ФОНЕТИКА И ФОНОЛОГИЈА НА АНГЛИСКИОТ ЈАЗИК

доц. д-р Натка Јанкова Алаѓозовска

ENGLISH PHONETICS AND PHONOLOGY
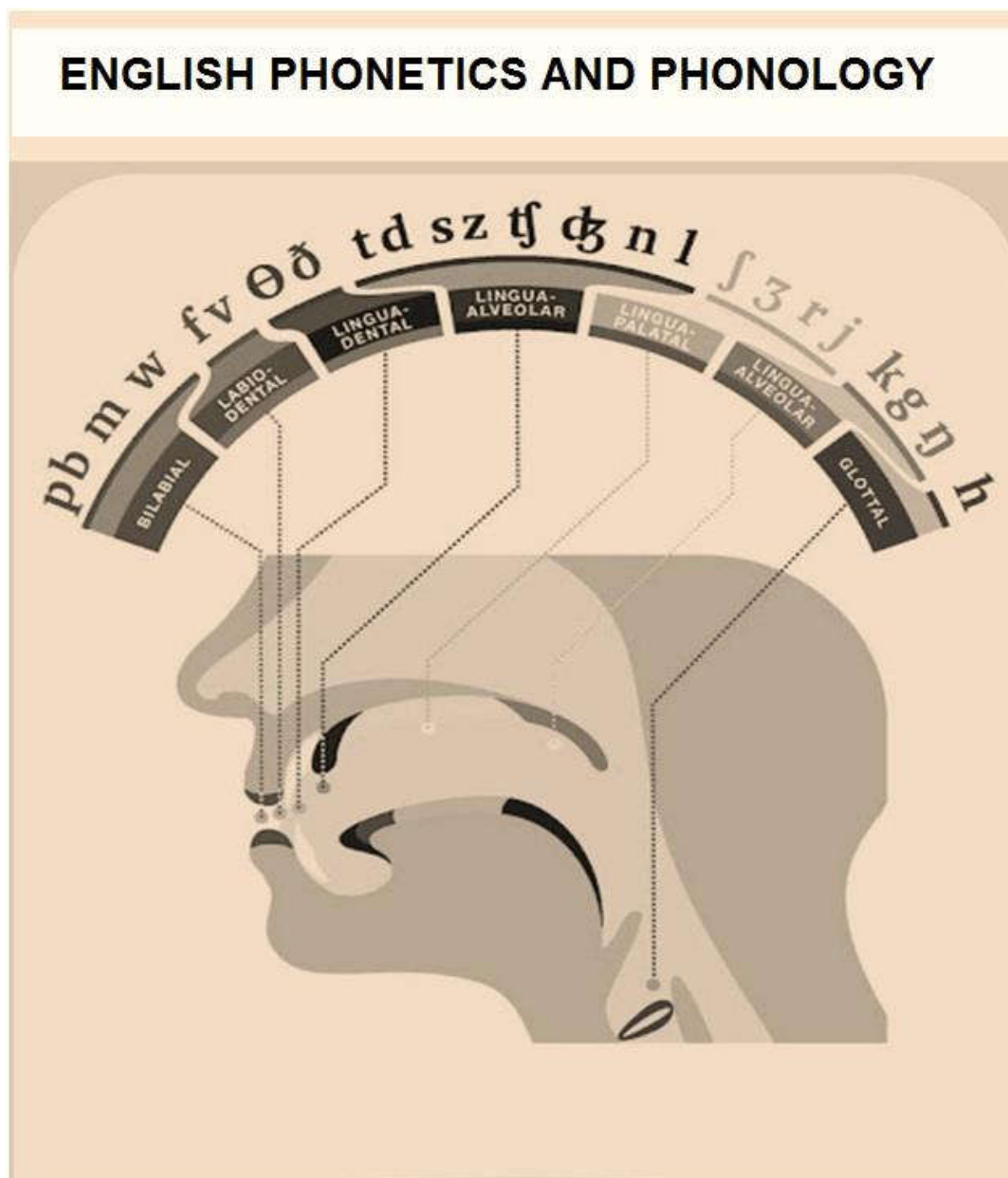
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Натка Јанкова Алаѓозовска
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ДОЦ. Д-Р НАТКА ЈАНКОВА АЛАЃОЗОВСКА

ФОНЕТИКА И ФОНОЛОГИЈА

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ПРЕДГОВОР

Овој пишан материјал се однесува нафонетикатаи фонологијатана англискиот јазик и истиот е наменет за потребите на студентите на англиската катедра т.е. англиски јазик и книжевност на Филолошкиот факултет при Универзитетот „Гоце Делчев"- Штип, кои ги изучуваат овие предмети на почетокот на своите студии како задолжителни предмети. Скриптата се состои од теоретски осврт на најважните сегменти од оваа област и цел на истата е да им го збогати фондот на зборови на студентите, да се увежбаговорниот јазик како и да се совладаатразличните фонетски структури во склоп на фонетската азбука и фонетската транскрипција со крајна цел развивање способност за правилен изговор на гласовниот систем на англискиот јазик. Голема е важноста на изучувањето на правилниот изговор бидејќи зборувањето странски јазик е прашање на целосно оформена навика за изговор, која е под влијание на мајчиниот јазик. Како резултат на тоа многу често се случува да се слуша странскиот јазик преку „филтерот" на мајчиниот јазик и неговиот гласовен систем. За да се избегне лошиот изговор, изучувачите на англискиот јазик мора да го слушаат и изучуваат странскиот јазик како таков наместо да се прави паралела со мајчиниот јазик.Со други зборови, зборувањето англиски јазик не може да биде продуктивно без добриот изговор.

Оваа скрипта е напишана во согласност со програмата за предметите фонетика и фонологија на англискиот јазик и содржината на истата се состои од основните поими и процеси кои им се потребни на студентите за да го продлабочат своето знаење т.е. да го подобрат нивниот изговор, а најважната цел на фонетиката е да објасни како се изговара стандардниот англиски јазик избран како таков од локалното население во областа Англија - Велика Британија. Скриптата ќе даде одговори на прашањата зошто е потребно да се учи теоријата поврзана со фонетиката и фонологијата,т.е. ќе се потврди дека теоретското познавање е потребно за секој кој е заинтересиран да ја научи и разбере употребата на гласовите во англискиот јазик.

Оваа рецензирана скрипта се состои од два дела и започнува со вовед во фонетиката. Во овој дел се зборува за основните цели на изучувањето на фонетиката и започнува со говорниот процес.Следниот дел е посветен на говорните органи, детално објаснување за истите и важноста на говорните органи.Скриптата продолжува со детали за зборовниот систем.Следната тема е посветена на разликите помеѓу фонетиката и фонологијата, како и нивната поврзаност со другите науки. Петтата тема е посветена на методи и техники на проучување во фонетиката каде има детално објаснување за технологијата која се користела порано и денес за фонетски истражувања и мерења.Следните две теми се посветени на фонемите и алофоните како гласовни сегменти и начини за разликување на истите.Понатаму следи детално запознавање со фонетската азбука во англискиот јазики завршува со различните класификации на гласовите во англискиот јазик.

Вториот дел е посветен главно на фонолошките единици чија цел е да ги продлабочи способностите на студентите за правилен изговор на гласовниот ситем на едно понапредно ниво, усвојување на разликите на различните говорни подрачја, усвојување на основните фонетски класи и основни граматички и фонетски структури во англискиот јазик. Она што е опишано во делот посветен на фонологијата се понатамошните принципи на правописот и правоговорот на англискиот стандарден јазик. Материјалот продолжува со позиционални и комбинирани промени на гласовите како и стилистичка вредност на фонетиските единици. Она што е многу важно во овој дел се темите за акцент, интонација и на разликите на основната поделба на изговорот во Британија, Сад и Австралија.

Оваа скрипта е корисна за студентите кои ги изучуваат предметите фонетика и фонологија на англискиот јазик и служи како дополнително помагало заедно со другата задолжителна литература пропишана во програмата на курсот.

доц. д-р. Натка Јанкова Алаѓозовска

Содржина на предметната програма - Фонетика на англискиот јазик:

1. Зошто е важно да се учи фонетика на англискиот јазик
2. Процесот на зборување
3. Говорни органи
4. Гласовниот систем на англискиот јазик
5. Фонетика и фонологија
6. Односот на фонетиката кон другите дисциплини
7. Методи и техники на истражувања во фонетиката
8. Гласовни сегменти: фонеми
9. Гласовни сегменти: алофони
10. Фонетска транскрипција
11. Запознавање со фонетската транскрипција
12. Типични артикулаторни карактеристики на гласовите во англискиот јазик

Содржина на предметната програма - Фонологија на англискиот јазик:

1. Вовед во Фонологијата
2. Нетипични артикулаторни карактеристики на гласовите во англискиот јазик
3. Англиските гласови и фонеми
4. Местото (позицијата) на фонемите во зборовите и нивно комбинирање
5. Фонетски варијации
6. Засилување и намалување на гласовите
7. Слог
8. Акцент
9. Интонација
10. Јазични варијации
11. Пишување и зборување - еквиваленти на пишаниот и зборовниот јазик
12. Сумирање на знаењата по фонетика и фонологија

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PART ONE: PHONETICS
Lecture 1: Introduction to Phonetics

What is language, what is speech?
What is IPA? What are aims of
studying Phonetics?

Language as a sign system can be discussed in terms of articulation i.e. exposing the matter of the sound system as its material formulation. In that sense language can be researched in terms of Phonetics - the sounds, accent, intonation as its material side and Phonology i.e. the sounds and their functional role in the language system. Phonetics and Phonology are two different sciences whereas Phonetics is considered as a helping linguistic discipline which is about the sound notions of the word apart from their linguistic function which is discussed further in Morphology, Syntax and Semantics. Phonetics does not deal with the sound complex and its meaning but the material side of the sounds and human speech i.e. the physiological description of the sounds.

Speech is the communication tool between people. What do people know when they know a foreign language? For native speakers it is automatic i.e. like driving a car whereas thelanguage exists in the minds of the speakers. How language works is a puzzle for the linguists and there are many theories, but no consensus. You might think that speaking comes naturally like seeing and hearing. Yet, it is not something you can do soon after you are born. Speech is not one of the five senses, and it has to be learned during the first few years of life. All babies cry in the first few seconds or minutes after birth. Crying is the first use of the vocal organs and the first step towards speaking. Very soon babies start to babble (make different sounds).Why is it important how speech sounds relate to meaning? The answer is that the speech sound is the medium we use to represent what we are saying: first we hear a stream of sounds and then we relate them to certain meaning. It cannot be denied that human speech characteristics are considered through genetics, but as researcherspoint out the views of phoneticians who claim that some people have innate predispositions for easier mastering of the voices of foreign languages, and another group of people who study foreign languages master these characteristics with much more effort.Any human being can produce 400 sounds. Only the structure of the human organs of speech allows a particular wide range of sounds which can be put together in extraordinary specific speech.

