \* **Three thousand smooth teeth together in this healthy mouth**
- \* **In this weather, wealthy people breathe through their mouths**

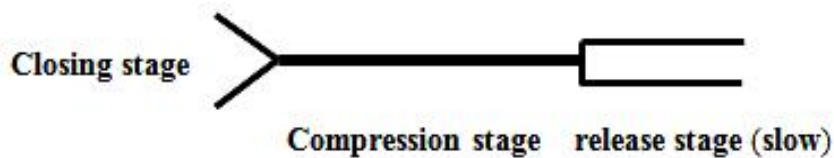
## Lesson Eight

### English Affricate Consonants

/tr, dr, tʃ, dʒ/

#### Description and sound production

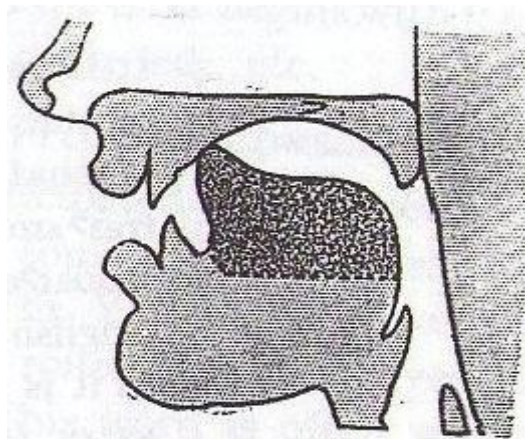
**Affricates** are consonants that begin as stops (most often an alveolar, such as /t/ or /d/) but release as a fricative. During the articulation of the English affricates, the soft palate is always raised. The two organs of speech ‘articulators’ come together and make a complete closure before they compress air for a moment. Instead of having a sudden release as for plosives, the articulators peel apart slowly causing friction.



**Place of articulation:** 1) post alveolar: /tr, dr/      2) palato-alveolar: /tʃ, dʒ/

**Manner of articulation:**

**(1) Post alveolar affricates /tr, dr/:** In producing the two sounds, the velum is raised to close the nasal passage. The tip and rims of tongue move towards the rear edge of the alveolar ridge and the upper side teeth to form the closure, meanwhile the centre of the tongue is hollowed in readiness for the /r/ type friction, resulting from the slow release of the stop. During the stop and fricative stages, the focal chords are wide apart for /tr/; however, in the case of /dr/, voice is present throughout the affricate when medial, but may be associated only with the fricative element when initial.



a) /tr, dr/



/ **tr** / \_\_\_ fortis (spelt **tr**, **train** ; **tur**, naturally often /<sup>n</sup>nætɹəl<sub>1</sub>/, and /tr<sub>1</sub>/ <sup>2</sup> factory & /təɹ<sub>1</sub>/,

Word initial \_\_\_ **t**ree, **t**reat, **t**ry, **t**rainer, **t**rowel, **t**ractor, **t**riangle, **t**remendous, **t**ranquility

Word medial (initial in the syllable) \_\_\_ **at**ttract, **en**trance, **po**etry, **pet**rol, **port**ray, **cou**ntry,

Word final \_\_\_ /**tr**/ does not occur in syllable final position.

/**dr**/ \_\_\_ lenis (spelt **dr** /dra<sub>1</sub>/ & /dəɹ<sub>1</sub>/ **bound**ry

Word initial \_\_\_ **d**ry, **d**rought, **d**reary, **d**reamy, **d**river, **d**rawing, **d**ressing, **d**rinkable

Word medial (initial in the syllable) \_\_\_ **ad**dress, **and**roid, **hind**rance, **And**ree, **lau**ndry

Word final \_\_\_ /**dr**/ does not occur in syllable final position.

**Compare** /**tr**, **dr**/ \_\_\_ try, dry ; trips, dribs ; trucker, drunker ; tread, dread; troupe, droop ;

/ **tr** / , / **tʃ** / \_\_\_ trees, cheese ; trick, chick ; trance, chance ; trump, chump

/ **dr** / , / **dʒ** / \_\_\_ drive. Jive; dreamy, jimmy; Andrew, Anjou

### **Vocabulary:**

**trowel** / 'traʊəl /: a tool with a flat blade for spreading cement, plaster, etc

**portray** / pɔ:'treɪ /: depict (someone or something) in a work of art or literature.

**dreary** / 'dʒrɪəri/: sad and depressing ; lifeless

**android** / ʌdrɔɪd /: an open-source operating system used for smart phones and tablet computers

**laundry** / 'lɔ:dri /: a place or business where clothes, etc., are washed and ironed

**dribs** / drɪbs /: (informal) small and unimportant amounts of something such as money

**tread** / tred /: a manner or the sound of someone walking

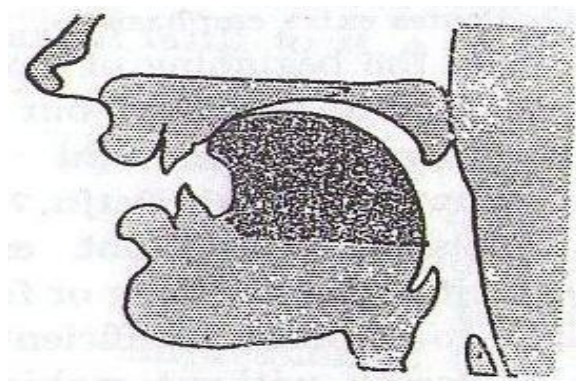
**dread** /dred/: great fear

**droop** /drʊ:p/: bend or hang downward limply (lacking strength or stiffness)

**trance** /tra:s/: a sleep-like condition of the mind in which one does not notice the things around him

**chump** /tʃʌmp/: a foolish or easily deceived person

**(2) Palato-alveolar affricates** / **tʃ**, **dʒ** /: During the articulation of these two sounds, the velum is raised to close the nasal cavity 'resonator'. The contact made by the tip, blade, and rims of the tongue, the upper molars and the alveolar ridge form an obstacle to the air-stream. At the same time, the front of the tongue is raised towards the hard palate in readiness for a slow fricative release. During both stop and fricative stages, the vocal chords are wide apart for / **tʃ** /, but may be vibrating for all or part of /**dʒ**/ according to the situation in the utterance, as in: 'Jane' / **dʒ**em/, adjust /ə' **dʒ**ʌst/, fridge /frɪ**dʒ**/.



b) /tʃ, dʒ/

/tʃ/ \_\_ fortis (spelt **ch**, **tch**, **t+ ure**, **t+eous**, and **t+ ion** when t is preceded by s)

Word initial \_\_\_ **ch**ase, **ch**eat, **ch**ease, **ch**atting, **ch**arity, **ch**eckers, **ch**ewing, **ch**imney

Word medial (intervocalic) \_\_\_ **ch**ieve, **ch**ature, **ch**eatures, **ch**ighteous, **ch**, **ch**uestion, **ch**utcher

Word final \_\_\_ **ch**ouch, **ch**orch, **ch**etch, **ch**witch, **ch**wretch, **ch**atch, **ch**much, **ch**coach, **ch**pitch

/dʒ/ \_\_ lenis (spelt **j**, **g**, **dg**, sometimes **gg**, **dj**, **de**, **di**, **ch**)

Word initial \_\_\_ **j**ail, **g**endarme, **g**ender, **j**ealous, **J**eremy

Word medial \_\_\_ **dg**edger, **dg**margin, **dg**suggest, **dg**randeur, **dg**urgent, **dg**adjacent, **dg**agenda, **dg**soldier

Word final \_\_\_ **dg**bridge, **dg**beige, **dg**lounge, **dg**judge, **dg**huge, **dg**sponge, **dg**Norwich, **dg**sandwich

**Compare /tʃ, dʒ/** \_\_\_ char, jar; cherty, jetty; choke, joke; cheese, geez; chick, jig  
 \_\_\_ riches, bridges; teachers, features; butcher, huger; culture, indulger  
 \_\_\_ teach, ridge; lunch, lunge; fletch, fledge; clutch, kludge; Mitch, midge

### Vocabulary:

**wretch** /retʃ/: an unfortunate or unhappy person

**ledger** /ledʒə/: a book or other collection of financial accounts of a particular type

**grandeur** /grændʒə/: splendor and impressiveness, especially of appearance or style

**geez** /dʒi:z/: often Am.Eng. Expressions of surprise

**jig** /dʒɪg/: **1-** a lively dance with leaping movements; **2-** a device that holds a piece of work and guides the tools operating on it

**indulger** /ɪn'dʌldʒə/: usually a person who yields, perhaps too much to the desire of someone, especially habitually

**lunge** /lʌndʒə/: to make a sudden forceful forward movement, esp. with the arms

## English Affricates

### Practice

**1- a-** Circle the word that contains an affricate sound:

- speak, speech, reach, orange, round, try, church, dreary, chocolate, house,
- station, reach, trouble, stiff, Andrew, clouds, prayer, drunker, gear, cheese,
- crush, stream, drive, working, chase, Android, tracks, sandwich, chalk, dry

b- Put the words ‘in activity one’ containing an affricate under the corresponding headings:

Post-alveolar affricate	Palato-alveolar affricate

2- a- Circle the words that contain a palate-alveolar affricate:

- choose, June, shine, trumpet, drink, treatment, hedge, catch, actress, Andrew

b- Circle the words that contain a post-alveolar affricate:

- dreadful, joke, extreme, reach, rigid, truth, adroit, contracted, butcher, attracted

c- Circle the words that contain a fortis affricate:

- genius, chance, trace, dresses, lunch, huge, addressed, attribute, reproach, sponge

d- Circle the words that contain a lenis affricate:

- dreamer, jaundice, transport, achieve, address, oblige, branch, drove, change

e- Circle the words that contain a fully voiced affricate:

- merger, joking, murderer, changing, drove, huge, tragic, addressed, drugs, fragile

f- Circle the words that contain a fully long vowel or diphthong before a final lenis affricate:

- chance, badge, perch, reach, torch, cage, search, indulge, urge, march, age

g- Circle the words that contain a reduced ‘shortened’ vowel or diphthong before a final fortis affricate:

- crouch, merge, surge, teach, torch, cage, search, brooch, large, coach, rage, speech

3- Give the VPM of the following sounds

Sound	Voicing	Place of Articulation	Manner of articulation
/ dʒ /			
/ tr /			
/ tr /			
/ tʃ /			

4- Transcribe the following words phonetically: (Use all the *diacritics* needed).

- 1- merge [            ]    2- dreary [            ]    3- rigidity [            ]  
 4- brooch [            ]    5- sponge [            ]    6- crutch [            ]  
 7- torch [            ]    8- traffic [            ]    9- chocolate [            ]  
 10- genius [            ]    11- travel [            ]    12- tragic [            ]

# Lesson Nine

## English Nasal Consonants

### English Nasals

**/m/, /n/, /ŋ/**

A nasal, also known as a ‘nasal occlusive’ is a consonant produced when two organs meet at a certain point in the vocal tract: **1-** lower lip with upper lip for **/m/**. **2-** tip and blade of tongue with the alveolar ridge for **/n/**. **3-** back of tongue with the soft palate for **/ŋ/**. The organs meet and make a blockage, and in the meantime the velum is lowered, allowing air to escape freely through the nose. The oral cavity still acts as a resonance chamber for the sound. Acoustically

In English the difference between nasals and plosives can be seen in terms of the position of the soft palate (velum). **/m/, /n/, /ŋ/** are usually voiced.

**Note:** Like **/h/**, nasal sounds do not have significant voiceless / voiced or fortis / lenis oppositions.

Acoustically, nasals are regarded as 1) ‘sonorants’, which means that no obstacle is made to the flow of air that escapes freely out of the nasal cavity. 2) ‘obstruents’ in the articulation, since the air is blocked by the different organs in the mouth. This duality explains that the air has two forms: a sonorant ‘free’ airflow through the mouth along with a complete obstruction in the mouth. Thus, nasal occlusives are both sonorants and obstruents.

#### **Place and manner of articulation:**

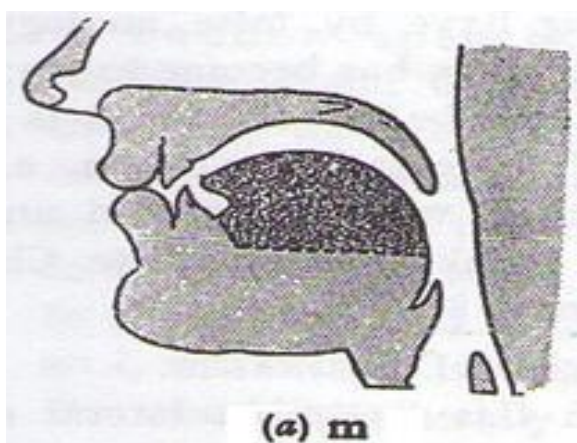
**1-** For **/ m /**, the air is blocked by closing the two lips for a ‘bilabial’ sound

**2-** For **/ n /**, the air is blocked by pressing the blade of tongue against the alveolar ridge for an ‘alveolar’ sound.

**3-** For **/ ŋ /**, the air is blocked by pressing the back of the tongue ‘dorsum’ against the soft palate for a ‘velar’ sound.

### **Manner of articulation:**

**(1) Bilabial nasal / m /:** In the articulation of the bilabial nasal /**m**/, the lips form the same closure as for the bilabial plosives /**p**, **b**/. In this process, the soft palate is lowered so that the air escapes through the nasal cavity to give /**m**/ a nasal resonance. The tongue will either remain in its neutral position or retain the position of the following adjacent vowel or lateral sound /**l**/. The shape of lips depends on the adjacent vowels. They may be spread as in: meet [mi:t] ; neutral as in: ‘mat’ [mæt] ; rounded in: malt [mɔ:lt] . The lips separate rapidly to give /**m**/ its last shape. /**m**/ is a voiced sound except when it is preceded by a voiceless consonant, such as /s/, /p/ and /t/ (in context). In this case, it loses its voicing feature and becomes partially devoiced [m̥] . /**m**/ in English occurs in all environments: initially, medially, and finally.