Phonetics is a science that deals with the sounds of human speech. Though the sounds can be perceived of a particular language as something simple and mundane, it is much more than that.Phonetics is one of the main building blocks in learning a new language. Phonetics teaches about how different words are pronounced verbally by something called International Phonetic Alphabet (IPA). The IPA stands as a standardized representation of the sounds of spoken language. It was first devised in the 19th century by scientists looking to standardize how some words are said across the world no matter the language barrier. To bypass this, a new alphabet was needed, an alphabet filled with signs that have different sounds. That is called the Phonemic Transcription. Further, phonetics studies the sound system of the language and the sounds of speech. Basically two branches that deal with sounds can be distinguished – Phonetics and Phonology. They both deal with sounds. No language description is possible without describing the sound system of it. Every language uses a subset of speech sounds. When we consider a sound system of any language from the point of view of its articulatory, acoustic, auditory characteristics we deal withphonetics. When we look at the sounds and its functions we deal with phonology. Phonetics can be divided into many more branches. Phonetics is a much older branch than Phonology. It is the oldest branch. Phonetics is the scientific field which studies speech

sounds i.e. not with the meaning of the sounds but how they are produced and heard and their properties. In the everyday interpretation of the sciences, phonetics and phonology refer to the study of speech, their definition in the most general sense remains so. But linguists have traditionally advocated their study and considered them to be two different fields of study. Phonetics deals with the physical aspects of speech production and their relationship to speech perception, while phonology deals with the functional and systemic nature of sounds in certain languages.

From one hand, the study of production, perception and analysis of speech sounds is not a new subject. It originates since 500 BC when the Sanskrit grammarian Panini from India included material on this subject in his grammar. On the other hand, much later in the late nineteenth century, various attempts were made to produce a phonetic alphabet. The most critical questions that arise in phonetics and phonology concern the ways in which languages are encoded in their orthographies because they systematically represent sounds on paper rather than in practice, and this is an important aspect of the study of speech. It would be convenient if the spelling, or spelling system, had a single sound or syllable associated with each symbol. This is why David Crystal defines the phonetic alphabet as "an attempt to make a permanent and unambiguous record of what goes on in our speech" (p.168). Finally, in 1889, the International Phonetic Alphabet was formulated and this system is still in use.

1.1. Aims of Studying Phonetics

If the pronunciation of the English language is compared to the pronunciation of the Macedonian language it can be concluded that the relationship between spelling and sounds in English language does not appear to be one-to-one. This means that each spelling symbol does not apply to a single sound. Take a look at the following words in English and Macedonian and think about how many sounds you make for each one:

Table 1.Comparison between the English and Macedonian Speech System

Examples:		Answers:	
1. fill	а) книга	1.three	а) 5
2. drunk	б) теорија	2. five	б) 7
3. chew	в) телефон	3. two	в)7
4. single	г) дрво	4. five or six	г) 4
5. jungle	д) клупа	5. five	д) 5

The relationship between the system of writing and pronunciation in English and Macedonian language can be seenfrom the above given examples. The aim of the English spelling system is to represent the sounds used by speakers and at first glance it may look easy but considering the above mentioned examples seems like the aim looks a little bit more complex in practice. If the Macedonian alphabet consists of 31 letters and the same number of sounds this cannot be said for the English language. The alphabet of the English language has 26 letters but the number of speech sounds is approximately 44.

The International Phonetic Alphabet is a system of phonetic notation based primarily on the Latin alphabet. It was devised by the International Phonetic Association in the late 19th century as a standardized representation of the sounds of spoken language. The IPA (see picture 1) is used by lexicographers, foreign language students and teachers, linguists, speech-language pathologists, singers, actors etc.

Picture 1: The Phonetic Alphabet
(source: www.-esl-lounge.com)

Lecture 2: The speech process

> *The differences between language
> and writing*

There are different definitions of language but the most essential ones are the following: Henry Sweet, an English phonetician and language scholar, stated: "Language is the expression of ideas by means of speech-sounds combined into words. Words are combined into sentences, this combination answering to that of ideas into thoughts." The According to the American linguists Bernard Bloch and George L. Trager the definition of language is the following: "A language is a system of arbitrary vocal symbols by means of which a social group cooperates (Bloch & Trager, 1942)." Thus, language as the basic code for communication can utilize two media:

➢ language

➢ writing

Speech as the oral medium is of earlier origin and only a small part of the humanity has been literate since the beginnings, while the child first learns how to speak and can learn to write later. Speech has different priorities over writing such as not being dependent of the presence of light, the hands are free while speaking, messages can be sent no matter the distance (from balcony to balcony) and writing takes more time than speaking. However, it is important to point out that speech communication consists of different elements. From here, another definition of speech is the activity of human organism by which sounds of a

language are produced, transmitted through the air and received (Hlebec, 1995). And this definition means that in order to achieve successful communication we need a listener and receiver of the message which is encoded and decoded, there is an air channel between the two speakers and the feedback refers to the response of the listener or the receiver of the message. This is graphically shown in the picture bellow:
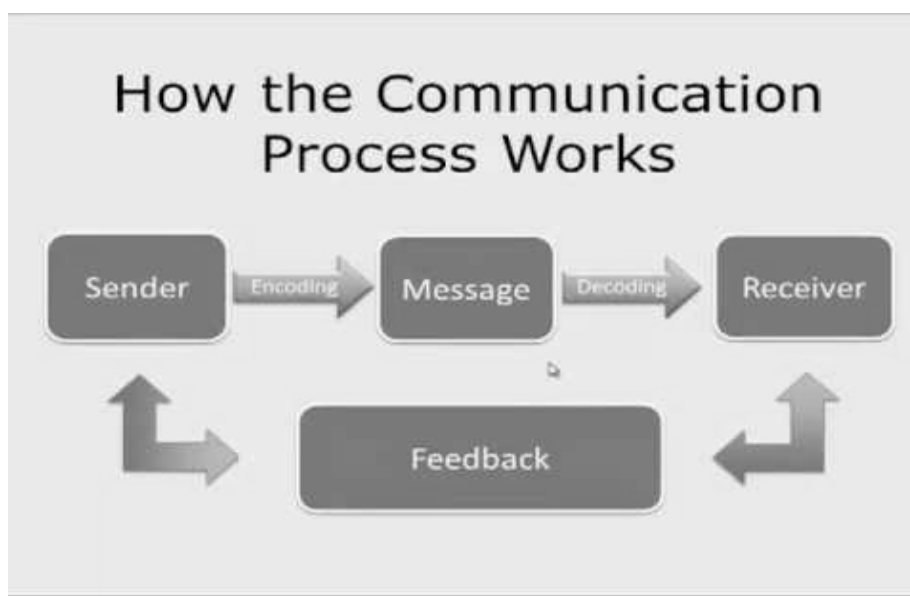
Picture 2:How communication works
(source: https://expertprogrammanagement.com/2019/04/the-communication-process/)

In addition, there are phases of speech worth mentioning and they are the following:

1. psychological phase - when the speaker gets the message and identifies the sounds that make up words

2. neurological phase - when the speaker activates the nervous system to move the speech organs and the vibrations turned into impulses are sent to the brain

3. physiological phase - producing the speech sounds with the help of the vocal tract

4. physical phase - speech sounds are transmitted as vibrations of air molecules with their frequencies and amplitudes

The above-mentioned phases are interconnected to the process of communication. Having in mind the four phases of speech, the speech organs were introduced and they will be discussed in details in the following chapter.

Questions to consider:

1. What is phonetics and what is phonology?
2. why do we need the Phonetic transcription?
3. What is speech and the speech process?
4. What is the difference between speech and writing?
5. What is important for aachieving successful communication?

Lecture 3: The speech organs

<div style="text-align:center">

The speech organs, types of speech organs and description

</div>

Organs are used to perform the basic vital functions: feeding and breathing and they are also involved in the production of speech thus are called the vocal organs or the vocal tract. According to Hlebec (1995), there are three types of speech organs:

- For starting the air to move (for initiation)
- For producing the voiced sound (for phonation)
- For movements above the windpipe (for articulation)

Organs of speech or articulators are part of the study of articulatory phonetics. Articulatory or speech organs are those organs of our body which help us produce speech sounds. Interesting characteristics of these articulators is that though they are helping to produce speech sounds, their primary job is to do something else for our body than articulate speech sounds. Different linguists define speech organs in different ways.
The famous linguist David Crystal (2009), in his Dictionary of Linguistics and Phonetics, defines the articulator as:"…any specific part of the vocal apparatus involved in the production of a sound is called an articulator". Unlike most animals that have the ability to communicate through nonverbal means, most humans produce distinct words to communicate with one another.

What is the priority of speech over writing?

▸ Speech is delivered with much speed; typically, a person who wants to speak does not need to think too much about what to say.
▸ When a person speaks, his or her thoughts are immediately converted into a spoken form as soon as the speech organs receive a signal or instruction from the brain.
▸ Basically, humans first learn to speak and then to write and nowadays there are still people who are not able to write.

Therefore, speech occurs when a person's brain and speech organs work together, although the organs of the respiratory system also play an important role in this process, as the vocal.

3.1. Elaborate description of speech organs

The lungs

The airflow is by far the most vital requirement for producing speech sound, since all speech sounds are made with some movement of air. The **lungs** provide the energy source for the airflow. The lungs are the spongy respiratory organs situated inside the rib cage. They expand and contract as we breathe in and out. The sounds produced while using the lungs are called **pulmonic**. Opposite to them, sounds produced without lung air are called **non-pulmonic** sounds, which is a very infrequent case. In many languages there are non-pulmonic sounds which are produced by the means of air in the mouth and they are called **clicks**, for example sending a kiss at a distance; when the tip of the tongue is involved in

order to show disagreement. These are some of the examples used in most of the Indo-European languages.

The amount of air accumulated inside our lungs controls the pressure of the airflow. Sounds formed while breathing out are called **egressive**. Words that make an uninterrupted whole are called **breath groups**. Some sounds are also produced while inhaling even though it is a very rare occasion and they are called **ingressive.**
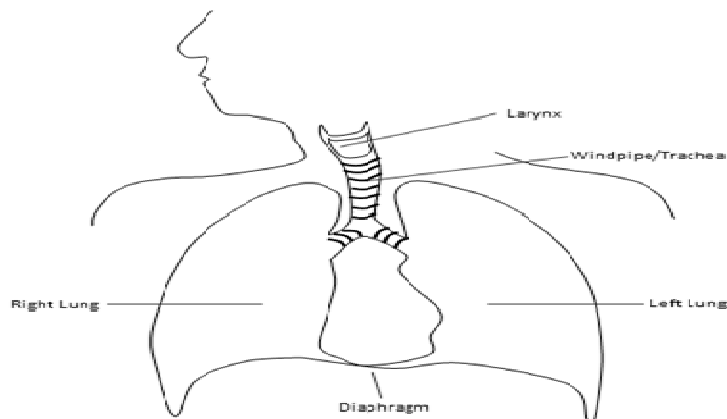
Picture 3: The lungs
(source: https://tanvirdhaka.blogspot.com/2010/12/organs-of-speech.html)

The larynx and the vocal folds

The larynx is colloquially known as the voice box. It is a box-like small structure situated in the front of the throat where there is a protuberance. For this reason the larynx is popularly called the Adam's apple. This casing is formed of cartilages and muscles. It protects as well as houses the trachea and the vocal folds .