**Bilabial Nasal / m /:** spelt with **m**, meat ; **mm**, summer ; **mb**, comb ; **mn**, autumn

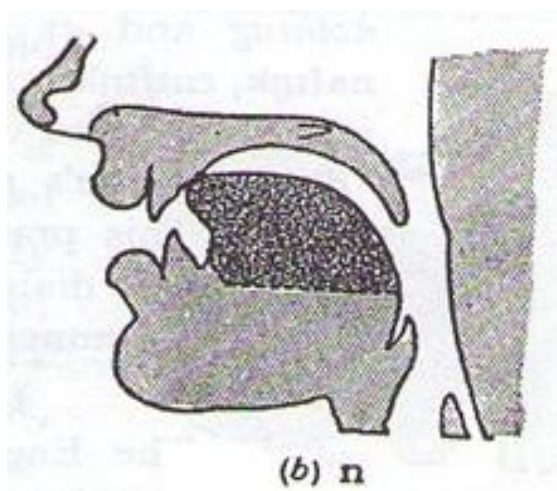
Word initial \_\_\_ **m**ilk, **m**arry, **m**ortal, **m**ovable, **M**ercedes, **m**ercury, **m**essenger, **m**armalade

Word medial \_\_\_ **T**omas, **t**omato, **i**mmortal, **i**mmature, **u**n**m**ovable, **i**mmoral, **s**ki**m**ming

Word final \_\_\_ **R**ome, **d**orm, **c**omb, **s**torm, **s**tadium, **s**pectrum, **s**yndrome, **s**trontium

**(2) Alveolar nasal / n /:** During the process of the articulation of the bilabial nasal /**n**/, the blade of tongue is raised to form a closure with the alveolar ridge in the same way it is made for the alveolar plosives /t, d/. The soft palate is lowered and air is pushed through the nasal cavity to provide /**n**/ with a nasal resonance. The two organs that meet to produce this sound make a rapid separation giving it its final shape. The shape of lips depends on the following adjacent vowels and lateral /**l**/. They may be spread as in: neet [ni:t] ; neutral in : natural [ 'nætʃərəl ] ; rounded in: ‘noon’ [nʊ:n] . /**n**/ is a voiced sound except when it is preceded by a voiceless consonant, such as / s / and / t /. In this case, it loses its voicing feature and becomes partially

devoiced [n̥]. Like the bilabial nasal /m/, the alveolar nasal /n/ in English occurs in all environments: initially, medially, and finally.



**Alveolar Nasal / n /**: spelt with **n**, name ; **nn**, funny ; **kn**, know ; **gn**, resign; **pn**, pneumatic

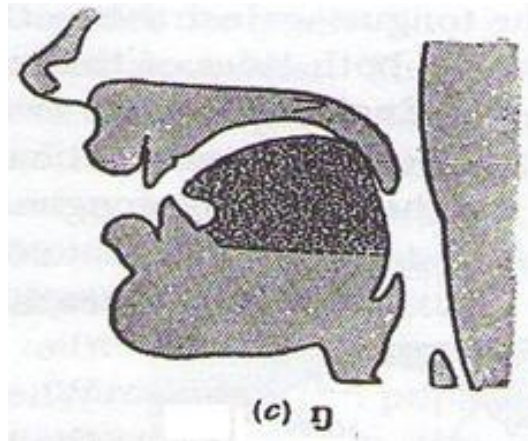
Word initial \_\_\_ **n**ice, **kn**ife, **N**ancy, **n**avy, **n**ursery, **N**etherlands, **n**evertheless, **p**neumonia

Word medial \_\_\_ funny, annoy, sadness, dining, reigning, diagnose, acknowledgment

Word final \_\_\_ rain, reign, refrain, cotton, sustain, button, enshrine, frighten, Brighten

**(3) Velar Nasal / ŋ /** is articulated as a result of the obstruction made by the back of tongue when rising towards the soft palate which is, in the meantime, lowered to let the air escape through the nasal cavity for a nasal resonance, the same as for the velar plosives /k/ and /g/. The type of closure of the stated organs depends on the preceding vowel. The shape of lips also depends on the adjacent vowels. For example, they are spread in ‘sing’ [sɪŋ] ; yet relatively open in [sɒŋ]. Velar nasal [ŋ] results from word-final -ng as in ‘bring’ [brɪŋ], and when /n/ is followed by the velar plosives /k/ and /g/, as in ‘uncle’ [ˈʌŋkl] and ‘angle’ [ˈæŋɡəl], and in the case of the substitution of final /g/, as in ‘king’ [kɪŋ] or in context ‘word boundaries’ when final /n/ in the first word is followed by an initial /k/ or /g/ in the second word, as in ‘ten kilos’ [ˈtɛŋ kɪləʊz] or ‘nine gifts’ [ˈnaɪŋ ɡɪfts].

**Note:** /ŋ/ usually occurs after the short vowels: /ɪ, æ, ʌ, ɒ/; rarely after /e, ə/. It does not occur in word-initial position. Phonologically, it is in complementary distribution with the sound /h/, which does not occur in word-final position



**Velar Nasal / ŋ /** : spelt with **ng**, king; **nk**, sink

Word initial \_\_\_ / ŋ / does not occur in word initial position

Word medial \_\_\_ **singer**, **thinker**, **income**, **ringing**, **amongst**, **including**, **engagement**

Word final \_\_\_ **bring**, **string**, **taken**, **sprinkle**, **frying**, **arriving**, **enhancing**, **stimulating**

Word final syllable \_\_\_ (occasionally) **bacon**, **taken**, **organ** (Gimson: 1989:199)

**Compare /n, ŋ /** \_\_\_ thin, thing; sin, sing; sun, sung; win, wing; band, banged; wind, winged  
fan, fang; gone, gong; ton, tongue, bonze, bongs; pond, ponged; stun, stung

### **Vocabulary:**

**strontium** / 'strɒntɪəm/: a type of soft metal that is a simple substance

**pneumonia** /njʊ:'məʊniə/: a serious disease of lungs with inflammation and difficulty in breathing

**enshrine** /m'ʃraɪn/: place a precious thing in an appropriate receptacle

**sprinkle** / 'sprɪŋkəl /: scatter or pour small drops or particles of a substance over an object or surface

**banged** / bæŋd/: hit forcefully and noisily

**fang** / fæŋ /: a long sharp tooth, as of a dog or a poisonous snake

## **English Nasals**

### **Allophones / Variants**

**Allophones:** **1-** /m/ is partially devoiced [m̥] when it is preceded by a voiceless consonant: initially, as in 'smoke' [sməʊk] ; medially, in 'topmost' [t'ɒp'məʊst] ; finally, as in: 'happen' [hæpm̥] . The devoiced /m/ is marked as [m̥]

**2-** When /m/ is followed by a labio-dental fricative sound /f, v/, the front closure becomes labio-dental rather than bilabial. The labio-dental nasal sound is marked as [m̪], in the words: ‘circumvent’ [sɜ:kəm̪'vent] ; ‘nymph’ [nɪm̪f] ; ‘emphatic’ [ɪm̪'fætɪk] ; ‘triumph’ [traɪəm̪f] ; ‘comfort’ [kəm̪fət] ; or in context: ‘warm vest’ [wɔ:m̪'vest] ‘bomb vessels’ [bɒm̪'vesəlz] ‘come forward’ [kəm̪'fɔ:wəd]

**Note:** The **labio-dental** sound [m̪] is made with an obstructing (occlusive) airflow in the vocal tract. This blocked airflow is directed back through the nose. In its articulation, the lower lip makes a firm contact with the upper teeth as a result of the following adjacent sound. (see the examples above)

**3-** /m/ frequently results in context from a final /n/ of the isolate word form before a following bilabial, e.g., one minute [wʌnm̪'mɪnət], more and more [mɔ:r əm̪ 'mɔ:], ten men [t̪em̪ 'men]

**4-** Sometimes /m/ is a realization of word final /ən/ or /n/ following /p/ or /b/, e.g., happen [ 'hæpm̪], ribbon [ 'rɪbm̪], or in context, as in: type and print [t̪aɪp m̪ 'prɪnt] .

**Note:** When /m/ is followed by /b/ in word final position, this last is lost, as in: comb climb /klaɪm/, lamb /læm/, though kept medially, as in: timber /'tɪmbə/, or inserted as in thimble /'θɪmbəl/, slumber /'slʌmbə/, bramble /'bræmbəl/.

**Allophones: 2-** when /n/ is followed by a labio-dental sound /f/ or /v/, it can be realized as a labio-dental [m̪] as in ‘infant’ [ɪm̪fənt], ‘invoice’ [ɪm̪'vɔɪs], ‘invent’ [ɪm̪'vent] ; or in context , as in : ‘on fire’ [ɒnm̪'faɪə], ‘in vain’, [ɪm̪'veɪn].

**2-** /n/ before dental sounds /θ, ð/ is realized with a lingua-dental closure [n̪], as in ‘tenth’ [ten̪θ], ‘when they’ [wen̪ 'ðeɪ], and sometimes when following /θ, ð/, as in ‘earthen’ [ 'ɜ:θə̪n̪/ 'ɜ:ðə̪ n̪], ‘southern’ [ 'sʌðə̪n̪].

**3-** Before /r/, /n/ may have a post- alveolar contact, as in: unreal [ʌn'rɪəl] ; ‘enrich’ [ɪm̪'rɪtʃ], ‘unrest’ [ʌn'rest], ‘unreliable’ [ʌnrɪ'laɪəbəl],

**4-** Word final /n/ frequently assimilates to a following word initial bilabial or velar consonant, being realized as [m] or [ŋ], e.g., ‘ten people’ [t̪em̪ 'pʰɪ:pəl], ‘ten boys’ [tem̪ bɔɪz], ‘ten men’ [t̪em̪ men], ten past [t̪em̪ 'pʰɑ:st], crown box [kraʊm̪ 'bɒks] ; ‘ten kilos’ [t̪eŋ 'kɪləʊz], ‘nine gifts’ [naɪŋ 'gɪfts]

**5-** /n/ is devoiced after a voiceless consonant and in particular after initial /s/. The devoiced alveolar nasal is described as [n̥] as in:

‘snarl’ [snḁ:l], ‘snoops’ [sn̥ʊ:ps], ‘snail’ [snḁɪl], ‘snapshot’ [ 'sn̥æpsʃɒt],



## Syllabic Nasals

**Meaning of syllabic consonant:** A consonant is often syllabic when it occupies the centre of the syllable (it forms the syllable on its own), or is the nucleus of a syllable (which is usually occupied by a vowel). It replaces the ‘schwa’ vowel / ə / in a syllable. This takes place so as to make the syllable shorter and simpler. Syllabic nasals are often final when preceded by obstruents such as stops and fricatives in words like system, sudden, taken, organ, rhythm, risen and seven, transcribed respectively and diacritically as: [ˈsɪst<sup>m</sup>],

[ˈsʌd<sup>n</sup>], [ˈteɪk<sup>ŋ</sup>], [ˈɔːg<sup>ŋ</sup>], [ˈrɪð<sup>m</sup>], [ˈraɪz<sup>n</sup>], [ˈsev<sup>n</sup>]. All syllabic consonants are marked with a small vertical mark below.

**Note:** Syllabic consonants occur in unstressed syllable only, following the alveolar consonant sounds /t,d/ and /s,z/, the labio-dentals /f,v/, the inter-dentals /θ,ð/, the palate-alveolars /ʃ,ʒ/ and the velars /k, g/.

**Note:** Dark [ɫ] in ‘snail’ [sneɪɫ] is not marked yet. It will be dealt with in ‘lateral’ sounds descriptions

### a) Bilabial syllabic [ m̩ ]

When /m/ becomes the nucleus of the syllable, it is said to be syllabic. It can be syllabic after obstruents such as stops and fricatives, as in the words ‘happen’, ‘Autum’, ‘rhythm’, transcribed respectively as [ˈhæp<sup>m</sup>], [ˈɔːt<sup>m</sup>] and [ˈrɪð<sup>m</sup>] or in context in: ‘at most’ [ætˈm̩əʊst], ‘upper most’ [ʌpˈm̩əʊst], though /ʌpəˈm̩əʊst/ (with / ə /) would be more common. The bilabial syllabic consonant is marked as [ m̩ ].

### b) Alveolar syllabic [ ŋ̩ ]

1) Of the three syllable nasals, the most frequently found is [ŋ̩]. Syllabic [ŋ̩] is most common in an unstressed (unaccented) syllable after alveolar plosives /t, d/, as in ‘often’ [ˈɒft<sup>ŋ̩</sup>], ‘eaten’ [ˈiːt<sup>ŋ̩</sup>], ‘sudden’ [ˈsʌd<sup>ŋ̩</sup>]; bilabial /p, b/, as in: ‘happen’ [ˈhæp<sup>ŋ̩</sup>], ‘ribbon’ [ˈrɪb<sup>ŋ̩</sup>] and fricatives /f, s, z, v/, as in ‘often’ [ɒft<sup>ŋ̩</sup>], ‘hasten’ [ˈheɪst<sup>ŋ̩</sup>], ‘risen’

[ 'raɪzŋ ], 'seven' [ 'sevŋ ]. In the case of /p/, /b/ and /t/, /d/ followed by [ŋ] the plosive is nasally released by lowering the soft palate, so that the air escapes through the nasal cavity. In this case, [ p ], [ b ], [ t ], [ d ] are said to be nasalized.