The vocal folds are like a pair of lips placed horizontally from front to back. They are joined in the front but can be separated at the back. The opening between them is called glottis. The glottis is considered to be in open state when the folds are apart, and when the folds are pressed together the glottis is considered to be in close state.
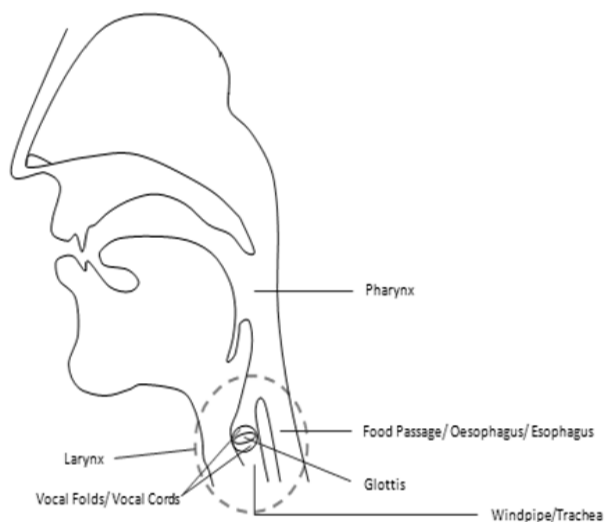
Picture 4: The vocal cords and the larynx
(source: https://tanvirdhaka.blogspot.com/2010/12/organs-of-speech.html)

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Here are some of the positions of the vocal cords:

- When the vocal cords are loosely together, they vibrate (oscillate)
- When the cords are tightly closed (like in the position when we lift something heavy) glottal stops are produced
- When the cords are wide – open ,the air escapes freely through the space between them and is called the glottis

Movable organs

The lips also play an important role in the matter of articulation. They can be pressed together or brought into contact with the teeth. The consonant sounds which are articulated by touching two lips each other are called bilabial sounds. For example, /p/ and /b/ are bilabial sounds in English. Whereas, the sounds which are produced with lip to teeth contact are called labiodental sounds. In English there are two labiodental sounds: /f/ and /v/.Another important thing about the lips is that they can take different shapes and positions. Therefore, lip-rounding is considered as a major criterion for describing vowel sounds. The lips may have the following positions:

- Rounded (see pic.5): When we pronounce a vowel, our lips can be rounded, a position where the corners of the lips are brought towards each other and the lips are pushed forwards. And the resulting vowel from this position is a rounded one. For example, /ə ʊ/. (doctor, put)

- Spread (see pic.5): The lips can be spread. In this position the lips are moved away from each other (i.e. when we smile). For example, in English /i: /is a long vowel with slightly spread lips (peak).

- Neutral (see pic.5):Again, the lips can be neutral, a position where the lips are not noticeably rounded or spread. For example, in English /ɑ: / (park) is a long vowel with neutral lips.

Round /u:/   Spread /i:/   Neutral /ɑ:/
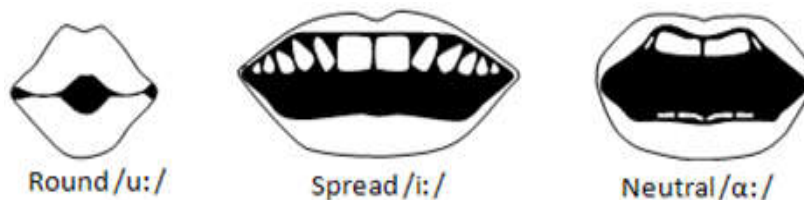
Picture 5: The position of lips
(source: https://tanvirdhaka.blogspot.com/2010/12/organs-of-speech.html)

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The Teeth: The teeth are also very much helpful in producing various speech sounds. The sounds which are made with the tongue touching the teeth are called **dental Counds**. Some examples of dental sounds in English include: /θ/ð/ as in the words : think and this.

The Tongue: The tongue is divided into five parts (see pic.6):

- The tip: It is the extreme end of the tongue.
- The blade: It lies opposite to the alveolar ridge.
- The front: It lies opposite to the hard palate.
- The back: It lies opposite to the soft palate or velum.
- The root : It lies at the end of the tongue.
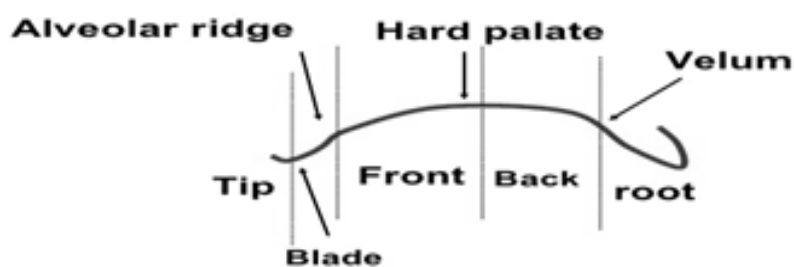
Picture 6: Parts of the tongue
(source: https://cte.univ-setif2.dz/moodle/mod/book/view.php?id=3573&chapterid=592)

Some phoneticians consider the jaws as articulators, since the lower jaw is moved a lot at the time of speaking. However, it should be noted that the jaws are not articulators in the same way as the others. The main reason is that they are incapable of making contact with other articulators by themselves.
The nose and its cavity may also be considered as speech organs. The sounds which are produced with the nose are called nasal sounds. Some nasal sounds in English include: /m/ /n/ /ŋ/ as in the words: mock, neck and king.

The uvula

The uvula is actually the little thing that hangs at the back of your throat (see pic.7) and it can produce large quantities of fluid saliva in a short time, and is believed to be an accessory to speech because plays a role in enunciating the uvular consonants.
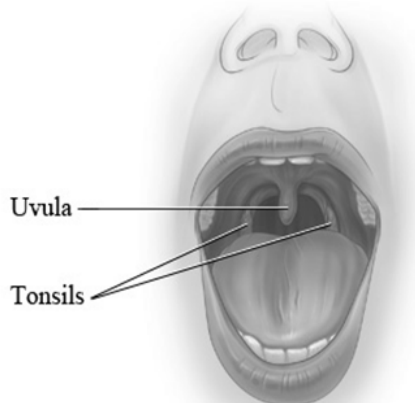
Picture 7: The uvula
(source: https://www.scienceabc.com/humans/what-is-the-uvula-and-what-does-it-do.html)

The Jaw

The jaw which is either a pair of bones that form the framework of the mouth of vertebrate animals, usually containing teeth and including a movable lower jaw (mandible) and fixed upper jaw (maxilla). Jaws function by moving in opposition to each other and are used for biting, chewing, and the handling of food (see pic.8).

Picture 8: The Jaw
(source: https://www.scienceabc.com/humans/what-is-the-uvula-and-what-does-it-do.html)

3.2. The importance of the speech organs

The division of the speech organs is as follows:

▸ Movable (the tongue, velum, uvula, lips, lower jaw and the vocal cords)

▸ Fixed (teeth, alveolar ridge, the palate and the pharynx wall.

The quality of the speech sounds is influenced by the cavities:

- The nasal cavity

- The oral cavity

- The pharynx

Speech sounds are formed when two parts of speech organs are activated together, where one is the articulator and the other being a point of articulation and this is very important to be noted because according to the articulator and the point of articulation further follow the divisions of the speech sounds. Speech organs are one of the most important fields in the study of phonetics. The scope of organs of speech is as important as the scope of phonetics. It helps us understand the articulators which are involved in the production of sounds or phones. A clear conception about articulators can change the style of any individual's pronunciation. The knowledge helps a native to be more accurate in his first language (mother tongue). Moreover, it helps a person to be more native like in his or her second language. Producing different speech sounds depends on the movement of speech organs. It is essential to know the movement and the placement of each organ in order to

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produce particular sounds. The above descriptions and functions of the organs of speech help a person to produce the consonants and vowels in a right way.
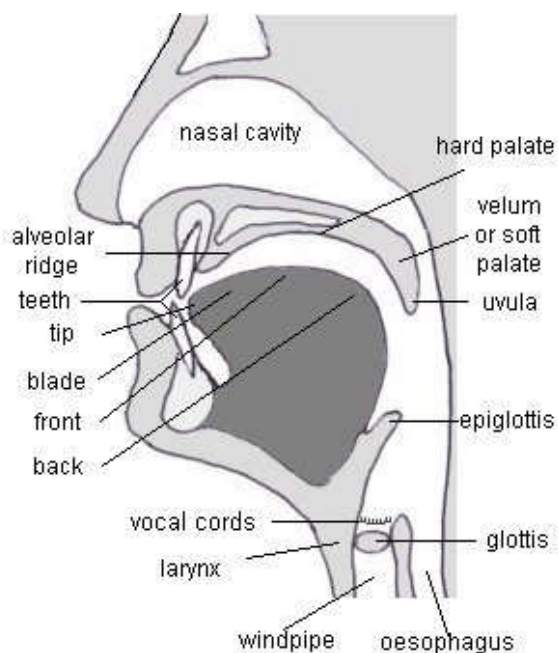
Picture 9: The Speech Organs
(source: https://myefe.com/english-sounds-pronunciation)

3.3. Transcriptions of important words in this chapter(see pic. 9):

- Nasal cavity : /ˈneɪzəl/ /ˈkævəti/
- Alveolar ridge: /ˌælviəʊlə ˈrɪdʒ/
- Upper lip: /ʌpə lɪp/
- Teeth: /tiːθ/
- Lower lip: /ləʊər lɪp /
- Blade: / bleɪd/
- Larynx: /lærɪŋks/
- Trachea: /trəkiːə/
- Palate: /pælət/
- Velum: /ˈviːləm
- Uvula: /juːvjələ/

Questions to consider:

1. Which are the three types of organs according to Hlebec?

2. Which are movable and which are fixed organs?

3. What are articulators?

N.B! Make sure you can give elaborate description of each vocal organ

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Lecture 4: The speech system

> *The speech system: system of sounds,*
> *words and grammar*

The sounds in language have initial role in the speech system. They all differ and cannot be repeated. Sometimes the speakers differ in repeating the same sounds because of many factors:

- The silence/noise in the room
- Whether the speaker is tired
- Whether the speaker is distracted
- Whether the speaker is not willing to repeat
- According to his/her background

Language consists of 3 interlocking systems:

- ➢ The system of sounds
- ➢ The system of words
- ➢ The system of grammar

These systems form the resources for creating meaning. Each system is language specific. As it was previously mentioned there is a big difference between Macedonian and English language. Differences may not be accessible to the sense of hearing. Due to modern phonetic instruments, sounds are transformed into visible records which make them more noticeable. Foreign language speakers find themselves in a chaos of sounds because of the nature of the "problem" i.e. the speaking or learning a foreign language. This chaos is supposed to be fixed by following certain rules or codes. Thus, each system (the speech system) has two main characteristics:

- It contains a limited number of sound units
- It contains certain rules to combine those units
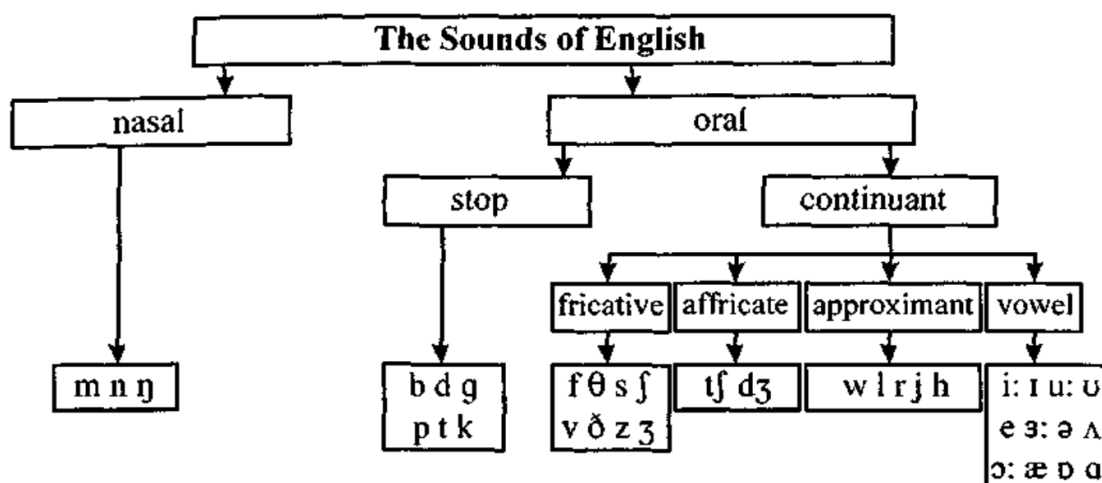
Picture 10: The Sounds of English
(source: http://onward-phonics.blogspot.com/2018/07/introduction-to-vowels-of-english-part-1.html)

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The speech sub-system of the verbal code has two types of units:

1. Distinctive features (sound properties)
2. Speech sound types (phonemes)

The sound system of any language can be studied from two points of view:

❑ how individual sounds in the language are made (phonetics)
❑ The relationship between sounds and meaning (phonology)

The minimum number of phonemes is different across languages (never exceeding fifty). The number of phonemes for natives of Hawaii is thirteen while there are 32-59 phonemes in Danish and Lithuanian language.
A **phoneme** is the smallest unit of a sound which can be meaningful or meaningless and by combination of phonemes we get morphemes. Further, a **morpheme** is the smallest linguistic unit with a semantic meaning.

Picture 11: Phonemes in English language
(source: https://www.techiesnet.com/blog/sound-system-of-english-phonetic-sound-pronunciation-video-tutorial#.Y2jYI3bMKM8)

The speech system (see pic. 10) in English language is organized within the 44 symbols in the International Phonetic Alphabet or IPA (see pic. 11). At first glance, the Phonetic Alphabet looks like a meaningless collection of symbols but actually, each symbol represents a different sound i.e. a different phoneme. The English language sounds are broken into three sections (see pic. 11):

1. Single vowels (monophtongs)
2. Diphthongs
3. Consonants

The first section is dedicated to vowels. When we think about vowels in our mother-tongue language, we will probably mention the sounds (a, e, i, o, u). But if we compare the pronunciations of the Macedonian and English language in general, we will state that the pronunciation in English is very inconsistent. That is why the vowels in English language are more than the five above-mentioned vowels in Macedonian language. In the IPA, they are

organized in two sections: monophtongs and diphthongs in three rows. In the top row of monophtongs, you can see: /iː/, /ɪ/, /ʊ/; /uː/. When pronouncing these sounds, the mouth is almost closed and the sound is made on the top of the mouth, so that is the reason why they are placed on the top row. On the second row, we can see /e/, /ə/, /ɜː/, /ɔː/. The mouth is a little open and the sounds seem like they come straight down on the middle of the mouth. That is why they are placed on the middle row. If we take a look at the bottom row in the section of vowels, we will see the sounds: /æ/, /ʌ/, /aː/, /ɒ/. In order to pronounce these sounds our mouth is wide-open and it feels like the sound is coming from the bottom of the mouth thus they are on the bottom row of this section.

Columns are also important in the IPA. They give us a hint about the position of the tongue when pronouncing the sounds. In the first left column, the tongue position is at the front when pronouncing /i/, /e/,/æ/. The next column includes: /ɪ/, /ə/, /ʌ/ and here the position of the tongue is back a little. When pronouncing /ʊ/, /ɜː/, /aː/ the tongue is back a little more. Finally, the when pronouncing the sounds /uː/, /ɔː/ and /ɒ/ the position of the tongue is at the back.

The second section of vowels includes the diphthongs which are actually a combination of two vowel sounds arranged according to their second sound. Here, we refer to the first two columns in the section diphthongs. The symbol is written with the shorter symbol sound in the combination but very often in pronunciation sounds like the longer version of the sound. In the third column, the diphthong is a combination with /ə/ or the so-called "schwa" and the same as in the previous two cases of diphthongs, the second sound sounds more like the longer version of the sound.

Proceeding to the third section in which the consonants are found, we can say that this section consists of three rows. The first two rows are said to be the consonant pairs' rows. The sounds are said to be voiced and voiceless which are also found in the Macedonian language as well. The main difference between voiced and voiceless sounds is that when pronouncing the voiced sounds, the vocal cords are used and if you feel your neck you will also feel a certain vibration. On the other hand, when pronouncing the voiceless there is no vibration. And on the third row of the consonants' section, we can see the single consonants i.e. they are found on the bottom row.

Hence, the IPA is not just a random collection of sounds i.e. it is a chart that can help us learn the correct pronunciation and improve our pronunciation of the English words.

4.1. Interesting features of sounds

The number of sound units among animals is different. They only produce sounds when they perform basic vital functions and emotions. As a consequence of the rules of combining phonemes in a given language some speech sound clusters are not allowed which decreases the total number of potential morphemes. One of the properties of the speech phonological subsystem is a tendency towards symmetry. Very often the number of voiced and voiceless consonants in language is almost equal, the number of front vowels is almost the same as that of the back vowels and their positions are mirror images of the latter.

4.2. Redundancy

The main definition of redundancy is the possibility to predict the presence of a linguistic unit merely based on the presence of another unit with which is always coupled. It actually fights disturbance in communication. Hlebec (1995) points out that redundancy is the possibility to predict the presence of a linguistic unit merely on the basis of the presence of another unit which is always coupled. Obviously, in order to be able to do that, you need deeper knowledge in phonetics. Clements (2009)states that languages tend to organize their sound systems by maximizing the use of a small number of highly valued features. Again, redundancy is minimized to achieve representational simplicity.

The disturbance is called noise. Noise is everything that is produced in the form of a sound in speaking. Noise appears if we have a tired speaker, different dialect, fatigue, different situations as shown in the picture below:
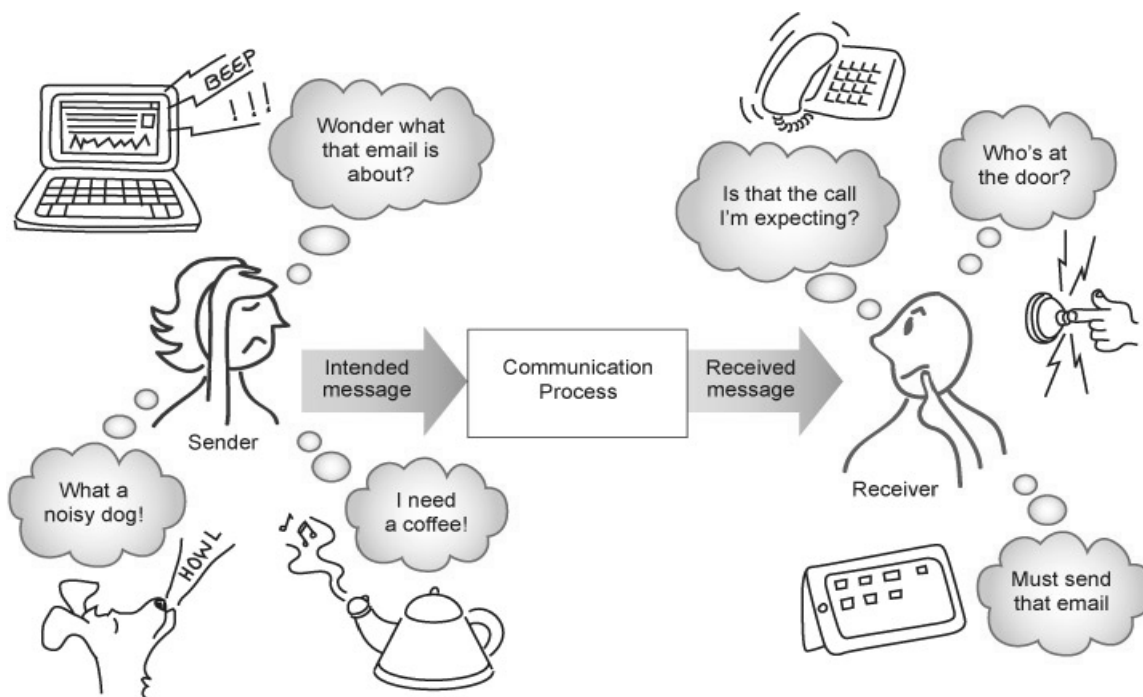
Picture 12: Noise
(source:https://www.open.edu/openlearncreate/mod/oucontent/view.php?id=81611&extra=th umbnailfigure_idm45532560906944)

4.3. How do we make speech sounds?

Speech sounds are made with the use of air from our lungs as well as the organs of speech, i.e. lips, tongue, teeth and the vocal cords to create different sounds. Moreover, by manipulating the sounds in different ways different sounds are produced (see pic.13):
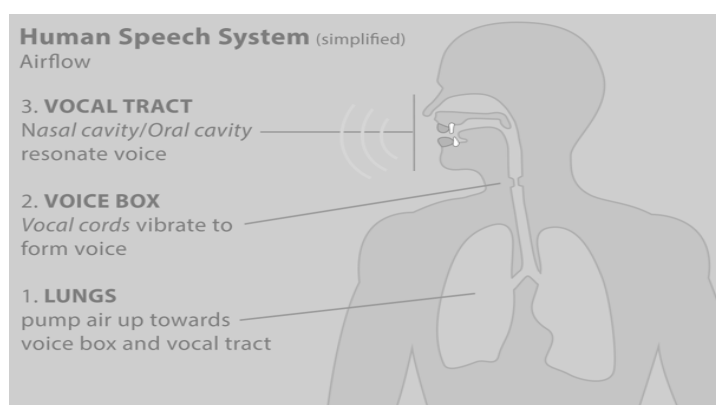
Picture 13: Human Speech System
(source: https://www.englishclub.com/pronunciation/speech-system.php)

- **Phonemes** are different sounds that indicate a different meaning, e.g. pill/bill, till/dill, mill/nil

- **Allophones** are variations in pronunciation of individual sounds that do not signal difference in meaning, e.g. the difference in the way the /l/ is pronounced according to the sounds that surround it, as in plane and pail.

Which sounds can be put together in a given language is a rule governed, i.e. certain sounds can go together while others cannot. In English / ŋ / can appear at the end of a string of sounds as in 'sing' but not at the beginning (as opposed to languages such as Thai where / ŋ / can appear at the beginning). In English language there are more sounds than letters. For example, there are: 12 vowel sounds, only 6 vowel letters.