**Note:** the word 'often' has two pronunciations. It is articulated with or without the sound [ t ].

2) After bilabial consonants, in words like 'happen', 'happening', 'ribbon', both syllabic [ŋ] and / ən / are considered equally acceptable. Hence, they are transcribed as follows:

[ 'hæpŋ ], [ 'hæpŋɪŋ ], [ 'rɪbŋ ]; or /'hæpən/, /'hæpənɪŋ /, /'rɪbən/

3) After velar consonants in words like 'thicken', 'waken', 'waggon', syllabic [ŋ] is possible, but /ən/ is also acceptable. Therefore, 'thicken' and 'waken' are respectively

transcribed as: [ 'θɪkŋ ], [ 'weɪkŋ ], [ 'wæɡŋ ] or [ 'θɪkən ], [ 'weɪkən ], [ 'wæɡən ]

4) After /f/ or /v/, syllabic [ŋ] is more common than /ən/, thus 'seven', 'heaven', 'often' are usually pronounced as [ 'sevŋ ], [ 'hevŋ ], [ 'ɒfŋ ] .

**Note:** there is no Syllabic [ŋ] after /l/, or /tʃ/, dʒ/, so that, for example, 'fallen' must be pronounced /'fɔ:lən/, 'fortune' as /'fɔ:tʃən/ and 'region' as /'ri:dʒən/.

### c) Velar syllabic / ŋ /

As mentioned earlier, velar / ŋ / can be placed in word medial and final position with the exclusion of initial position. / ŋ / can be syllabic in final position when preceded by a velar consonant /k, g/, as in 'broken' [ 'brəʊkŋ ], 'bacan' [ 'beɪkŋ ], 'organ' [ 'ɔ:gŋ ]

## English Nasals

### Practice

(1)- a- Circle the words that contain a bilabial nasal:

- thing, needles, lamb, male, bomb, anxiety, bunch, mode, plumber, shame, fame

b- Circle the words that contain an alveolar nasal:

- winter, tongue, comb, melon, saint, bank, sinner, summer, oven, sinking, know

c- Circle the words that contain a velar nasal:

- think, main, hen, hum, wrong, anthem, distinct, England, months, strength, king

**d-** Circle the words that contain a final / ŋ /:

- ring, think, thing, thin, king, sing, sun, son, among, tongue, arriving, longing

**f-** Circle the words that contain a / ŋ /+ /k/:

- think, thing, sink, Zink, sing, hang, long, ring, link, pink, fink, shrink, wrinkle

**g-** Circle the words that contain a / ŋ /+ /g/:

- ring, wrangle, wrangler, mingle, meaning, combining, longer, ping, pinging

**h-** Circle the words that contain a / ŋg / in medial position:

- hanging, finger, singer, hanger, linger, mingle, longer, singular, longing, single

**i-** Circle the words that contain a devoiced nasal:

- rhythm, sneeze, smashed, prism, snow, annoy, among, smoke, snore, smell, business

**j-** Circle the words that contain a fully-voiced nasal:

- small, attain, amid, snake, smell, mileage, bombing, nature, long, longing, hammer

**k-** Circle the words that contain a syllabic [ ŋ ] :

- sudden, announced, London, haven, abandon, bacon, oven, wanton, listen, organ, bacon

**l-** Circle the words that contain a syllabic [ m̩ ] :

- happen, comb, ribbon, among, hammy, often, rhythm, system, mechanism, tomb, bottom

**m-** Circle the words that contain a syllabic / ŋ̩ /:

- organ, cushion, heaven, often, Morgan, seven, bacon, dozen, broken, shrunken, widen

**(2)- a-** For / m /, the active articulator is .....and the passive articulator is .....

**b-** For / n /, the active articulator is .....and the passive articulator is .....

**c-** For / ŋ /, the active articulator is .....and the passive articulator is .....

**(3)-** Put the words containing nasal consonants under their appropriate headings:

hammer, snake, ring, timber, long, singer, shrink, bacon, prison, fortune, wrinkle  
spindle, canny, lamb, mummy, bramble, income, dozen, mortal, knower, knotty

Bilabial Nasal	Alveolar Nasal	Velar Nasal

**(4)-**

Give the

VPM of the following sounds:

Sound	Voicing	Place of Articulation	Manner of articulation
/ n /			
/ ŋ /			
/ m /			

(5) For each of the following words, write down the phonetic symbol for every the corresponding nasal consonant:

- 1- bacon / /    2- knit / /    3- nasal / /    4- chain / /    5- rhythm / /  
 6- June / /    7- mine / /    8- month / /    9- ring / /    10- think / /  
 11- spoon / /    12- mutton / /    13- ribbon / /    14- cousin / /    15- maiden / /

(6)- Transcribe the following words phonetically: (Use all the *diacritics* needed).

- 1- organ [            ]    2- name [            ]    3- sneeze [            ]  
 4- broken [            ]    5- income [            ]    6- happen [            ]  
 7- reading [            ]    8- often (1) [            ]    9- often (2) [            ]  
 10- Morgan [            ]    11- heaven [            ]    12- ribbon [            ]  
 13- bacon [            ]    14- seven [            ]    15- reason [            ]

## Lesson Ten

### English Lateral Consonant

/l/

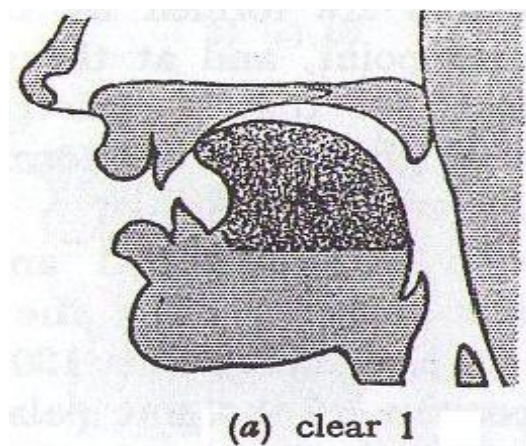
#### English Lateral

A Lateral is a consonant sound produced by raising the tip of the tongue to touch the alveolar ridge area forming a partial closure. In the meantime, the airstream proceeds along the sides of the tongue, which prevents it from going through the middle of the mouth. The [ l ] sound is articulated laterally, and hence it is known as 'lateral'. English lateral sounds are usually voiced and frictionless; i.e., produced without friction. During the articulation of this sound, the lips are usually shaped by the effect of the adjacent vowels. Within the / l / phoneme three main allophones occur:

**(1) Clear [ l ]** is articulated laterally, that is, instead of the breath passing down the centre of the mouth; it passes around the sides of an obstruction set up in the centre by pressing the tip and blade of the tongue against the alveolar ridge. The sides of the remainder of the tongue are not in contact with the sides of the palate, so air can pass between the sides of the tongue and the palate round the central obstruction and so out of the mouth. In the meantime, the soft palate (velum) is raised to touch the back wall of the pharynx. Clear [ l ] can get a relatively front vowel resonance before vowels and / j /.

There is only one alveolar lateral phoneme in English. There is no fortis/lenis opposition.

*Note:* The English lateral [ l ] occurs in all environments.



**English Lateral / l /** is regularly spelt: **l, ll**, as in lemon, lateness, plate, smell, shuttle

Word initial \_\_\_ lock, loom, lexis, left, loose, lately, London, Larson, Lancashire

Word medial \_\_\_ regally, yellow, fellow, really, highly, ridiculous, heavily, selection, twelve, explain, elbow, illegality

Word final, intervocalic in context \_\_\_ shall it, feel it, fall out, all over, fall out, will it

*Note:* Clear / l / never occurs in a sequence after initial stressed / t /

### **Vocabulary:**

**Larson** /'la:sən/: a name of a person

**Lancashire** /'læŋkəʃə/: A town in North West of England

**regally** /'ri:gəlɪ/ in a very splendid manner

**(2) Devoiced/voiceless [ l̥ ]:** **a)** this sound is articulated laterally and undergoes the same process as for clear [ l ]. [ l̥ ] very often appears after initial /p, k/ and is affected by the aspiration that follows these two sounds [p<sup>h</sup>, k<sup>h</sup>] when accented in the syllable; i.e., the aspiration is manifested in a way that it makes the voiced [ l ] lose some voicing to become devoiced/voiceless, as in: \_\_\_ plane, plastic, employ, clever, enclose, inclusion

**b) Less/weakly devoiced [ l̥ ]** after an unstressed fortis plosive /p, t, k/, as in: applicant ['æp!ɪkənt] accomplish, inclination, clarification, settler['setl̥ə] ; or after /s, f, θ, ʃ/, as in: slapping, fluent, athlete, Welsh. This kind of lateral is marked with [ . ].

### **Vocabulary:**

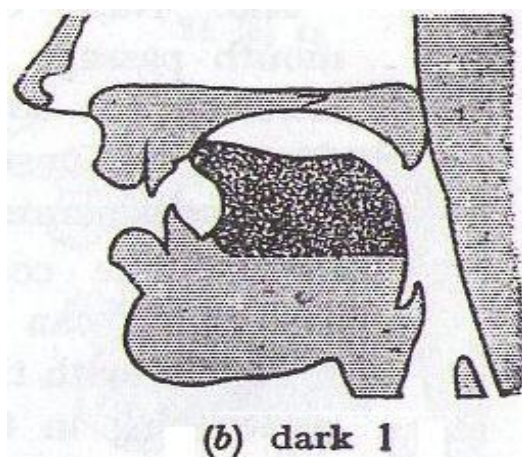
**slapping** /'slæpɪŋ/: hitting or striking with the palm of the hand or flat object

**Welsh** /welʃ/: People, or the language of the people living in Wales.

**(3) Dark [ l̥ ]** is articulated laterally, for the breath instead of passing down the centre of the mouth; it passes around the sides of an obstruction set up in the centre by pressing the tip and blade of tongue against the alveolar ridge, except for the dental fricatives where the contact is made with the tip and blade of tongue against the upper teeth, as in 'filth' [fɪl̥θ] and 'will they' [wɪl̥ ðeɪ]. In the process, the back of tongue is raised towards the soft palate 'velarization'. In the same way, as in the articulation of clear [ l ], the air passes between the sides of the tongue and the palate round the central obstruction and so out of the mouth. The tongue rims make a slow contact with the upper molars and the velum is raised to touch the back wall of the pharynx. English dark lateral sound is usually voiced and frictionless.

Dark [ɫ] is articulated with relatively back vowel resonance, before a consonant and as a syllabic sound following a consonant. Its occurrence is usually in word-final position after a vowel sound and after a vowel before a consonant.

**Note:** Contrary to the case of clear [ɪ], dark [ɫ] is not submitted to any devoicing.



**Dark [ɫ]**, with relatively back vowel resonance. What makes it different from clear [ɪ] is an extra-raising of the tongue to the same position it has for a high back vowel. Its occurrence is usually in word-final position after a vowel sound, or after a vowel before a consonant

- a) Word-final, after a vowel \_\_\_ bill, animal, spaniel, musical, natural, magical, basketball
- b) After a vowel, before a consonant \_\_\_ filth, build, silk, shield, field, insult, killed, Sheffield

**Note:** Contrary to the case of clear [ɪ], dark [ɫ] is not submitted to any devoicing.

### **Vocabulary:**

**filth** /fɪlθ/: dirt

**Sheffield** /ˈʃefi:ld/: is a town in south Yorkshire, England. Its name derives from the River Sheaf which runs through the city

**(4) Syllabic [ɫ]:** this sound undergoes the same process as for dark [ɫ]; i.e. articulated with relatively back-vowel resonance. The only difference is that it occurs in word-final position, usually after the stop and fricative consonant sounds. In this case, it is less desirable to have the schwa vowel / ə / between the stop and the syllabic [ɫ]: as soon as the lips are opened the syllabic [ɫ] is sounded immediately, as in \_\_\_ apple, table, little, eagle, couple, bible, chuckle, giggle, camel, final, zonal, baffle, travel, castle, puzzle, bushel, or with / əɫ /, as in: \_\_\_ awful, oval, parcel, special, usual, spaniel, satchel, beautiful, travel, whistle, dazzle, channel...

## Vocabulary:

**chuckle** /ʃʌkl̩/: laugh quietly or inwardly

**giggle** /gɪɡl̩/: laugh lightly in a nervous, affected or silly manner

**spaniel** /spæniəl/: any of various breeds of small short-legged dogs with long drooping ears and long wavy hair

**dazzle** /dæzəl/: to cause to be unable to see by throwing a strong light in the eyes

## English Laterals

### Practice

(A) 1- Circle the words that contain a 'lateral' consonant: [ l, l̥, l̪, l̝ ]:

right, walk, bell, old, billion, talk, ugly, deal, folk, battle

2- Circle the words that contain a 'clear' [ l̥ ]:

low, medial, allow, crawl, all over, melt, slight, lonely, settle, wealth

3- Circle the words that contain a 'dark' [ l̪ ]:

melt, lull, simple, blow, million, mingling, healthy, silly, alphabet, lively

4- Circle the words that contain a voiced alveolar lateral [ l̝ ]:

plate, allow, oblige, glide, clearance, medal, club, , plague, blue, eagle

5- Circle the words that contain a devoiced alveolar lateral [ l̥̝ ]:

place, glow, clean, splash, cleared, glamour, plight, plosive, alive, field

6- Circle the words that contain a syllabic [ l̩ ]:

soul, simple, camel, filled, film, Oswald, useful, satchel, fool

(B) Transcribe the following words phonetically: (Use all the *diacritics* needed).

- |                            |                            |                              |
|----------------------------|----------------------------|------------------------------|
| 1- feel [            ]     | 2- bottom [            ]   | 3- button [            ]     |
| 4- little [            ]   | 5- silly [            ]    | 6- lemon [            ]      |
| 7- medal [            ]    | 8- filled [            ]   | 9- plague [            ]     |
| 10- clement [            ] | 11- melt [            ]    | 12- clearance [            ] |
| 13- simple [            ]  | 14- million [            ] | 15- blowing [            ]   |

(C) Give the VPM of /l/

Consonant	Voicing	Place of Articulation	Manner of Articulation
/l/			



# Lesson Eleven

## English Approximant Consonants

/ w, j, r /

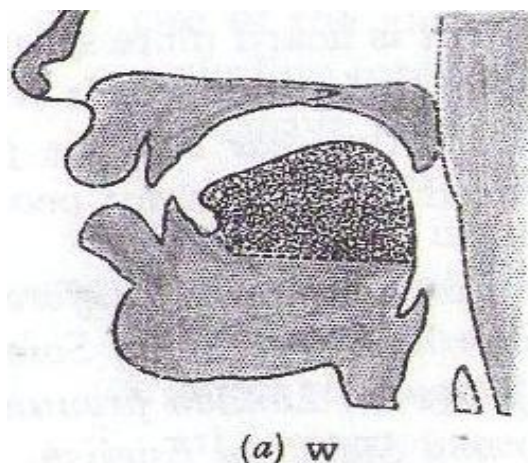
### English Approximants

The approximants are referred to as "frictionless continuants", "semivowels", and "glides". Approximants refer to the sounds /w/, /r/, /j/, with /w/ and /j/ a subclass called "semivowels", which are very similar to close vowels such as /u/ and /ɪ/, but are produced as a rapid glide, and /r/ a subclass called "liquid", which has a constriction of the airflow but not one that is sufficiently obstructive to produce friction.

In other words, approximants involve the articulators approaching each other but not narrowly enough nor with enough articulatory precision to create turbulent airflow. Therefore, approximants fall between fricatives, which do produce a turbulent airstream, and vowels, which produce no turbulence. This class of approximants includes [ɹ] (as in *rest*), and semivowels like [j] and [w] (as in *yes* and *west*, respectively). Approximants occur before vowels without any intervening consonants, as in: red, wet, yet. They are all voiced. They do not have significant voiceless/voiced or fortis/lenis oppositions. Phonologically speaking, they function as the syllable boundary rather than as the nucleus of a syllable.

#### **D) Labial-velar semi-vowel / w /**

**Description:** The /w/ is articulated by the tongue moving from back half-close to close position. The lips take the rounding shape according to the degree of openness of the following sound. The back of tongue moves upward towards the velum, which is in its raised position for an oral sound. The vocal chords vibrate for /w/ initially, intervocalically and after a voiced consonant. To produce /w/, the lips are rounded (more closely when followed by /u:/, /u/, or /ɔ:/, as in (woo, wood, water) than when preceding a more open or front vowel, as in (wit, west, web). Consonants get lip-rounding initially in accented syllables before the labio-velar approximant /w/, as in: twin, quite, swing, language. This rounding is lesser in quality, mainly in word-boundaries, as in: take one, get water, cold winter, torn wallet, this one...



**Labial-velar semi-vowel / w /** is regularly spelt: **w, wh** ; or **u** after **q, g** \_\_\_ west, which, quick, language. Note, /w/ is found in words like ‘one’, ‘once’, ‘choir’, ‘suite’.

**(1) Voiced [ w ] a)** initially \_\_\_ wet, weed, wag, **wh**isper, wallet, wardrobe, windy, waterloo

**b)** Inter-vocally \_\_\_ away, always, forward, aware, reward, awareness, **awkward**, somewhat

**c)** Following voiced (lenis) consonants \_\_\_ dwelt, language, inward, dwelling

**(2) Completely devoiced [ ʍ ]**, following accented /t, k/ \_\_\_ twig, twelve, twice, queen, quell, acquaint

**(3) Slightly devoiced [ w̥ ]** following **a) /sk/** \_\_\_ square, squash, squirrel, squeeze, squad

**b)** Accented fortis (voiceless) fricative, mostly starting with /s/ \_\_\_ thwart, swarthy, sweets, sweater, swept

**c)** Unaccented /p, t, k/ \_\_\_ upward, outward, equal, *or in context*: pump water, that wallet, pick one, write ‘white’

**Note:** /w/ does not occur in word-final position.

### **Vocabulary:**

**wag** /wæg/: a single rapid movement from side to side; clown, buffoon

**waterloo** /wɔ:təlʊ:/: an experience which (justly) crushes one after a time of unusual success

**awkward** /'ɔ:kwəd/: difficult to use ; difficult to deal with

**dwelling** /'dwelɪŋ/: a house, apartment, or other place of residence

**twig** /twɪg/: a slender woody shoot growing from a branch or stem of a tree or shrub

**quell** /kwel/: put an end to ( a rebellion or other disorder), typically by the use of force

**squash** /skwɒʃ/: to crush or squeeze (something) with force so that it becomes flat, soft, or out of shape

**squeeze** /skwi:z/: flatter by pressure; firmly press something usually with one’s fingers

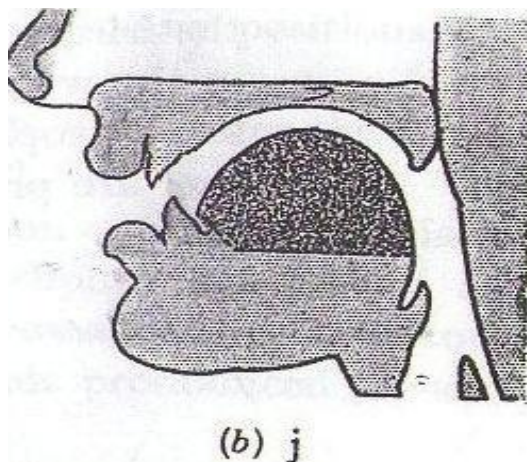
**squad** /skwɒd/: a group of people working as a team

**thwart** /θwɔ:t/: prevent someone from accomplishing something

**swarthy** /'swɔ:tɪ/: of the skin or face (dark-coloured)

## II) Unrounded palatal semi-vowel/approximant /j/

**Description:** The articulation of the palatal approximant /j/ is made with the front of the tongue raised towards the hard palate, leaving immediately this position to take up that of the following vowel. The /j/ is articulated with neutral or spread lips. They can also be articulated with lip-rounding depending on the degree of the lip-rounding of the following vowel, as in: you, yawn. The /j/ is produced without friction, and with a vibration of the vocal chords. In the process, the velum is in its raised position



**Unrounded palatal semi-vowel /j/** is regularly spelt with y, i, u, ew, eu, eau, ui \_\_\_ as in: yellow, mute, new, feud, beauty, cute

**1) Voiced [ j ]** a) initially \_\_\_ yeast, youth, yesterday, yacht, Europe, Yorkshire, youngster  
b) following lenis consonants \_\_\_ duty, music, value, residue, senior, familiar, behaviour, manure, onion, abuse

**2) Completely devoiced [ ɣ ]** following accented / p, t, k, h, f / (only before / u: /, / uə / \_\_\_ pew [ p ɣ u ə ], tune, queue, cure, pure, huge, accuse, secure, peculiar, attuned

**3) Slightly devoiced [ j̥ ]** a) following /sp/, /st/, /sk/ \_\_\_ spurious, stew, askew, or in context: ask you [a:sk j̥u:]

b) Following fortis fricatives \_\_\_ enthusiasm, pursue, refuse, issue [ɪs j̥u:]

c) Following unaccented /p, t, k/ \_\_\_ opulent, spatula, oculist; help you, quick, yield (Gimson 1989: 213)

**Note:** the unrounded palatal / j / does not occur inter-vocalically; i.e., between two vowels, neither does it have a place in word-final position.

## Vocabulary:

**feud** /fju:d/: a prolonged and bitter quarrel or dispute, usu. Between two people, families, or clans

**yacht** /jɒt/: a medium-sized sailboat equipped for cruising or racing

**Yorkshire** /jɔ:kʃə/: is a historic county of Northern England and the largest in the United Kingdom

**residue** /rezədjʊ:/: a small amount of something that remains after the main part has gone or been taken or used.

**attuned** /ə'tju:nd/: ready for use

**spurious** /spju:riəs/: false or fake

**askew** /ə'skju:/: not in the straight or right position

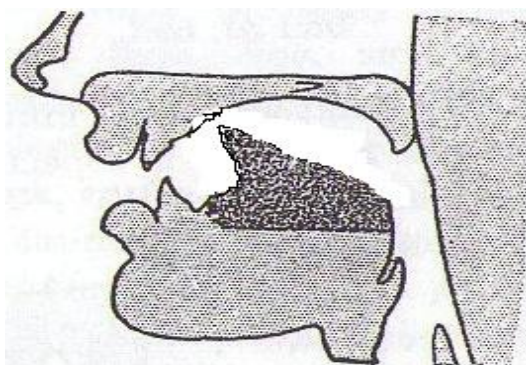
**opulent** /'ɒpjulənt/: extremely wealthy

**spatula** /'spætjulə/: a kind of flat spoon

**oculist** /'ɒkjulɪst/: ophthalmologist

## III ) Post-alveolar approximant (Frictionless continuant) /r/

**Description:** during the articulation of / r /, the tip of the tongue is raised towards the rear part of the alveolar ridge, yet without a firm touch. The back rims of the tongue make a soft contact with the upper molars and in the meantime the soft palate is raised to shut off the nasal resonator for an oral sound. The central part of the tongue, where the air escapes freely without friction, is lowered with a general contraction. The shape of the lips is determined by the adjacent vowel; thus it varies from neutral to spread for the word 'reed', and rounded for 'rude'.



( c ) / r /

**Post-alveolar approximant (Frictionless continuant) /r/** is regularly spelt **r**, 'reckon'; **rr**, 'burry' ; **wr**, 'write' ; **rh**, 'rhyme'

**1) Voiced [r]:** a) Word initial \_\_\_ red, room, write, restore, rhythm, regiment, reincarnation

b) Word medial (intervocalic) \_\_\_ cereal, parrot, fairy, furious, material, hurricane

**Note:** / r / does not occur in word final position, except in situation of context; i.e., in word boundaries before a vowel in the following word. (See linking [R])

- 2) Devoiced [ɹ̥]:**
- a)** in consonant cluster (following fortis accented plosives): prison, private, tractor, tremendous, crime, crown, express, surprise, attraction, extremely, decrease, increase
  - b)** following fortis fricatives \_\_\_ freeze, frighten, shrink, shrewish, shrine, throwing, thrilling
  - c)** following unaccented fortis plosives \_\_\_ apron, apropos, transport, tremendous, cretonne
  - d)** following fortis plosives preceded by accented /s/ in the same syllable:

/spr, str, skr/ \_\_\_ spring, sprightly, stream, string, strawberry, scribe, scrofula, screaming

### Variants / Allophones of / r /

There are more phonetic variants of / r / phoneme than of any other English consonant.

**1) Alveolar tap [ɾ]:** This sound is articulated with the tongue tip raised towards the alveolar ridge. The air stream is directed along the centre of the tongue, rather than to its sides. The alveolar tap [ɾ] can be found:

- (a)** after fortis fricative /θ/ \_\_\_ thread, throng, thriller, throughout, threaten
- b)** occasionally after /ð/ \_\_\_ in context as in: there is /ðɹɪz/; with respect [wɪð ɹɪ'speʔktʰ]
- c)** in intervocalic position when the first vowel in a stressed syllable \_\_\_ terror, hurry, mirror

**2) Alveolar flap [ɾ]:** (mainly in North American English) usually occurs in unstressed syllables when the alveolar plosives /t/ and /d/ are intervocalic. It very often appears before / r /, especially at the end of words. During the articulation process, the tongue rims move upward and push smoothly against the sides of the upper molars, and in the meantime, a curve in the back part of the tongue is made. Examples of the alveolar flap [ɾ]: are \_\_\_ water [wɔ:ɾə], greater, daughter, started, notice, united, bedding, readable, or in context \_\_\_ beat it [bi:ɾɪt], caught it. /t/ is also pronounced as a flap [ɾ] before a syllabic [ ɹ ], as in: bottle [bɔɾ ɹ ]

**Note:** the transcription is realized as [ɾ] because the /t/ & /d/ are articulated with a very soft /d/. It's worth mentioning that [ɾ] is the allophone of both /t/ & /d/ in American English.

**3) Lingual trill/roll [r]:** is a type of consonantal sound used in some spoken languages. It may take a dental, alveolar, or post-alveolar place of articulation. It is often pronounced with the tip

of tongue touching the alveolar ridge in a rapid succession of taps. This sound may also be heard among RP English speakers, but “usually in highly stylized speech” (Gimson: 1989:209). This sound can also be found in the Scots’ speech. These Scottish words are examples of lingua trill: rye [raɪ] , ire [aɪr].

**4) Intrusive [R]:** involves the appearance of the rhotic consonant ( /r/-like sound represented by the symbol [R], which corresponds to the phoneme / r / between two consecutive morphemes where it would not normally be pronounced. It is the insertion of an ‘imaginary’ / r / between a word ending in a vowel sound, and another one immediately following and beginning with another one. The following examples illustrate the point \_\_\_Shah of Persia [ʃa:Rəfɜ:ʃə], saw a film [sə:Rə'fɪlm], China and Japan [tʃɪnəRdʒə'pʰæn], law and order [lɔ:Rən'ɔ:də], America is a big country [ə'merɪkəRɪz əbɪg 'kʰʌntri], a banana is a yellow fruit, Pamela Anderson.

**5) Linking [R]:** occurs when a word ends in ‘r’ or ‘re’ and is immediately followed by a word beginning with a vowel. In this case, it becomes between two vowels ‘intervocalic’. [R] occurs only after /ə, a:, ɔ:, ɜ:, ɪə, eə, uə/, as in: \_\_\_ mother-in-law [mʌðəRɪn'lɔ:], Tower of London, in your eye, never again, remember it, far away, answer it, more of it, clear as water, hare and tortoise [heəRn'tʰɔ:təs], there are four owls in her old barn.