To represent pronunciation the International Phonetic Alphabet (IPA) has been created. By using IPA representation of how words are pronounced can be seen:coot *noun* /kuːt/. The alphabet also aallows UK/US variations to be noted: YouTube noun has different pronunciation in British/American: UK /ˈjuː.tʃuːb/ US /ˈjuː.tuːb/

Word:	British	American
hairy	/ heəri /	/ heri /
near	/ nɪə(r) /	/ nɪr /
ask	/ ɑːsk /	/ æsk /
answer	/ ɑːnsə(r) /	/ ænsər /
grass	/ grɑːs /	/ græs /
dance	/ dɑːns /	/ dæns /
process	/ prəʊses /	/ prɑːses /
fear	/ fɪə /	/ fɪr /
sheer	/ ʃɪə /	/ ʃɪr /
buy	/ baɪ /	/ baɪ /
fate	/ feɪt /	/ feɪt /
tour	/ tʊə(r) /	/ tʊr /
later	/ leɪtə(r) /	/ leɪdər /

Picture 14: UK/US Pronunciation
source: https://www.quora.com/Which-one-is-easier-to-understand-American-English-British-English-or-Australian-English

Questions to consider:

1. Explain the speech system!
2. What is a phoneme and how many phonemes are there in the English language?
3. What is a morpheme?
4. What is redundancy?
5. Which combinations of sounds are not acceptable in English?

Lecture 5: Phonetics and Phonology

<table>
<tr><td>Phonetics vs. Phonology</td></tr>
</table>

Phonetics can be defined as a science which deals with the sounds related in speech i.e. the physical aspect of language.

The branches of phonetics are the following:

❑ Articulatory (physiological state of the speaker and describes details about the speech organs, their movement and their usage in producing sounds i.e. Articulation)

❑ Acoustic (physical properties of the air vibrations and the transmission of the sound waves i.e. studies phonetics from the point of view of the physicist)

❑ Experimental/instrumental (closely connected to acoustic phonetics and requires a certain amount of scientific equipment i.e. it is concerned with measuring and recording of the mechanism of speech in the human individual).

❑ Auditory (investigates the perception of the speech sounds by the listener)

❑ Functional/ structural (referred to by one name - phonemics/phonology and it is concerned with the physical aspect of the utilization of different sounds to produce meaning i.e. how the sound is used as part of a word)

❑ Applied (concerned with the application of phonetics to the teaching og pronunciation and speech in general)

❑ Historical (deals with the phonetics of a language at different period in History, going back more than thousands of years such as analyzing English sources in different ages)

Further division of phonetics:

❑ Synchronic phonetics – the sound phenomena in a short period of time

❑ Diachronic phonetics – traces speech sounds during the language development explaining changes that had happened within a given period of time

❑ Contrastive phonetics – comparison of different language systems

5.1. The connection of phonetics and other disciplines

Phonetics is one of the basic branches of linguistics and that is why it said that it is naturally closely related to other linguistic disciplines. The connection of phonetics with grammar, lexicology and stylistics is realized within the study of spelling, which is very closely related to phonetics. Phonetics formulates the rules of pronunciation for individual sounds and sound combinations. Reading rules are based on the relationship of sounds with spelling and represent certain difficulties in learning English, especially at the initial stage of learning. Phonetics is also related to stylistics, primarily through the intonation and its components: speech melody, stress, rhythm, pause and sounds that serve to express emotions, to distinguish the different attitudes of the author and the speaker. Very often the writer helps the reader to interpret their ideas through special words and remarks such as: pause, short pause, anger, hope, tenderness, disbelief, etc. Phonetics is also related to stylistics through the repetition of words, phrases and sounds. Repetition of this kind serves as the basis of rhythm, rhyme and alliteration.

Phonetics is also related to lexicology. Due to the presence of different language variations and accents in the right place, certain nouns from verbs can be distinguished (formed by conversion).Homographs can only be distinguished by pronunciation because they are identical in spelling.

Special attention should be paid to the relationship between phonetics and social sciences.

The functioning of phonetic units in society is studied by Sociophonetics. It should be mentioned that in the last few decades a number of different interdisciplinary topics have appeared, such as sociolinguistics (and accordingly sociophonetics), psycholinguistics, mathematical linguistics and others. These, as their titles suggest, refer to aspects of language that can be studied from two points of view (sociology and linguistics, psychology and linguistics, and so on). Sociophonetics studies the ways in which pronunciation interacts with society. In other words, it is the study of the way phonetic structures change in response to various social functions. Sociophonetics studies the ways in which pronunciation functions in society. It is interested in the ways in which phonetic structures vary in response to different social functions.

Psycholinguistics covers an extremely broad area, from acoustic phonetics to language pathology, and includes such problems as acquisition of language by children, memory, attention, speech perception, second-language acquisition and so on. Another example of interdisciplinary overlap is the relationship of linguistics to psychology. Psycholinguistics in its early form covers psychological implications from acoustic phonetics to language pathology. Here are some of the problems addressed by psycholinguistics: language acquisition by children, the extent to which language mediates or structures thinking, the extent to which language is influenced by and itself affects brain functions such as memory, attention, perception; problems of speech production and speech perception - speech pathology.

Phonetics is also closely related to several non-linguistic disciplines that study various aspects of speech and speech perception: Physiology, Anatomy, Physics (acoustics). Mathematics, Statistics, Computer Science are used in phonetic research. There is another phonetic closely related. It is the study of non-verbal means of communication. This relatively new approach to the connection of language with non-verbal communication has a close connection with phonology, from where a deep root, historical study of the language and its root culture is approached.

5.2. Phonology

The study of sounds and the relationship between sound and meaning is called phonology. Phonology is the description of the systems and patterns of speech sounds in a language. It is based on a theory of what every speaker of a language unconsciously knows about sound patterns of that language. Phonology serves as the underlying design for all the variations in different physical articulations of a sound type in different contexts. Phonology is concerned with the abstract or mental aspects of sounds in language.

Phonology as a scientific discipline is divided into:

- Segmental (segments of the speech sounds and the possible combinations of sounds)
- Suprasegmental (the features of pronunciation): stress, rhythm, intonation

The course Phonology follows after finishing the course Phonetics and will be discussed in details in another script named as such. In the picture below, a clear distinction between Phonetics and Phonology can be seen in a form of a pyramid (see pic.15). On the top you can see the phonic and spelling skills needed for the phonological awareness and below the Phonetics features of the language are posed i.e. the articulation, acoustics and auditory perception which is actually what Phonetics is about.
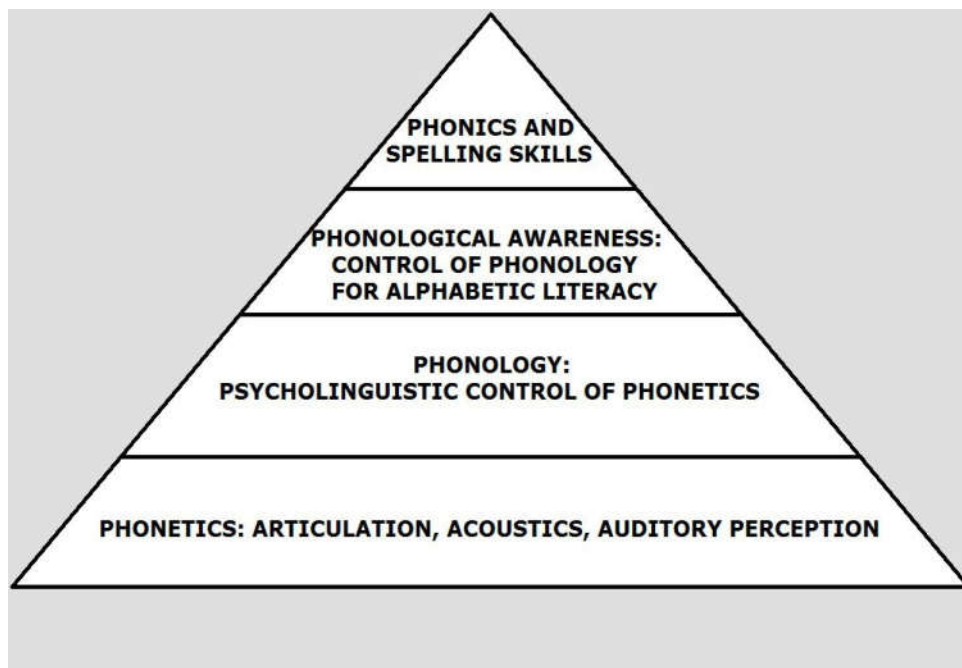
Picture 15: Phonetics vs. Phonology
(source: https://www.aps1.net/DocumentCenter/View/11644/DYSLEXIA-GUIDE_v29_jb_2_2020)

Questions to consider?

1. What is the difference between Phonetics and Phonology?

2. What is articulatory phonetics, acoustic phonetics and auditory phonetics?

3. What are the other divisions of phonetics?

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Lecture 6: The phonetic methods and techniques

> *Research methods and techniques:*
> *kinesthetic, palatography,*
> *electromyography, oscilloscopy,*
> *spectrography, recordings*

Each branch of phonetics can have different methods and techniques for research work. The three basic principal methods of research are:

1. Instrumental

2. Non-instrumental (descriptive)

3. Comparative method (comparing familiar forms of a number of cognate languages

Instrumental methods were introduced into phonetics in the second half of the 19th century in order to supplement the impressions deriving from the human senses. They are based on the use of special technical devices, such as hand mirror, spectrograph, intonograph, oscillograph, x-ray photography and cinematography, CD records, laryngoscope and others. The term 'instrumental' is used to refer to the analysis of speech by means of instruments; this may be acoustic (the study of the physical properties of speech sound as transmitted between mouth and ear) or articulatory (the study of the way speech sounds are made (『 articulated』) by vocal organs). Instrumental phonetics is a quantitative approach - it attempts to characterize speech in terms of measurements and numbers rather than by relying on listeners' impressions.Many different instruments have been devised for the study of speech sounds. The best known technique for acoustic analysis is spectrography, in which a computer produces a "picture" of speech sounds. Such computer systems can usually also carry out the analysis of fundamental frequency for producing "pitch displays".

Kinasesthetic feeling (proprioception)

The simplest technique of articulatory phonetics is one's own feeling of the position and movements of the speech organs primarily the tongue.
The used devices are: mirror, electric torch, miniature instruments inserted into the mouth etc. It can be very useful because it can help people get a good idea of certain position of speech organs. Other techniques used by phoneticians: palatography, x-ray photography, oscilloscopy, spectrography, electromyography.

Palatography

A technique used to monitor contacts between the tongue and hard palate particularly during articulation and speech.
Electropalatography (EPG) has 62 silver electrodes embedded in it. When the tongue touches these electrodes the pattern is recorded by a computer. When contact occurs between the tongue surface and any of the electrodes particularly between the lateral margins of the tongue and the borders of the hard palate electronic signals are sent to an external processing unit.
EPG provides dynamic real-time visual feedback of the location and timing of tongue contacts with the hard palate. This procedure can record details of tongue activity during

speech. It can provide direct articulatory information that children can use in therapy to monitor and improve their articulation patterns. Visual feedback is very important in the success of treating deaf children.

Electromyography

The most invasive method – placing a thin electrode in a human throat in order to measure muscular movements and vibrations. There is an electro-aerometer i.e. an instrument that measures the relative force of the air stream from the mouth and the nose.