*Note:* The difference between intrusive [R] and linking [R] in British English is that the former does not contain a silent /r/ at the end of the first word, yet the latter does include one at the end and is pronounced only when followed by a vowel in the following word.

**6) Voiced post-alveolar fricative [ɹ]:** The approximant / r / gets a sort of hissing sound ‘friction’ when it is preceded by the alveolar plosive / d /; thus it becomes fricative, as in: dream [dɹɪ:m], dramatic, dreadful, android, drought. This case is also in rapid speech, at syllable or word boundaries, as in: headrest, hairdresser, bedroom, wide road [waɪdɹəʊd].

**7) Voiceless post-alveolar fricative [ɹ̥]:** The approximant / r / also become fricative after the voiceless alveolar plosive / t /, as in: tree, treasure, treasury, tranquility, transportation, entrance, introductory, controversial

**8) Labialized post-alveolar approximant [ɹʷ]:** / r / is sometimes labialized ‘articulated with the lips’ at the beginning of a word, as in reed [ɹʷi:d], ring [ɹʷɪŋ], tree [tɹʷi:]

**Note:** labialization is a secondary articulatory feature of sounds in a number of languages. Labialized sounds involve the action of the lips at the same time when the remainder of the organs of speech produces other sounds. This term is restricted to consonants only.

**9) Retroflex [ɻ]:** is a kind of consonantal sound used in some languages. It is articulated by the tip of the tongue in a curled-up position moving towards the post-alveolar area without being palatalized. The narrowing produced by the two organs is not enough to produce a turbulent airstream. This sound is produced by directing the airstream along the centre of the tongue, rather than to its sides. The tongue contact can be ‘apical’; i.e., the tip of the tongue makes an obstruction with the rear part of the alveolar ridge. **Retroflex [ɻ]** sound is articulated in words like: red [ɹɛd], ring [ɹɪŋ], rainbow [ˌreɪnbəʊ], mirror [meɪɹə]

### Vocabulary:

**‘reincarnation’** /reɪnkɑːrˈneɪʃən/ : rebirth of a soul in a new body

**‘hurricane’** /ˈhʌrɪkən/: a storm with a strong fast wind

**‘shrewish’** /ˈʃruːɪʃ/: typical of a bad-tempered woman

**‘thrilling’** /ˈθrɪlɪŋ/: causing excitement and pleasure; exciting; spectacular

**‘apron’** /ˈeɪprən/ : a protective or decorative garment worn over the front of one’s clothes and tied at the back to keep them clean while working

**‘apropos’** /æprəˈpəʊ/: very suitable for the time and conditions

**‘cretonne’** /ˈkreʔn/ or /kreˈʔn/: a heavy cotton fabric with printed patterns on it, used for furniture covers, etc.

**‘scribe’** /skraɪb/: a person who used to copy out documents, especially one employed to do this before printing was invented.

**‘scrofula’** /ˈskrɒfjʊlə/: a disease in which organs in the neck become swollen

**‘rye’** /raɪ/: a type of grass plant grown in cold countries

**‘ire’** [aɪr]: anger; tantrum /ˈtæntɹəm/

## English Approximants

### Practice

**1) 1) Circle the words that contain an approximant: /w/, /j/, /r/**

verse, worse, sorry, man, peel, variety, failure, tube, yesterday

**2) Circle the words that contain a voiced labio-velar approximant or semi-vowel /w/:**

yesterday, away, wrath, write, Wednesday, twilight, Gwyneth, quite, dwell

**3) Circle the words that contain a completely devoiced [ʍ]:**

quiet, trouble, twice, queen, dwarf, twin, twist, quick

4) Circle the words that contain a voiced palatal approximant or semi-vowel [j]:

union, Europe, human, Tunis, huge, university, beyond, curious, beauty, failure, avenue

5) Circle the words that contain a completely devoiced [ç]:

humour, yours, puce, security, curious, beauty, huge, peculiar, accuse

6) Circle the words that contain a slightly devoiced [w̥]:

twelfth, square, water, sweater, equality, screen, twice, squabble

7) Circle the words that contain a post-alveolar approximant [r]:

witty, rights, yellow, ready, world, arrow, strike, crown, describe

§

8) Circle the words that contain a voiced post-alveolar approximant [ɹ]:

light, right, white, around, brown, growth, way, wet, yet, room

9) Circle the words that contain a devoiced post-alveolar approximant [ɹ̥]:

present, raisin, trial, friend, string, throw, synchronic, horrific, train, word

10) Circle the words that contain a tap [ɾ]:

drown, through, vary, around, thread, mirror, erase, burry, yield, scream

11) Circle the words that contain a fricative [r]:

training, striding, driving, crying, undressed, draw, speeder, dryness

12) Circle the words that contain an alveolar flap [D]:

but I do, bedroom, starting, burrier, seated, parody, strawberry, thirty, attic

13) Underline the linking [R] in the following phrases:

very far, far away, bread and butter, a comma after it, here and there, far east, far off

14) Underline the parts that make the intrusive [R] in the following phrases:

Silvia at home, you and me, a day in life, tuna oil, saw a film, China and Japan, Pamela Andy

II) Transcribe the following words phonetically

verse [            ] worse [            ] sorry [            ]

tube [            ] variety [            ] failure [            ]

away [            ] wrath [            ] write [            ]

quiet [            ] twice [            ] queen [            ]

twin [            ] dwarf [            ] quick [            ]

Europe [            ] human [            ] huge [            ]

beauty [            ] universe [            ] beyond [            ]



RP ENGLISH

PHONOTACTICS

## SECTION FOUR

### Phonotactics

\* Syllable Structure

\* Consonant clusters

- Onset / Nucleus / Coda

\* Word Stress

Two syllable word stress / Three syllable word stress

(Parts of speech: verbs / Adjectives / Nouns)

## LESSON ONE

### Syllable Structure

#### (1) Phonotactics:

**Phonotactics** is a branch of phonology that deals with restrictions in a language on the permissible combinations of phonemes. Phonotactics defines permissible syllable structure, consonant clusters, by means of **phonotactic constraints**; i.e., what is permitted and what is not permitted as consonant clusters, onsets, and codas in syllables in any language. What is permissible in a language syllable may not be so in another. Phonotactic constraints are then language specific. For example, in Japanese, the /st/ as consonant clusters do not occur. Similarly, in English /tɫ/ and /pw/ are not permitted initially in accented syllables.

#### (2) Consonant clusters:

The English syllable (and word) *twelfths* /twɛlfθs/ is divided into the onset /tw/, the nucleus /ɛ/ and the coda /lfθs/; thus, it can be described as CCVCCCC (C = consonant, V = vowel). On this basis it is possible to form rules for which representations of phoneme classes may fill the cluster. For instance, English allows at most three consonants in an onset, but among native words under standard accents, phonemes in a three-consonantal onset are limited to the following scheme:

/s/ + stop + approximant:

- /s/ + /t/ + /ɪ/ in : *stream*
  - /s/ + /t/ + /j/ (not in most accents of American English) in: *stew*
    - /s/ + /p/ + /j ɪ l/ in : *sputum, sprawl, splat*
      - /s/ + /k/ + /j ɪ l w/ in : *skew, scream, sclerosis, squirrel*

Constraints on English phonotactics include:

- All syllables have a nucleus
- No geminate consonants
- No onset /ŋ/ ;i.e., /ŋ/ does not occur in word-initial position
- No /h/ in the syllable coda (except in Hiberno-English),i.e., /h/ does not occur in word-final position
- No affricates or /h/ in complex onsets, i.e., no consonant clusters + an affricate or /h/ in word-initial position
- The first consonant in a complex onset must be an obstruent (e.g. *stop*). Combinations such as *\*ntat* or *\*rkoop*, with a sonorant, are not allowed)
- The second consonant in a complex onset must not be a voiced obstruent (e.g. *\*zdop* does not occur)
- If the first consonant in a complex onset is not /s/, the second must be a liquid or a glide
- The second consonant in a complex coda must not be /r/, /ŋ/, /ʒ/, or /ð/ (compare *asthma*, typically pronounced /'æzmə/ or /'æsmə/, but rarely /'æzðmə/)
- An obstruent following /m/ or /ŋ/ in a coda must be homorganic with the nasal
- Two obstruents in the same coda must share voicing (compare *kids* /kɪdz/ with *kits* /kɪts/)

### (3) Syllable:

A syllable is a unit of organization for a sequence of speech sounds. For example, the word *water* is composed of two syllables: *wa* and *ter*. A syllable is typically made up of a syllable nucleus (a vowel) with optional initial and final margins (typically, consonants).

Syllables are often considered the phonological "building blocks" of words. They can influence the rhythm of a language, its prosody, its poetic meter and its stress patterns.

A word that consists of a single syllable (like English *dog*) is called a **monosyllable** (and is said to be *monosyllabic*). Similar terms include **disyllable** (and *disyllabic*) for a word of two syllables; **trisyllable** (and *trisyllabic*) for a word of three syllables; and **polysyllable** (and

*polysyllabic*), which may refer either to a word of more than three syllables or to any word of more than one syllable.

In most theories of phonology, the general structure of a syllable consists of three **segments**:

**Onset (o): (optional)**

**Consonant(s)** preceding the nucleus. Except for /ŋ/, all consonants in English can appear as onsets. In the following examples the onsets are in bold type: **fat**, **speak**, **string**.

If the first syllable of a word begins with a vowel, this syllable has a **zero** onset, as in ‘**apply**’, ‘**artist**’

**Nucleus (v): (obligatory)**

It is the core (body) **or** essential part. It is the **vowel**, which is obligatory. For example: ‘**mad**’ /æ/, ‘**mate**’ /eɪ/, ‘**start**’ /ɑː/

**Coda (κ): (optional)**

Is usually one or more **consonant**. The coda may or may not exist in some syllables. For example: ‘**mean**’ /n/, ‘**fight**’ /t/, ‘**red**’ /d/

The syllable is usually considered right-branching, i.e. nucleus and coda are grouped together as a "rime" (rhyme) and are only distinguished at the second level. However, in some traditional descriptions of certain languages, the syllable is considered left-branching, i.e. onset and nucleus group below a higher-level unit, called a "body" or "core":

**Rime (Rhyme) (ρ) (obligatory)**

Right branch, contrasts with onset, splits into nucleus and coda

**Body or core**

Left branch, contrasts with coda, splits into onset and nucleus

**Tone (τ)**

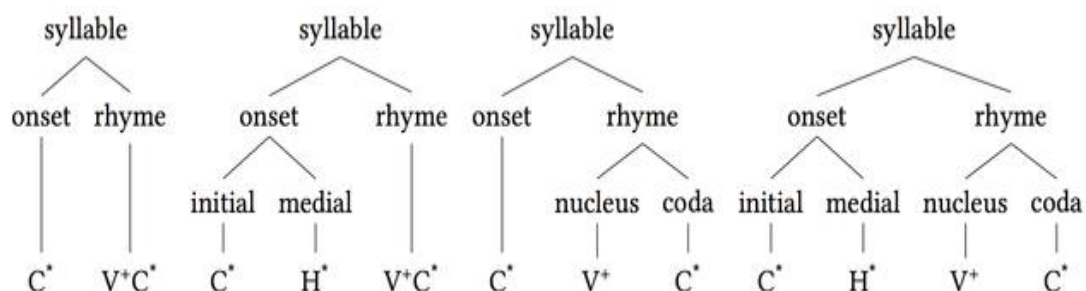
It may be carried by the syllable as a whole or by the rime

In some theories of phonology, these syllable structures are displayed as **tree diagrams** (similar to the trees found in some types of syntax).

The **nucleus** is usually the vowel in the middle of a syllable. The *onset* is the sound or sounds occurring before the nucleus, and the *coda* (literally 'tail') is the sound or sounds that follow the nucleus. The term **rime** covers the nucleus plus coda. In the one-syllable English word *cat*, the

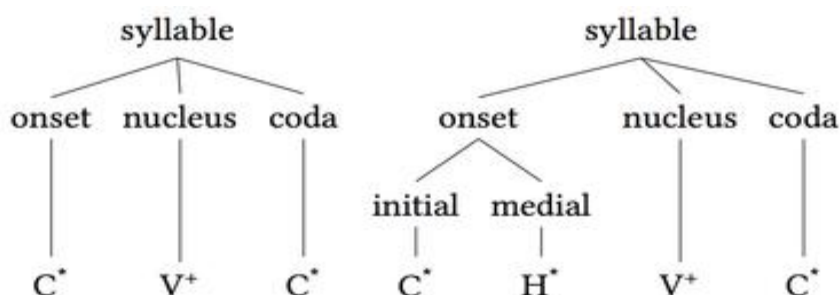
nucleus is /æ/ (the sound that can be shouted or sung on its own), the onset /k/, the coda /t/, and the rime /æ t/. This syllable can be abstracted as a **consonant-vowel-consonant** syllable, abbreviated **CVC**. Languages vary greatly in the restrictions (constraints) on the sounds making up the onset, nucleus and coda of a syllable, according to what is termed a language's phonotactics.