Oscilloscopy

This is a very old measuring method known as the *cathode-ray oscilloscope* which actually creates a picture by causing a focused electron beam to travel in patterns across the face of a cathode ray tube (CRT). The more contemporary oscilloscopes work electronically using a liquid crystal display very similar to those found on notebook computers. The newest oscilloscopes are connected to computers to process and display waveforms. These computers can use any type of display, including CRT, LCD, and gas plasma (see pictures 21 and 22).
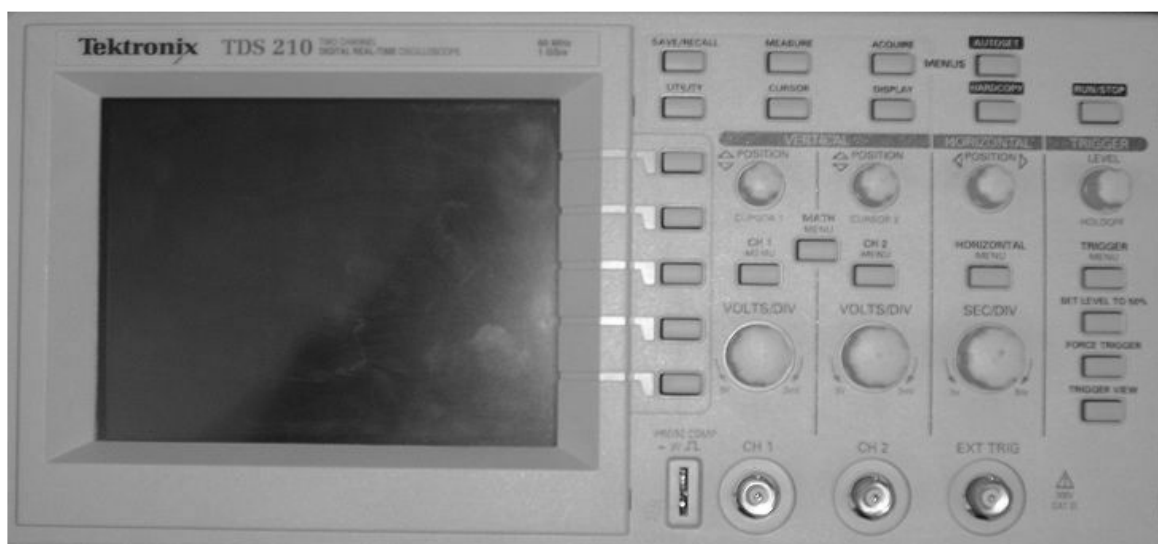
Picture 16: Oscilloscope
(source: https://www.leibniz-zas.de/en/research/laboratories/phonetics-laboratory)
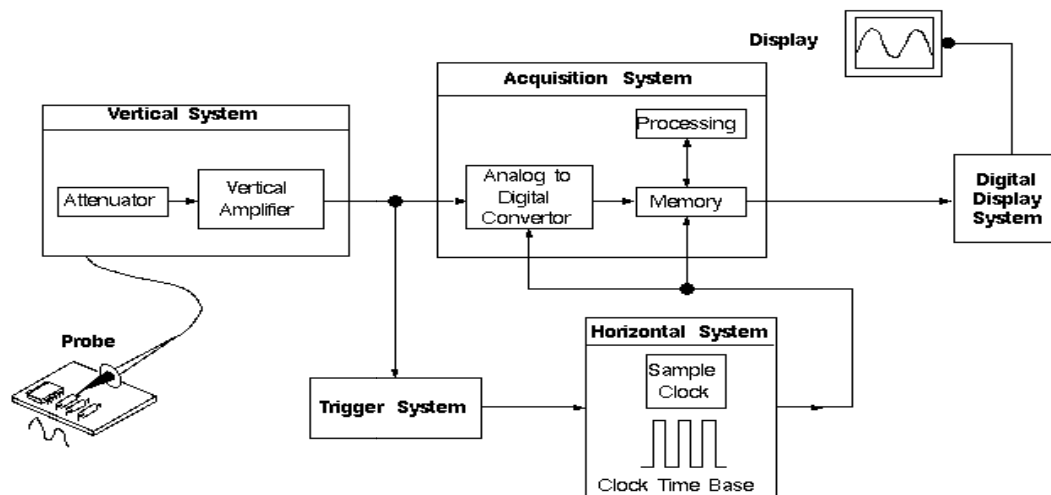
Picture 17: Digital Oscilloscope
(source: https://www.hobbyprojects.com/oscilloscope_tutorial/oscilloscope_working.html)

Spectrography is an instrument used in acoustic phonetics which provides a visual representation of the acoustic features that constitute the sounds in an utterance. The original sound spectrograph produced a three-dimensional visual record or spectrogram of an utterance in which time is displayed horizontally, frequently vertically, and intensity by the relative blackness of the marks on a sheet of sensitized paper.

Since the development of acoustic analyses in the late 1940s the sound spectrograph has been the single most useful device for the quantitative analysis of speech. The early applications of the spectrograph focused on the parameters of normal speaking patterns. Until the mid-1980s most of this research used the electro-mechanical sound spectrograph. The development of digital signal processing or the ability to convert analogue to digital (A/D) signals for analysis has produced radical change in spectrography. Today, spectrographic information can be generated electronically and displayed on a screen.
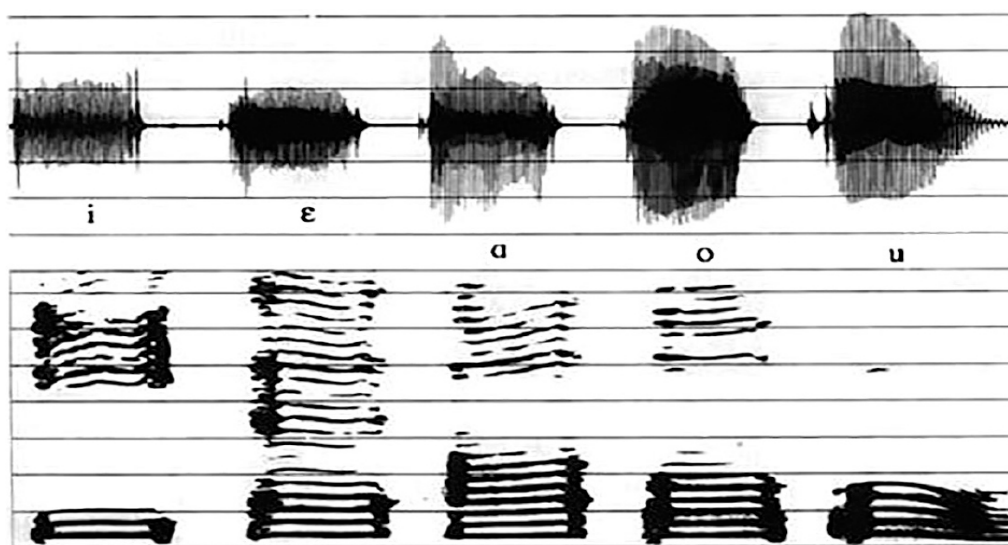
Picture 18: Spectrography
(source: https://all-about-linguistics.group.shef.ac.uk/branches-of-linguistics/phonetics/what-do-phoneticians-study/acoustic-phonetics/)

Recordings

The most common used technique in auditory phonetics is the magnetic audio recording through which sounds are recorded in different environments, parts of the tape are cut and replaced. By playing such recordings some auditory impressions are heard and definite conclusions are reached on the hearing perception. Nowadays, video and audio recordings are good as hearing materials and they provide the learner with a personal feedback.

We use this technique in this course for students to practice their speech and pronunciation. Students are asked to record themselves reading a given text by the professor and they receive feedback in terms of the rules of pronunciation which are covered by the end of the course.

Picture 19: Recordings
(source: https://www.amsterdamuas.com/carem/shared-content/publications/pure-import/fusing-the-electromagnetic-articulograph-high-speed-video-cameras-and-a-16-channel-microphone-array-for-speech-analysis.html)

Questions to consider?

1. What are the main types of phonetic research methods?

2. Which are the more sophisticated phonetic techniques?

Final task: Record yourself while reading the text given below in audio or video file having in mind the pronunciation rules learned within this course!

Picture 20: The Big Ben
(source: https://news.sky.com/story/after-five-years-under-wraps-is-big-ben-ready-to-chime-again-12288197)

THE HISTORY OF BIG BEN

The famous tower clock known as Big Ben, located at the top of the 320-foot-high Elizabeth Tower, rings out over the Houses of Parliament in Westminster, London, for the first time on May 31, 1859.

After a fire destroyed much of the Palace of Westminster—the headquarters of the British Parliament—in October 1834, a standout feature of the design for the new palace was a large clock atop a tower. The royal astronomer, Sir George Airy, wanted the clock to have pinpoint accuracy, including twice-a-day checks with the Royal Greenwich Observatory. While many clockmakers dismissed this goal as impossible, Airy counted on the help of Edmund Beckett Denison, a formidable barrister known for his expertise in horology, or the science of measuring time.

The name "Big Ben" originally just applied to the bell but later came to refer to the clock itself. Two main stories exist about how Big Ben got its name. Many claim it was named after the famously long-winded Sir Benjamin Hall, the London commissioner of works at the time it was built. Another famous story argues that the bell was named for the popular heavyweight boxer Benjamin Caunt, because it was the largest of its kind.

Even after an incendiary bomb destroyed the chamber of the House of Commons during the Second World War, Elizabeth Tower survived, and Big Ben continued to function. Its famously accurate timekeeping is regulated by a stack of coins placed on the clock's huge pendulum, ensuring a steady movement of the clock hands at all times. At night, all four of the clock's faces, each one 23 feet across, are illuminated. A light above Big Ben is also lit to let the public know when Parliament is in session.

Retrieved from: https://www.history.com/this-day-in-history/big-ben-goes-into-operation-in-london

Lecture 7: The phoneme

> *The Phoneme – the smallest linguistic unit*

Up to what was said by now, it became clear that there is a big difference between phonetics and phonology. More precisely, phonetics is the scientific field that studies speech sounds and phonology is the study of the mental organization of a language's sound system. Every system consists of different units and those units need to follow certain rules. The units of organization of the language sound system are the following:

- Biggest: *syllables*, metrical feet, words
- Middle: *segments* (phonemes and allophones)
- Smallest: *features*

The phoneme is a completely new unit in the language. Any spoken language can be broken down into a stream of some units and each language has a relatively small fixed set of such units. Most sounds can be united into groups. The most important question here will be how we can establish what the phonemes of a language are. The most widely excepted view on the phonemes is that they are contrasted (the sounds are opposed to each other, they are different). They differentiate meanings of bigger units. For example – pin-pen, men-man. Pairs of words which differ in just sound are called **minimal pairs**. Fundamental concepts used in phoneme analysis are complementary distribution,free variation, distinctive feature, allophone and some others.

The term sound can be interpreted into the two ways. The articulation of the sound which accounts for the physical difference of a sound made and perceived. The second interpretation of the sound is its functional importance and this second interpretation of the sounds abraises the basis of the constant phoneme. A phoneme is a functional unit. It exists because it fulfills some function. The phoneme implies that two sounds are in opposition to each other in all contexts throughout the language. The opposition of the phonemes in the same phonetic environment always differentiates meanings of bigger units. Closer study of phonemes shows that in some contexts the opposition ceases to function. Basically those are cases when people experience some difficulty in understanding each other.

Secondly, the phoneme is objective and material. It exists in the form of speech sounds. These sounds represents phonemic variants and they are called allophones. The phonemes are not sounds we must remember. A phoneme can be realized in many different ways. In theory a phoneme can have an infinite number of allophones, but in practice they can be united into several groups. Allophones of the same groups are different; there is always some phonetic similarity. The allophones which do not undergo any distinguishable (significant) changes of speech are called principal or typical. Accordingly the allophones which undergo distinguishable changes of speech are called subsidiary. Subsidiary allophones are always predictable because phonetic situations are always predicted in the language. Subsidiary allophones can be divided into positional and combinatory. Positional – light and dark "l" (at the beginning and at the end of the words). Combinatory allophones exist in different combinations. Allophones of different phonemes are in contrastive distribution. They are mutually distinctive. And allophones of the same phoneme never occur in the same phonetic circumstances (they never occur in the minimum pair) which means they never differentiate the meanings. Thus, they are mutually non-distinctive. Though, physically they are different. They are in complementary distribution. The distribution of the allophones of the same phoneme is usually predictable, we are able to tell when one variant or another will appear. For example –[k] –representative of phoneme: kick – quick ;kik - kwik.

The phoneme is an abstract unit. All allophones of the same phoneme possess a set of pronunciation features which make this phoneme functionally different from any other phoneme in the language. The phoneme is a minimal functional objective and abstract unit of the language which serves to differentiate meanings of bigger linguistic units. A phoneme represents a set of functionally releavant pronunciation features (distinctive features). The number of the phonemes in any language is much smaller than a number of sounds actually pronuanced. The total number of the phonemes in English is 44out of which 24 consonantal phonemes and 20 vowel phonemes.

7.1. Segmental phonology

There are hundreds of possible speech sounds (phones). Speakers have to reduce them to a definite number of speech sound units called PHONEMES. Certain sound characteristics are taken into account whereas more or less different speech sounds are perceived as identical. The properties which are significant for the identification of phonemes are called **distinctive features**. A phoneme is a set of distinctive features. The phoneme is abstract. There is always definite set of such features which is required to differentiate one phoneme from the other. Features can be:

- Articulatory – the physiological aspect of production

- Acoustic – behavior of sound waves during its passage through the air medium

The parameters relevant for the articulatory features in the English language system are:

- *Type of articulation*
- *Manner of articulation*
- *Height of the tongue*
- *Distinctive articulator*
- *Force of articulation*
- *Degree of length*
- *Composition*

7.2. What are the different places of articulation?

A consonant is made by constricting the airflow between where it starts with the exhalation in the lungs and where it exits the mouth at some point. One reason sounds differ is because the point of constriction happens at different places. If the point of constriction is at the lips (/p/, /b/, /m/, /w/) then the place of articulation is bilabial.
If the point of constriction is just behind the top teeth (/t/, /d/, /s/, /z/, /n/, /l/, /r/) then the place of articulation is alveolar. Here is a list of the places of articulation and a picture to help you visualize those places:

- bilabial - constriction between both lips

- labio-dental - constriction between top teeth and bottom lip

- dental - constriction between top and bottom teeth

- alveolar - constriction between the tongue and the alveolar ridge (top of mouth just behind top teeth)

- palatal - constriction between the tongue and the hard palate (roof of mouth)

- velar - constriction between the tongue and the soft palate (roof of the very back of the mouth)

- glottal - constriction at the vocal folds
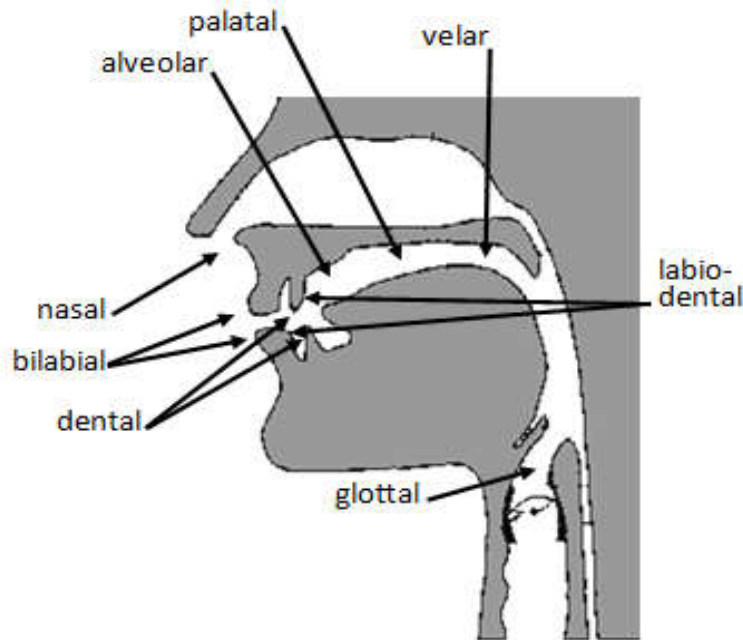
Picture 21: Places of articulation
(source: http://alejandronunez-a-3.blogspot.com/p/acoustic-phonetics.html)

7.3. What are the different manners of articulation?

A consonant is made by constricting the airflow between where it starts with the exhalation in the lungs and where it exits the mouth at some point. One reason sounds differ is because the method of constriction happens in different ways. If the airflow is completely stopped and then released in a puff of air (/p/, /b/, /k/, /g/, /t/, /d/) then the manner of articulation is a stop. If the airflow is redirected through the nose (/m/, /n/, /ŋ/) then the manner of articulation is nasal. Here is a list of the manners of articulation:

- stop - airflow is completely stopped and then released
- fricative - airflow is constricted causing slight hissing noise
- affricate - This is a combination of a stop and a fricative. First the airflow is completely stopped and then it is constricted causing a slight hissing noise with the consonant.
- nasal - airflow is redirected out the nose
- liquid - airflow is constricted significantly more than a vowel, but not enough to cause a hissing noise with the consonant
- glide - similar to a liquid, but with slight movement during the production of the consonant

7.4. A speech sound unit

The phoneme is a bundle of distinctive features which make up a speech unit. By combining this unit morphemes and words are produced.

What is voicing?

There is a third characteristic of consonants. /s/ and /z/ are made with exactly the same place and manner of articulation and yet they are different. /z/ is made while vibrating the vocal folds. If you place your hand on your throat while making a /z/ sound (buzz like a

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bee) you will feel the vibration of your vocal folds. /s/ is made without vibrating the vocal folds. If you place your hand on your throat while making an /s/ sound (hiss like a snake) you will not feel the vibration. So the third characteristic of consonants is the presence or absence of voicing.

	stop	fricative	affricate	nasal	liquid	glide
bilabial	p, **b**			**m**		**w**
labio-dental		f, **v**				
dental		θ, **ð**				
alveolar	t, **d**	s, **z**		**n**	**l, r**	
palatal		ʃ, **ʒ**	tʃ, **dʒ**			**j**
velar	k, **g**			**ŋ**		
glottal		h				
Sounds that are **bold** are voiced.						

Picture 22: Characteristics of consonants
(source: http://teachingpronunciation.weebly.com/consonant--vowel-charts-nae.html)

7.5. Minimal pairs and free phonemic variations

There is another interesting situation that occurs when speaking about phonemes. That is the contrastive minimal pair test. This type of testing is needed if we want to differentiate two different phonemes. The test is positive if two word pairs whose pronunciation is the same but differs only in one sound. For example:

- [pæd]   [bæd]   *minimal pair*

- Mean different things: /p/ and /b/ contrast

- [pæt]   [pætʰ]   *not minimal pair*

- Mean the same thing: [t] and [tʰ] do not contrast

There is another similar situation of sounds when such pairs can be found in the same phonemic environment but they have identical meanings. These are called free phonemic variations in a single word. Cruttenden defines this notion with the following example: "When the same speaker produces noticeably different pronunciations of the word *cat* (e.g. by

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exploding or not exploding the final /t/), the different realizations of the phonemes are said to be in free variation" (Cruttenden, 2014, p.65).Mehmet Yavasdefines it in another way: " [F]ree variation, however infrequent, can be found between the realizations of separate phonemes (phonemic free variation, as in [i] and [aɪ] of *either*), as well as between the allophones of the same phoneme (allophonic free variation, as in [k] and [kˀ] of *back*)... For some speakers, [i] may be in free variation with [ɪ] in final position (e.g. *city* [sɪti, sɪtɪ], *happy* [hæpi, hæpɪ]). The use of final unstressed [ɪ] is most common to the south of a line drawn west from Atlantic City to northern Missouri, thence southwest to New Mexico" (Yavas, 2011, p.7).

Another scholar in the field Kager (1999) explains this notion by stating:

> The fact that variation is 'free' does not imply that it is totally unpredictable, but only that no grammatical principles govern the distribution of variants. Nevertheless, a wide range of extragrammatical factors may affect the choice of one variant over the other, including sociolinguistic variables (such as gender, age, and class), and performance variables (such as speech style and tempo). Perhaps the most important diagnostic of extragrammatical variables is that they affect the choice of occurrence of one output in a stochastic way, rather than deterministically (p. 407).

Kager highlights the trend toward functional explanations as a view for the future that needs a more integrated understanding of performance and competence. He highlights the continual blending of the phonology and phonetics lines in this sense.If it is admitted that variability is important for the development of a system, it should be postulated that variability is also important when dealing with the system's relevance for perception and production. If that is not the case the risk of believing that language input and output are of quite different quality can be easily perceived. Departing from the notion of variability as noise in favor of a less general and more precise explanation, which could provide insight into Lacerda and Lindblom's theory of speech sound as "fuzzy clouds":

> It is the implication that categories of speech sounds are fuzzy clouds of multidimensional (multimodal) sensory representations that arespontaneously structured by cross-correlation, due to their similarity (Lacerda & Lindblom 1997, p. 31).

Questions to consider:

1. What are distinctive features and do they apply to phonemes or allophones?
2. Explain the phoneme!
3. Which are the places and manners of articulation?
4. What is voicing?
5. What is a minimal pair test?
6. What is a free phonemic variation?

Lecture 8: Allophones

> *Allophones: similar bundle of distinctive and non-distinctive features and members of the phoneme*

- ⊚ The allophones are the most important for the functioning of a language, they belong to the same phoneme

- ⊚ They are phonetically similar bundle of distinctive and non-distinctive features and they are members of a phoneme

- ⊚ When using allophones we can easily switch sounds within a word and this switching may lead to switching a whole phoneme i.e. by changing allophones we won't necessarily change the meaning but it may lead to non-native or unintelligible production

The person who introduced the term "allophone" is Benjamin Lee Whorf and managed to develop the phoneme theory in the 1940s. The American structuralist tradition together with G.L. Trager and Bernard Bloch's managed to cement the usage of the word in the paper on English phonology. The theory of a sound in a word being replaced by another allophone will not usually change the meaning of a word, but may make the word unintelligible to others.When producing sounds for a particular phoneme are always different even for the same speaker. All allophones are produced consciously and that is why some people cannot understand that they actually exist. A very good differentiation with phonemes can be that phonemes are visible, we have signs for each phoneme and allophones can be considered as "invisible" figuratively speaking because we only pronounce them. What can be helpful in this sense is to contrast some particular examples with noted distinctions of aspiration, glottalization, nazalization or checking for minimal pairs or complementary distribution as explained below. Allophones can be understand within the context of the language they occur. Additional areas of research for more understanding of allophones might include allophonic rule, allomorphs, linguistic alternation, phonemes, complementary distribution, free variation, and positional variants.