## Onset



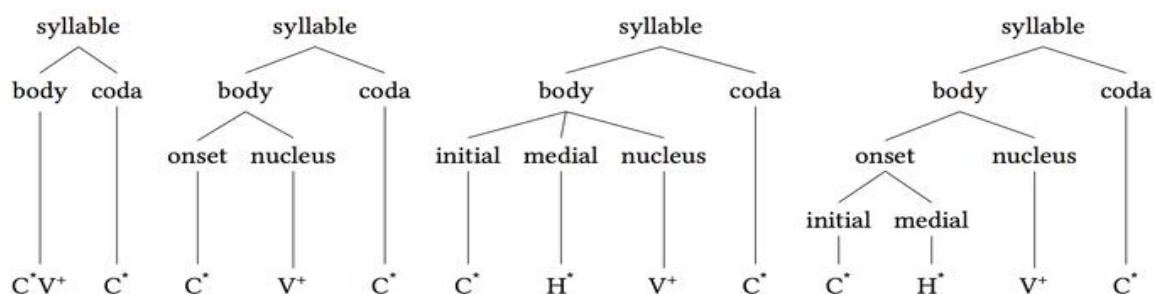
The **onset** is the consonant sound or sounds at the beginning of a syllable, occurring before the nucleus. Most syllables have an onset. Some languages restrict onsets to be only a single consonant, while others allow multi-consonant onsets according to various rules. For example, in English, onsets such as *pr-*, *pl-* and *tr-* are possible but *tl-* is not, and *sk-* is possible but *ks-* is not. In Greek, however, both *ks-* and *tl-* are possible onsets, while contrarily in Classical Arabic no multi-consonant onsets are allowed at all, as in: 'كتب' /kataba/ CVCVCV.

## Nucleus



The **nucleus** is usually the vowel in the middle of a syllable. Generally, every syllable requires a nucleus (sometimes called the '**peak**'), and the minimal syllable consists only of a nucleus, as in the English words "eye" /aɪ/ or "owe" /əʊ/. The syllable nucleus is usually a vowel, in the form of a monophthong, diphthong, or triphthong, but sometimes is a syllabic consonant. By far the most common syllabic consonants are sonorants like [l], [m], [n] or [ŋ].

## Coda



The **coda** comprises the consonant sounds of a syllable that follow the nucleus, which is usually a vowel. The combination of a nucleus and a coda is called a rime/rhyme. Some syllables consist only of a nucleus with no coda. Some languages' phonotactics limit syllable codas to a small group of single consonants, whereas others allow any consonant phoneme or even clusters of consonants.

A coda-less syllable of the form V, CV, CCV, etc. (V = vowel, C = consonant) is called an **open syllable** (or *free syllable*), while a syllable that has a coda (VC, CVC, CVCC, etc.) is called a **closed syllable** (or *checked syllable*). Almost all languages allow open syllables, but some, such as Hawaiian, do not have closed syllables.

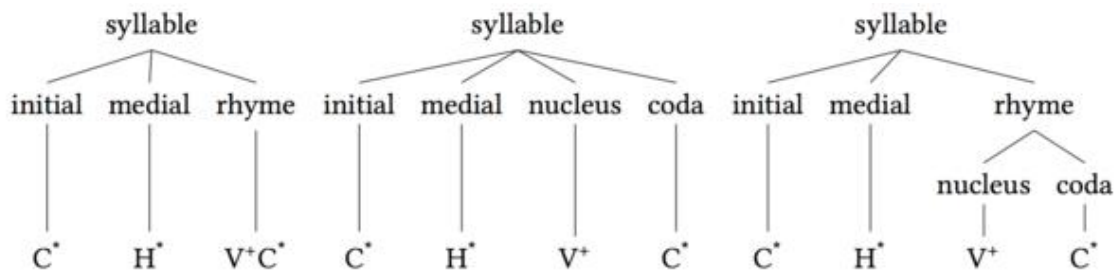
Here are some English single-syllable words that have both a nucleus and a coda (i.e. closed syllables), where v denotes "nucleus" and κ "coda":

- \* *in*: v = /ɪ/, κ = /n/      \* *cup*: v = /ʌ/, κ = /p/      \* *tall*: v = /ɔ:/, κ = /l/
- \* *milk*: v = /ɪ/, κ = /lk/      \* *tints*: v = /ɪ/, κ = /nts/      \* *fifths*: v = /ɪ/, κ = /fθs/
- \* *sixths*: v = /ɪ/, κ = /ksθs/      \* *twelfths*: v = /ɛ/, κ = /lfθs/      \* *strengths*: v = /ɛ/, κ = /ŋθs/

The following single-syllable words end in a nucleus and do not have a coda (i.e. open syllables):

- \* *glue*, v = /u:/      \* *pie*, v = /aɪ/      \* *though*, v = /əʊ/      \* *boy*, v = /ɔɪ/

## Rime / Rhyme

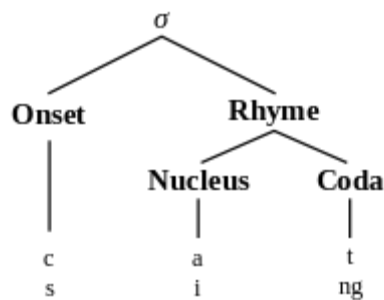


The **rime** or **rhyme** of a syllable consists of a nucleus and an optional coda. It is the part of the syllable used in poetic rhyme, and the part that is lengthened or stressed when a person elongates or stresses a word in speech.

The rime is usually the portion of a syllable from the first vowel to the end. For example, /æt/ is the rime of all of the words *at*, *sat*, and *flat*.

"Rime" and "rhyme" are variants of the same word, but the rarer form "rime" is sometimes used to mean specifically "syllable rime" to differentiate it from the concept of poetic rhyme. This distinction is not made by some linguists and does not appear in most dictionaries.

Segmental model for *cat* and *sing*



**Hierarchical model for *cat* and *sing***

**Useful Definitions:**

1) **Germinate Consonants:** is the articulation of consonants for a longer period of time than that of a singleton consonant. This is generally made in word-boundaries when the last consonant sound of the first word is homorganic with the initial consonant in the second word, which is often perceived as a doubled consonant, as in: ‘white **dog**’, ‘good **night**’, ‘**top most**’, ‘**nine dogs**’. Some phonological theories use ‘doubling’ as a synonym of ‘gemination’.

2) **Homorganic sounds:** are produced in the same place of articulation, as the case for bilabial, labio-dental, dental, alveolar sounds, etc.

**LESSON TWO**

## Word Stress

### Word Stress

When we talk about stress, we talk about the intensity of the syllable. It means that there is more air in the syllable. The syllable on which there is stress is perceived as a greater loudness. The two words insult (n) /'ɪnsʌlt/ and insult (v) /ɪn'sʌlt/ are distinguished by pitch pattern. Pitch means high and low frequency. It is the sensation of sound. It is with stress that pitch is rendered. Stress and pitch make the syllable prominent. We have stress when we have energy. The voiced sounds, for example, result in a great intensity of sound on syllables. Such intensity is perceived by the listener as greater loudness.

\* Intensity on the syllable = stress

\* Pitch is the frequency of vibration of the vocal chords.

\* Vibration is the sound of numerous explosions and the time between these explosions is too short to hear.

Stress on the penultimate syllable (syllable before the last one)

\_\_eous e.g. advantageous /ædvən'teɪdʒəs/

\_\_ial e.g. proverbial /prə'vɜ:bɪəl/

\_\_ic e.g. Phonetic /fə'netɪk/

\_\_ion e.g. perfection /pə'fekʃn/

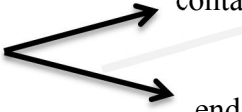
\_\_ity e.g. tranquility /træŋ'kwɪlɪtɪ/

\_\_ive e.g. reflexive /re'fleksɪv/

\_\_graphy e.g. photography /fə'tɒgrəfɪ/


**I) 2 syllable word:** Either the 1<sup>st</sup> or the 2<sup>nd</sup> is stressed

**(1) Verbs :**


1) 2<sup>nd</sup> syllable is stressed if it 

apply / ə'plɑɪ /

attract / ə'trækt /

 it contains a short vowel

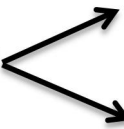


- 2) Final syllable is not stressed if  there is 1 or no final consonant  
 It contains the diphthong /əʊ/

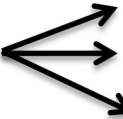
**In these examples, the 1<sup>st</sup> syllable is stressed**

enter / 'entə /  
 open / 'əʊpən /  
 follow / 'fɒləʊ /

**(2) Adjectives :**

- 1) 2<sup>nd</sup> syllable adjective is stressed if  it contains a long vowel or diphthong  
 ends with more than 1 consonant

divine / dɪ 'vaɪn /  
 correct / kə'rekt /  
 alive / ə 'laɪv /

- 2) Final syllable is not stressed if  it contains a short vowel  
 there is 1 or no final consonant  
 It contains/ends with the diphthong /əʊ/

**Here the 1<sup>st</sup> syllable is stressed**

lovely / 'lʌvli /  
 even / 'i:vən /  
 hollow / 'hɒləʊ /

**(3) Nouns :**

- 1) If the second syllable contains a short vowel, stress is put on the 1<sup>st</sup> syllable

money / 'mʌni /  
 product / 'prɒdʌkt /

- 2) The second syllable is stressed if it contains a long vowel or diphthong.

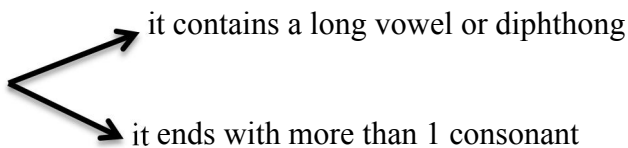
estate / ɪs'teɪt /  
 balloon / bə'lu:n /

**II) 3 Syllable words:**

**(1) Verb:**

1) Final syllable is unstressed if it contains a short vowel and ends with no more than one consonant. Stress will be placed on the preceding syllable.

encounter / ɪŋ'kaʊntə /  
determine / dɪ'tɜ:mɪn /

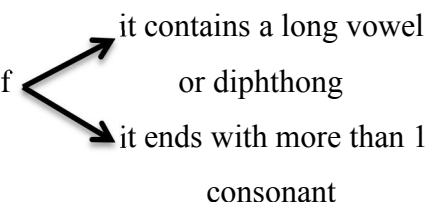
2) Final syllable is stressed if 

entertain / ɪntə'teɪn /  
resurrect / rɪzə'rekt /

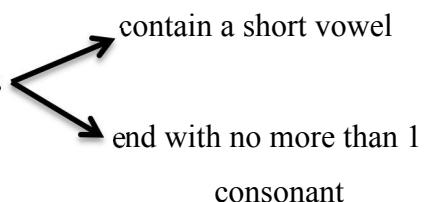
**(2) Noun:** requires different rules.

1) Final syllable is unstressed if it contains a short vowel or the diphthong /əʊ/. Stress will be put on the preceding syllable.

disaster / dɪ'zɑ:stə /  
potato / pə'teɪtəʊ /

2) Middle syllable preceding the final syllable is stressed if 

researcher / rɪ'sɜ:tʃə /  
mimosa / mɪ'məʊzə /  
postgraduate / pəʊst'grædʒuət /  
attractive / ə'træktɪv /

3) First syllable is stressed if both middle & final syllables 

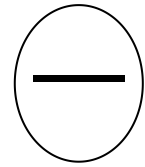
quantity / 'kwentɪtɪ /  
emperor / 'empərə /  
custody / kʌstədɪ /

Samples  
of  
Official Examinations  
in  
Phonetics

Sample 01



Full Name: ..... Group: .....



First Year English Degree (L.M.D)

Second Semester Written Examination in Phonetics

Date: June 9th, 2012 Length: 1h.30 From 9h.30 to 11h.00

Write on this paper to answer all questions, please.

1) Answer the following question: (04.00 pts.)

Explain briefly the following items?

Phonetics.....

.....

Phonology.....

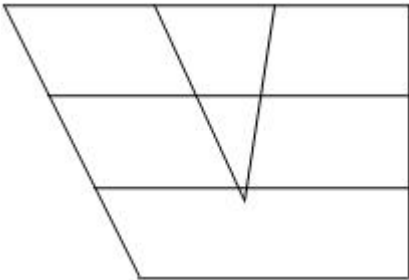
.....

2) Use words to give examples about the following cases: (03:00 pts.)

No	Different cases	Examples
a)	an aspirated fortis plosive	
b)	a reduced long vowel	
c)	A fully long vowel	
d)	An intrusive [ R ]	
e)	A syllabic [ l ]	
f)	A devoiced palatal approximant [ ]	

4) Plot the vowels in the given words on the cardinal vowel diagram. (02.00 pts)

cat, kit, cut, could



5) Pick out the sounds /ɪə/, /əʊ/, /ʊə/, /ɑ:/, /eə/, /eɪə/, /aʊə/, /ʌ/ from the following list. (04.00 pts.)

pair, clerk, pure, tough, seven, shower, many, sergeant, layer, sisters, mere, speak, elbow, write,

sound	word	sound	word
/ɪə/		/eə/	
/əʊ/		/eɪə/	
/ʊə/		/aʊə/	
/ɑ:/		/ʌ/	

6) Transcribe phonetically [ ] the words in the table below. (03.00 pts.)

word	transcription	word	transcription
speak		mutton	
quiet		young	
dwel		comfort	

7) Write in a sentence what the phonemic transcribed words refer to: (04:00 pts.)

/θru: ðə rɪ'vju: əv 'lɪtərətʃə, ðə rɪ'sɜ:tʃə gets ə mɒdl wɪtʃ kən bi: jʊ:st əz ə beɪsɪs fə hɪz stɑ:di/

.....  
 .....  
 .....

## Sample 02

First Year English Degree (L.M.D)

### First Semester Written Examination in Phonetics

**Date:** January 18<sup>th</sup>, 2013 **Length:** 1h.30 **From** 10h00 to 11h30

Write *on this paper* to answer **all** questions, please.

**1) Fill in the gaps with one word only: (05.00 pts.)**

In normal speech we use an egressive ..... airstream. In the ....., the vocal chords vibrate for voiced sounds. Sounds with no vibrating vocal chords are called ..... sounds. There are three cavities which function as resonators: the .....cavity, the ..... cavity and the cavity of the ..... The airstream is then obstructed in different points in the mouth by the active and ..... articulators. In the process, the soft palate can be ..... for an ..... sound, or lowered for a ..... sound.

**2) Explain briefly the linguistic role of the following organs of speech (04.00 pts.)**

a) lungs: .....

.....

b) vocal chords: .....

.....

c) velum:.....

.....

d) tongue: .....

.....

**3) What do the following phonetic features refer to? (01.50 pts.)**

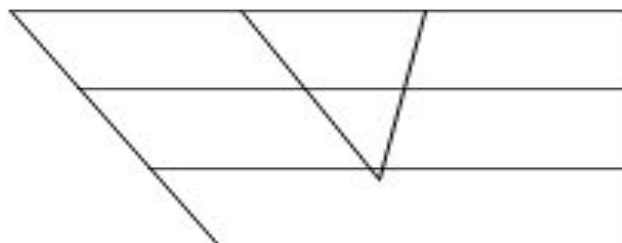
a) articulatory, acoustic, auditory: .....

b) short / long: .....

c) fortis / lenis: .....

4) Plot the phonemic **symbols** of vowels in the given words on the cardinal vowel diagram. (03.00 pts.)

fit, morning, man, food, mend, monkey,



5) Pick out the words containing the sounds /ɒ/, /aʊə/, /ʊə/, /i:/, /ɑ:/, /eə/, /eɪə/, /ʌ/ from the following list. (02.00 pts.)

pair, clerk, pure, seven, shower, many, cable, gaze, layer, sisters, tough, mere, doctor, speak, elbow, write, speak

sound	word	sound	word
/ɒ/		/eə/	
/aʊə/		/eɪə/	
/ʊə/		/i:/	
/ɑ:/		/ʌ/	

b) Transcribe the following words: (01.50 pts.)

Words	Phonemically	Phonetically
harder		
park		
spot		

8) Give the written form of the phonemically transcribed words. (03.00 pts.)

Transcription	Written form
/ˈwenzdɪ/	
/ˈkjuərəɪəs/	
/vəˈraɪəti/	
/sprɪŋ/	
/ˈleɪbə/	
/saɪkɪˈætrɪk/	

### Sample 03

First Year English Degree (L.M.D)

#### First Semester Make up Examination in Phonetics

**Date:** March 6th, 2014 **Length:** 1h.30 **From** 13h.00 to 14h.30

Write on this paper to answer **all** questions, please.

**Question 1:** (Please, answer this question on the back of this paper) **(08 pts.)**

Explain how speech sounds are produced.

**Question 2: (03 pts.)**

a) What is the difference between a **phonological** & a **phonetic** transcription?

.....  
.....  
.....  
.....  
.....

b) Transcribe the following words, accordingly. **(05 pts.)**

Words	Phonological transcription	Phonetic transcription
play		
spin		
pot		
park		
spark		

**Question 3:** Explain briefly the positions & states of the given organs: **(04 pts.)**

a) Positions of the **vocal chords**: .....

.....  
.....  
.....  
.....





## Sample 04:

First Year English Degree (L.M.D)

### First Semester Written Examination in Phonetics

**Date:** March 15th, 2015 **Length:** 1h.30 **From** 12h30 to 14h00

Write *on this paper* to answer **all** questions, please.

**1) Fill in the gaps with one word only: (05.00 pts.)**

In normal speech we use an egressive ..... airstream. In the larynx, the vocal chords ..... for voiced sounds. Sounds with no vibrating vocal chords are called ..... sounds. There are three cavities which function as .....: the oral cavity, the ..... cavity and the cavity of the ..... The airstream is then obstructed in different points in the mouth by the ..... and passive articulators. In the process, the ..... can be raised for an ..... sound, or lowered for a ..... sound.

**2) Answer the following questions: (05.00 pts.)**

**a) What is a vowel?**

A vowel is .....

**b) When can a long vowel be**

**a) fully long?**.....

**b) reduced?**.....

**c) What is a consonant?**

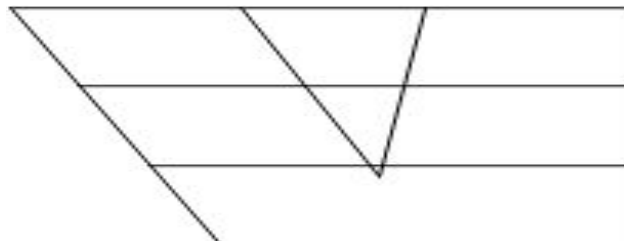
A consonant is .....

**d) What is a phoneme?**

A phoneme is .....

3) Plot the phonemic **symbols** of vowels in the given words on the cardinal vowel diagram. (03.00 pts.)

Fit /ɪ/, morning /ɔ:/, man /æ/, food /u:/, mend /e/, monkey /ʌ/



4) a) Pick out the words containing the sounds /ɒ/, /aʊə/, /ʊə/, /i:/, /ɑ:/, /eə/, /eɪə/, /ʌ/ from the following list. (02.00 pts.)

pair, clerk, pure, seven, shower, many, cable, gaze, layer, sisters, tough, mere, doctor, speak, elbow, write, speak

sound	word	sound	word
/ɒ/		/eə/	
/aʊə/		/eɪə/	
/ʊə/		/i:/	
/ɑ:/		/ʌ/	

b) Transcribe the following words according to their vowel length. (02.00 pts.)

Words	Phonetically
harder	
leaf	
teacher	
leaves	

5) Give the written form of the phonemically transcribed words. (03.00 pts)

Transcription	Written form
/ˈwenzdɪ/	
/ˈkjuəriəs/	
/vəˈraɪətɪ/	
/sprɪŋ/	
/ˈleɪbəl/	
/saɪkɪˈætrɪk/	

## Sample 05

First Year English Degree (L.M.D)

### Second Semester Written Examination in Phonetics

Date: May 18<sup>th</sup>, 2016 Length: 1h.30 From 08h00 to 09h30

Write *on this paper* to answer **all** questions, please.

**Activity 1:** Underline the words that contain **(02.50 pts.)**

**1- a velar plosive:**

tomb, peace, kite, rubber, supper, letter, order, done, bigger, tongue, ring

**2-an unaspirated plosive:**

apple, bar, snail, queen, scarf, door, slate, sad, gas, gun, write, rode, start

**3- an alveolar fricative:**

bomb, zinc, said, butter, rapid, organ, ton, built, glass, lacked, dirty, shirt, ride

**4-an affricate:**

organ, bulb, open, skin, gain, church, hid, bread, guide, curtain, train, pig, pick

**5- a velar nasal:**

captain, singer, good boy, fighting, locked, bottle, ripe cheese, league, leak

**Activity 2:** Among the following words, there are words that contain silent letters. Take them out and then underline their silent letters **(01.50 pts.)**

Example: **p**psychology

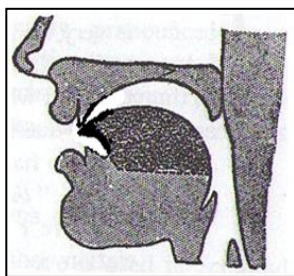
speaker fighting cleaner return doubt before

knowledge lamb trousers became pneumonia heir

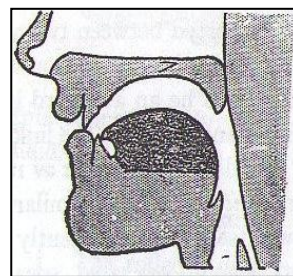
**Activity 3:** Give the **VPM** of the following consonants **(03.00 pts.)**

No	Consonant	Voicing	Place of articulation	Manner of articulation
Eg.	/s/	voiceless	alveolar	fricative
<b>01</b>	<b>/g/</b>			
<b>02</b>	<b>/f/</b>			
<b>03</b>	<b>/dʒ/</b>			
<b>04</b>	<b>/m/</b>			

**Activity 4:** Regardless of their voicing features, what are the two consonants the two figures represent? (02.00 pts.)



a) / ..... / and /.....



b) / ..... / and /..... /

**Activity 5:** Underline the stressed syllables in the following words: (02.00 pts.)

Example: en'danger

confusion      mechanic      mechanism      defend

dramatic      about      declaration      starter

**Activity 6:** Use words to give examples about the following cases: (02.50 pts.)

Number	Different cases	Examples
01	A fully aspirated fortis plosive	
02	An unaspirated fortis plosive	
03	A reduced long vowel	
04	A fully long vowel	
05	A labiodental nasal [ŋ]	

**Activity 7:** Give the written form of the phonemically transcribed words. (03.00 pts.)

<b>Transcription</b>	/raɪt/	/ˈtrʌbəl/	/ɪˈnɔ:məs/	/kɪŋ/	/ˈneɪbə/	/junɪˈvɜ:s/
<b>Written form</b>						

**Activity 8:** Transcribe the following words phonetically: (03.00 pts.)

Clothes [            ]      plate [            ]      of time [            ]  
 important [            ]      of dogs [            ]      speed [            ]  
 climb [            ]      plate [            ]      psychology [            ]

## Sample 06

First Year English Degree (L.M.D)

### Second Semester Written Examination in Phonetics

**Date:** May 17<sup>th</sup>, 2017    **Length:** 1h.30    **from** 09h.30 to 11h.00

Write *on this paper* to answer **all** questions, please.

**Activity one:** Give the **VPM** of the following consonants: **(03.00 pts.)**

Consonant	Voicing	Place of articulation	Manner of articulation
/t/			
/z/			
/m/			
/l/			
/h/			
/ŋ/			

**Activity two: a)** Use only **one** word as an example about each of the following cases:  
**(04.50 pts.)**

Number	Different cases	Examples
<b>Example</b>	<b>an aspirated fortis plosive</b>	<b>important</b>
<b>01</b>	an unaspirated fortis plosive	
<b>02</b>	A fully voiced velar plosive	
<b>03</b>	a reduced long vowel	
<b>05</b>	A slightly devoiced [ ɿ ]	
<b>05</b>	a syllabic alveolar nasal[ ŋ ]	
<b>06</b>	a labio-dental nasal[m]	
<b>07</b>	a plosive having a nasal release	
<b>08</b>	A clear lateral used intervocalically [ l ]	
<b>09</b>	A dark [ ɫ ]	

**b)** Explain the following phonetic cases: **(04.50 pts.)**

- 1) A fortis plosive can be unaspirated .....
- 2) A velar plosive can be fully voiced .....
- 3) A long vowel can be reduced .....
- 4) A voiced lateral can be devoiced [ ɿ ].....
- 5) An alveolar nasal can be syllabic[ ŋ ] .....

6) Bilabial and alveolar nasals can be pronounced as labiodental [m].....  
 .....

7) Any plosive can have a nasal release .....

8) A lateral /l/ can be clear [l] in: a) .....

b) .....

9) A lateral /l/ can be dark [ɫ] in: a) .....

b) .....

c) Transcribe the following words accordingly. (03.00 pts.)

Words	Phonetic transcription
play	
spin	
pot	
park	
help	
comfort	

**Activity three:** Give words as examples that constitute the following vowels: (02.00 pts.)

sound	word	sound	word
/ɪə/		/ɪ/	
/ɜ:/		/eɪ/	
/əʊə/		/aʊə/	
/u:/		/ʌ/	

**Activity four:** Give the written form of the following transcribed proverbs: (02:00 pts.)

1) /ə bɜ:d ɪn ðə hænd ɪz wɜ:θ tu: ɪn ðə bu:f/  
 .....

2) /wʌn mænz mi:t ɪz ə'nʌðə mænz 'pɔ:ɪzn/  
 .....

3) /ju: kætʃ mɔ: flɑ:ɪz wɪð 'hʌni ðæn wɪð 'vɪnɪgə/  
 .....

## Sample 07

First Year English Degree (L.M.D)

### Second Semester Written Examination in Phonetics

Date: May 16<sup>th</sup>, 2018 Length: 1h.30 From 13h.00 to 14h.30

Write *on this paper* to answer **all** questions, please.

1) Explain briefly the following phonetic items: **(03.00 pts.)**

a) Phoneme: .....

b) Allophone: .....

2) What do the following phonetic features **refer to?** **(03.00 pts.)**

1) articulatory, acoustic, auditory: .....

2) fortis / lenis : .....

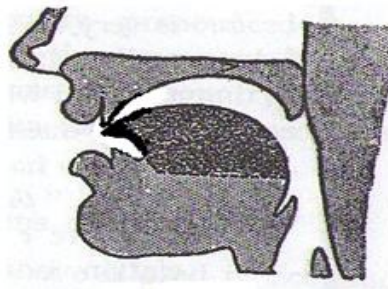
3) short / long: .....

3) Underline the **stressed** syllables in the following words. **(02.00 pts.)**

a) selection    b) familiar    c) target    d) confusion

e) begin    f) speaker    g) mechanic    h) ability

4) Regardless their voicing features, what are the two consonants this figure represents?  
**(02.00 pts.)**



- The two consonants are: / ..... / and / ..... /



5) Use words to give examples about the following cases: (04.00 pts.)

No	Different cases	Examples
a)	an unaspirated fortis plosive	
b)	a labio-dental nasal [m]	
c)	a syllabic alveolar nasal [n]	
d)	a clear [l] used intervocalically	
e)	a dark lateral [ɫ]	

6) Give the VPM of the following consonants. (03.00 pts.)

Consonants	Voicing	Place of articulation	Manner of articulation
/t/			
/v/			
/tʃ/			
/l/			
/n/			
/j/			
/w/			

7) Transcribe **phonetically** [ ] the words and phrase in the table below. (03.00 pts.)

word	transcription	word	transcription
cure		helpful	
park		ten pairs	
skin		receipt	

## Sample 08

First Year English Degree (L.M.D)

### Second Semester Official Examination in Phonetics

**Date:** May 16<sup>th</sup> 2019    **Length:** 1h.30    **From** 13h00 to 14h30

Use only one (01) **word** to give an example about each case of the following:  
(Do **not** give any form of transcription)

No	Different Cases	Examples
01	a fully aspirated fortis plosive	
02	A weakly aspirated fortis plosive	
03	an unaspirated fortis plosive	
04	an inaudible release stage of the first plosive in a sequence of two plosives	
05	a reduced long vowel	
06	a labio-dental nasal [ɱ]	
07	a fully voiced lenis plosive	
08	a reduced long vowel	
09	a fully long vowel	
10	a plosive with a nasal release	
11	an elided dental fricative in cases of difficulty	
12	a fortis palato-alveolar affricate used initially	
13	a velar /ŋ/ used medially	
14	a syllabic alveolar nasal [ɹ̩]	
15	a clear [ɪ] used intervocalically	
16	a dark lateral [ɫ]	
17	a devoiced lateral [ɭ]	
18	A syllabic lateral [ɭ̩]	
19	A devoiced labio-velar approximant [ɰ]	
20	A devoiced palatal approximant [ç]	

**Sample 09**

First Year English Degree (L.M.D)

**Second Semester Official Examination in Phonetics**

**Date:** October 3<sup>rd</sup>, 2020 **Length:** 1h.00 **From** 10h00 to 11h00

Write *on this paper* to do **all** activities, please.

**I. Circle the correct answer: T (True) or F (False).....(06 Pts.)**

- 1. Phonetics studies the physical properties of human speech sounds T / F
- 2. Articulatory phonetics studies the way (how) speech sounds are produced T / F
- 3. The minimal distinctive functional unit in phonology is the morpheme T / F
- 4. Phonemic transcription aims to disregard all allophonic variations of phonemes T / F
- 5. Vocal folds are placed in the larynx T / F
- 6. When the vocal folds are brought together firmly, the result is a voiced sound T / F
- 7. Vowels are produced with a stricture (obstruction) made in the vocal tract T / F
- 8. There are 05 short vowels in RP English language T / F
- 9. Closing diphthongs have /ɪ/ or /ʊ/ as target points (second part) T / F
- 10. Consonants can be articulated with complete or partial closure of in the vocal tract T / F
- 11. Plosives are also known as nasal stops T / F
- 12. Affricates are consonants that begin as nasals but release as fricatives T / F

**II. Select the correct answer. Put a tick (✓)..... (06 Pts.)**

1. RP English vowel sounds are referred to as :

- a. free voiceless sounds
- b. free voiced sounds
- c. constricted voiced sounds

2. Long vowels are reduced (shortened) before

- a. fortis consonants
- b. lenis consonants
- c. short vowels

3. Voiced plosives / **b,d,g** / are said to be fully devoiced in:

- a. word initial position 

- b. word medial position 

- c. word final position 


4. The plosives /**p, t, k**/ are unaspirated

- a. initially in unstressed syllables 

- b. after initial /**s**/
- c. before / **l,r,w,j** /

5. /**p**/ is silent in

- a. receipt 

- b. plumber
- c. spy

6. Labiodental fricatives are :

- a. /**f, v**/ 

- b. /**θ, ð**/
- c. /**s, z**/

**III. Decide if the pronunciation of the vowel sounds in each pair of the following words is 'same' or 'different' (03 pts.)**

- |                       |                       |
|-----------------------|-----------------------|
| 1. said – sad .....   | 4. mower- power ..... |
| 2. right –write ..... | 5. pair – there ..... |
| 3. pool –pull .....   | 6. war-board .....    |

**IV. Change the phonemically transcribed symbols into their corresponding English words (02 pts. )**

- |                       |                       |
|-----------------------|-----------------------|
| 1. /kə'rekt / .....   | 3. / intə'tem / ..... |
| 2. /fə'netiks / ..... | 4. /'vɜ:ʒən/ .....    |

**V. Transcribe phonetically the following words (03 pts.)**

- |                           |                           |                           |
|---------------------------|---------------------------|---------------------------|
| 1. import [            ]  | 2. speaker [            ] | 3. apply [            ]   |
| 4. comfort [            ] | 5. comb [            ]    | 6. receipt [            ] |

**Second Semester Official Examination in Phonetics**

**Date:** June 3<sup>rd</sup>, 2021 **Length:** 1h.00 **From** 11h00 to 12h00

**1- For each group of the sounds listed, state the phonetic feature(s) they all share (5Pts)**

Sounds	Shared Features
<b>Example:</b> [p] [b] [m]	Bilabial stop consonants
[u:] [ɔ:] [ɑ:]	
[p] [t] [k]	
[θ] [ð]	
[i:] [ɪ]	
[ɪə] [eə] [ʊə]	

1. Circle the word with the different vowel sound (05Pts)
  - a. dear/ beard/ cheer/ pear
  - b. care / rare / fear/ mare
  - c. break / great / heat / weight
  - d. void/ toe /noise / joy
  - e. south /oven / son / flood
  
2. Use these five terms ( *labiodental / phonetic /hard palate /soft palate / active*) to complete the following statements appropriately (05 pts.)
  - a. The.....is called the roof of the mouth.
  - b. The.....is called the velum.
  - c. Narrow transcription indicated by square brackets is called.....transcription.
  - d. The lower lip is one of the.....articulators.
  - e. When the lower lip touches the upper teeth, the place of articulation is called.....
  
3. Change the transcribed English symbols to their corresponding words (05 Pts.)
  - /ɪŋ'kri:s/ ..... - /ɔ:l'ðəʊ/ .....
  - /'sensətɪv/ ..... - /'rekəɡnaɪz/ .....
  - /ɪm'pɔ:təns/ .....

Second Semester Official Examination in Phonetics

Date: March 13<sup>th</sup>, 2021 Length: 1h.00 From 11h00 to 12h00

Write *on this paper* to do *all* activities, please.

I. Classify the organs in the given list according to the processes they belong to: (04Pts)

<ol style="list-style-type: none"><li>1. Lungs</li><li>2. Nose</li><li>3. Teeth</li><li>4. Velum</li><li>5. Trachea</li><li>6. Mouth</li><li>7. Pharynx</li><li>8. Tongue</li><li>9. Vocal chords</li><li>10. Lips</li></ol>	<b>a. Respiration process</b> .....
	<b>b. Phonation process</b> .....
	<b>c. Resonation Process</b> .....
	<b>d. Articulation process</b> .....

II. Select the correct answer: (05Pts)

1. Articulatory phonetics studies:

- a. the way (how) speech sounds are produced by speech organs
- b. the way sound waves are transmitted through air
- c. the way sounds are perceived by the inner ear and the brain

2. The minimal distinctive functional unit in phonology is:

- a. morpheme
- b. phoneme
- c. grapheme

3. The transcription which aims to disregard all the diacritics is:

- a. Phonemic transcription
- b. Phonetic transcription

4. When the vocal folds are brought together firmly, the result is a:

- a. Voiced (lenis) sound
- b. Voiceless (fortis) sound
- c. Glottal stop

**5. Vowels are produced with ..... made in the vocal tract:**

- a. no stricture (obstruction)
- b. partial obstruction
- c. complete obstruction


**III. Circle the word with the different vowel sound**

**(06Pts)**

- f. come / gone / long / want
- g. foot / blood / look / push
- h. break/ great / heat / weight
- i. sad / bag / tap / salt
- j. snow / low / cow / show
- k. cloud / road / plough / drought

**IV. Give examples of words that contain the following vowel sounds**

**(05Pts)**

Vowels	Words ( one example)
/ɪ/	.....
/ɑ:/	.....
/eɪ/	.....
/ɔɪə/	.....
/aʊə/	.....

Samples  
Correction  
Of  
Official  
Examinations



## Sample 01

### First Year English Degree (L.M.D)

January 18<sup>th</sup>, 2015 Length: 1h.30 From 10h00 to 11h30

#### First Semester Written Examination in Phonetics

#### Sample Correction

Write *on this paper* to answer **all** questions, please.

**1) Fill in the gaps: (05.00 pts)**

In normal speech we use an egressive .....**palmonic**..... airstream. In the .....**larynx**....., the vocal chords vibrate for voiced sounds. Sounds with no vibrating vocal chords are called .....**voiceless**..... sounds. There are three cavities which function as resonators: the .....**oral**.....cavity, the .....**nasal**..... cavity and the cavity of the .....**pharynx**..... . The airstream is then obstructed in different points in the mouth by the active and .....**passive**..... articulators. In the process, the soft palate can be .....**raised**..... for an .....**oral**..... sound, or lowered for a .....**nasal**..... sound.

**2) Explain briefly the linguistic role of the following organs of speech (04.00 pts)**

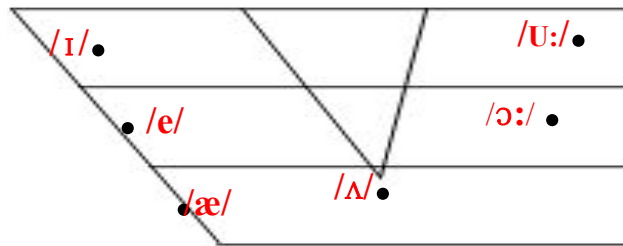
- a) Lungs:** are two sponges-like which serve as an air reservoir. These organs are responsible for inhalation/exhalation process.
- b) Vocal chords:** are responsible for the three phonation processes: apart for voiceless sounds, lightly together 'vibration' for voiced sounds, and tightly together for glottal stop.
- c) Velum:** is the active articulator used to prevent air from going either through the mouth (lowered) producing nasal sounds; or through the nose (raised) for oral sounds.
- d) Tongue:** is an active articulator used for constricting air in different points in the mouth according to the kind of consonant to be produced. The height of the tongue is also used as a criterion in producing vowels.

**3) What do the following phonetic features refer to? (01.50 pts)**

- a) articulatory, acoustic, auditory:** ...**phonetics**...
- b) short / long:** .....**vowels**.....
- c) fortis / lenis :** .....**consonants**.....

4) Plot the phonemic **symbols** of vowels in the given words on the cardinal vowel diagram. (03.00 pts)

fit, morning, man, food, mend, monkey,



5) Pick out the words containing the sounds /ɒ/, /aʊə/, /ʊə/, /i:/, /ɑ:/, /eə/, /eɪə/, /ʌ/ from the following list. (02.00 pts)

pair, clerk, pure, seven, shower, many, cable, gaze, layer, sisters, tough, mere, doctor, speak, elbow, write, speak

sound	word	sound	word
/ɒ/	doctor	/eə/	pair
/aʊə/	shower	/eɪə/	layer
/ʊə/	pure	/i:/	speak
/ɑ:/	clerk	/ʌ/	tough

b) Transcribe the following words according to their vowel length. (02.00 pts)

Words	Phonologically	Phonetically
harder	/ha:də/	[hɑ:də]
park	/pa:k/	[p <sup>h</sup> ɑ:k]
pot	/pɒt/	[p <sup>h</sup> ɒt]
hotdog	/hɒtdɒg/	[hɒt dɒg]

8) Give the written form of the phonemically transcribed words. (01.50 pts)

Transcription	Written form
/ˈwenzdɪ/	Wednesday
/ˈkjʊəriəs/	Curious
/vəˈraɪətɪ/	Variety
/sprɪŋ/	Spring
/ˈleɪbə/	Labour
/saɪkiˈætrɪk/	Psychiatric

## Sample 02

### First Year English Degree

### Second Semester Written Examination in Phonetics

### Sample Correction

Write *on this paper* to answer **all** questions, please.

1) Answer the following question: (03.00 pts)

What is the difference between a phonological and a phonetic transcription?

A **phonological** transcription is a **transcription which does not need all the aspects of the speech sounds (we don't need to give all the details)**

A **phonetic** transcription is a **transcription that needs to give all the diacritics (all the details, i.e., aspects of the speech sounds)**

2) Use words to give examples about the following cases: (03:00 pts)

No	Different cases	Examples
a)	an unaspirated fortis plosive	<b>spoon, stay, screw</b>
b)	a reduced long vowel	<b>spark, fork, height</b>
c)	A fully long vowel	<b>bird, please, programme</b>
d)	a linking [ R ]	<b>here and there, moreover</b>
e)	A syllabic [ n̩ ]	<b>cotton, sudden</b>
f)	A devoiced palatal approximant [ ɕ̥ ]	<b>pure, queue, tune</b>

3) Answer the following questions using the appropriate sound. (03.00 pts)

- What **voiceless** consonant has the same place of articulation as / t / and the same manner of articulation as / f / ? It is: / **S** /
- What **voiced** consonant has the same active articulator as / b / and the same passive articulator as / θ / ? It is: / **v** /

4) pick out the sounds /ɪə/, /əʊ/, /ʊə/, /ɑ:/, /eə/, /eɪə/, /aʊə/, /ʌ/ from the following list.  
(03.00 pts)

pair, clerk, pure, tough, seven, shower, many, sergeant,  
layer, sisters, mere, speak, elbow, write,

sound	word	sound	word
/ɪə/	<b>mere</b>	/eə/	<b>pair,</b>
/əʊ/	<b>elbow</b>	/eɪə/	<b>layer</b>
/ʊə/	<b>pure</b>	/aʊə/	<b>shower</b>
/ɑ:/	<b>sergeant, clerk</b>	/ʌ /	<b>tough</b>

5) Transcribe **phonetically** [ ] the words in the table below. (03.00 pts)

word	transcription	word	transcription
pure	[pʰʊə]	helpful	[helpful]
well	[weɪ]	young	[jʌŋ]
skin	[skɪn]	cotton	[kɒt n]

6) Turn the following phonemically transcribed words into a written sentence. (03:00 pts)

/θru: ðə rɪ'vju: əv 'lɪtərəʃə, ðə rɪ'sɜ:tʃə gets ə mɒdl wɪtʃ kən  
bɪ: jʊ:st əz ə beɪsɪs fə hɪz stʌdɪ /

Through the review of literature, the researcher gets a model which can be used as a basis for his study.

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