Types of allophones

a)Free   * typical (commonly used in isolation)
b) Positional   * untypical

Regarding their occurrence (environment and accent) they are called positional allophones. They usually occur in predictable conditions i.e. in complementary distribution. C. D. refers to the systematic relationship b/n two allophones where the one allophone can occur in an environment which the other one cannot. If one allophone is replaced with another by positional allophonic variation the meaning remains the same.

In English, [pʰ] and [p] are allophones of the same phoneme (/p/), meaning that a word doesn't change its meaning if you substitute one sound for the other.

- For example: [pʰaj] vs. [paj] 'pie'
- Phonemes are written between / / brackets
- Allophones are written between [ ] brackets

The difference between phonemes and allophones is explained visually bellow:
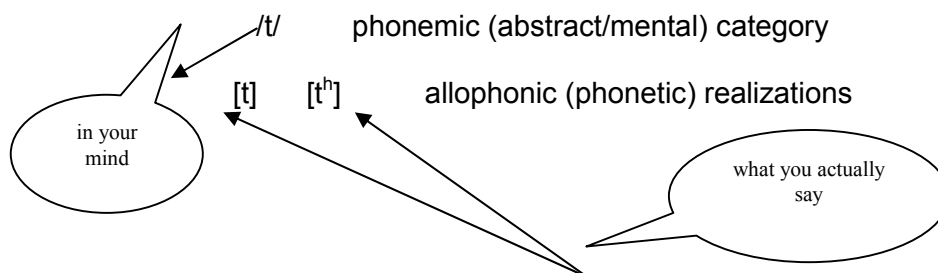
The pronunciation of a phoneme is often determined by the other sounds around it.The nearby sounds around a phoneme are called the **environment** of that phoneme.

E.g. in the word [pæt], [p__t] is the environment for the [æ].

Crucial concept : Complementary Distribution

When two phones are mutually exclusive, i.e., they appear in *different environments*

| [spæt] | [pʰæt] | *[spʰæt] | *[pæt] |
| [spul] | [pʰul] | *[spʰul]*[pul] | |

[pʰ] and [p] are in **complementary distribution** (which means they are allophones of the same phoneme).

When sounds are in complementary distribution, you can predict where you get each sound.

Crucial Concept : Free Variation
When two sounds appear in the *same* environment, but don't make a difference in meaning:

[lip] *leap*   [lip̚] *leap*
[sowp] *soap*   [sowp̚] *soap*

Perceived as the same sound: another kind of allophony. This is called **free variation**.

How can I tell if two sounds are phonemes or allophones? *Method 1*

◉ Check for minimal pairs. If there is a pair then the sounds are <u>separate phonemes</u>

◉ Check for complementary distribution. Are the sounds found in the same phonetic environment? If ***not***, they are <u>allophones of the same phoneme</u>.

How can I say if two sounds are phonemes or allophones? *Method 2*

◉ If two sounds are in complementary distribution then (a) figure out which one is predictable and which one is the "elsewhere" variant. The elsewhere variant is the symbol that we use for the phoneme

/X/   Phoneme (in your mind)

[X]   [Y]   Allophones (what you say)
        elsewhere   predictable

same symbol
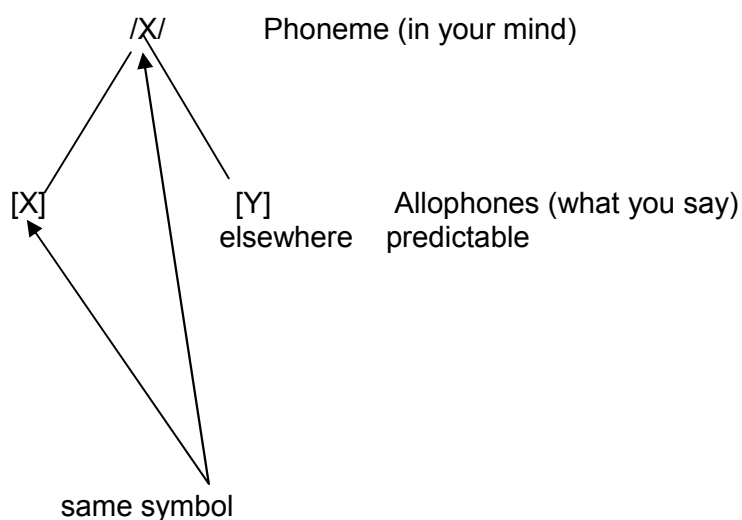
How can I say if two sounds are phonemes or allophones? *Method 2.1.*

◉ and (b) write a rule that spells out where the predictable variant is found.

○ /X/ → [Y] / environment _____ environment

A fairly rare situation: If the two sounds are in the same phonetic environment (and there were no minimal pairs) Then they are possibly in <u>free variation</u>.

Method 2
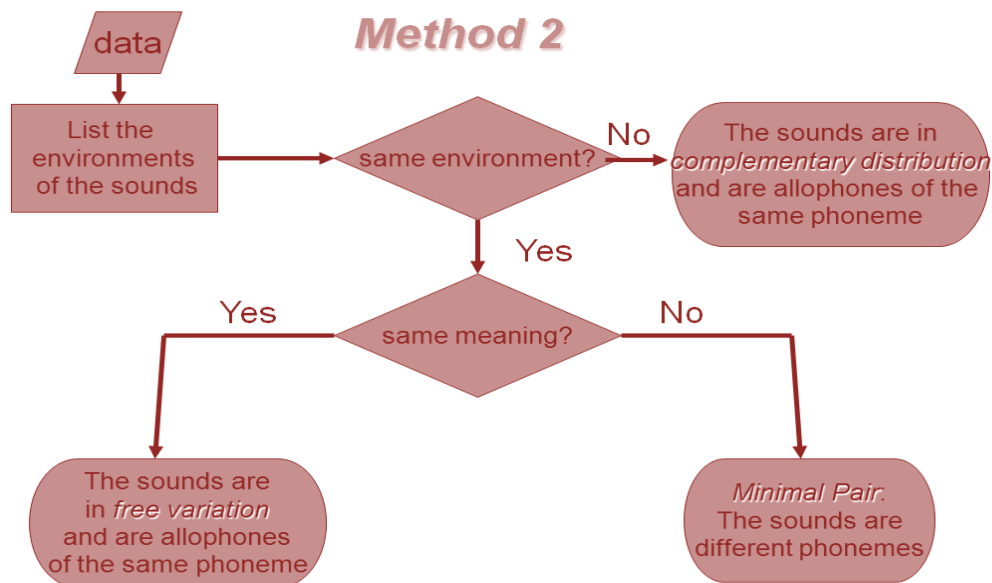
Picture 23: Phonemes or allophones?

Since the allophone is a narrower concept than the phoneme, greater number of features for ascertaining the composition. These are the needed parameters, with no distinctive function:

- *Type of articulation*

- *Manner of articulation*

- *Height of the tongue*

- *Non-distinctive articulator*

- *Force of articulation*

- *Degree of length*

- *Composition*

- *Degree of voicing*

- *Lip position*

- *Type of explosion*

- *Point of articulation*

Neutralization of phonemes

Sometimes, allophones of different phonemes can be identical   and this is called neutralization of phonemes.
For example, when labio-dental allophones of the phonemes /m/ and /n/, or the voiced allophones /t/ and /d/ in the pronunciation of some American speakers do not distinguish *writer* and *rider.*

To sum up, phonemes are abstract mental units of the sound. They can be either
- Distinctive/contrastive: minimal pairs
Allophones are variant forms of a phoneme. They can appear in:

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- Complementary distribution: different environments
- Free variation: same environment but no difference in meaning

Forms in complementary distribution are predictable by rules.

Questions to consider:

1. Explain the concept of the allophone!
2. Which are the features that apply to allophones?
3. How can you say if a sound is an allophone or phoneme (choose one method)?

Lecture 9: The phonetic transcription

The Phonetic Transcription – using the IPA

Very often, when students see a phonetic transcription of a word, they deem that it is something unusual and difficult. What they usually see is the regular 'orthographic' transcription which can be found in all dictionaries if you look up a new word or check the spelling of a word you already know. What the transcription is about actually is the way words are pronounced and shown by series of symbols which comprise the International Phonetic Alphabet.

It is a well known fact that the English alphabet was invented more than a thousand years ago and it was based on the Latin alphabet. Since then very few changes in spelling have occurred while the English pronunciation has undergone considerable modifications. There is a great discrepancy between the spelling and pronunciation system in English. This results in a very illogical spelling system because of the twenty six letters of the alphabet and forty four phonemes in the sound system.

In order to be able to write down the sounds of English, the phonetic alphabet was developed. It is called the International Phonetic Alphabet (IPA) as previously mentioned and in this alphabet the relationship between sounds and symbols is one-to-one. Famous scholars in this field are Daniel Jones (1881-1967), Gimson (his transcription widely accepted) and Hornby (no use of the length mark, in all respects being identical to Gimson).

The vowels in	Gimson	Jones
sea, feet, me, field	i:	i:
him, big, village, women	ɪ	i
get, fetch, head, Thames	e	e
sat, hand, ban, plait	æ	æ
sun, son, blood, does	ʌ	ʌ
calm, are, father, car	ɑː	ɑː
dog, lock, swan, cough	ɒ	ɔ
all, saw, cord, more	ɔ:	ɔ:
put, wolf, good, look	ʊ	u
soon, do, soup, shoe	u:	u:
bird, her, turn, learn	ɜ:	ɜ:
the, butter, sofa, about	ə	ə
ape, waist, they, say	eɪ	ei
time, cry, die, high	aɪ	ai
boy, toy, noise, voice	ɔɪ	ɔi
so, road, toe, know	əʊ	ou
out, how, house, found	aʊ, aʊ	au
deer, here, fierce, near	ɪə	iə
care, air, bare, bear	eə	ɛə
poor, sure, tour, lure	ʊə	uə

Picture 24: Gimson's and Jones' Phonetic Symbols
(source:http://webhome.auburn.edu/~nunnath/engl6240/esounds.html)

9.1. Classification of the English speech sounds: vowels and consonants

Sounds can be classified according to a certain physiological activity of the vocal organs. In terms of that activity the acoustic characteristic of the sounds is defined. That is why we say that there are two main classes of speech sounds known as vowels and consonants.
- A vowel is defined as a voiced sound in the pronunciation in which the breath stream has a free passage through the mouth or nose and for which there is no audible friction. Diphthongs are made by sliding the tongue for one position to another - this is known as a glide. There are two subclasses of vowels: pure vowels and compound vowels - diphthongs:

Picture 25: Diphthongs

(source: http://nnetforumspace.weebly.com/part-1-phonemic-chart.html)

There are also triphthongs in English language pronunciation and they are combinations of three sounds i.e. English has 1triphthong (a diphthong + a schwa sound):

/aʊ/	+	/ə/	= [aʊə]	hour
/aɪ/	+	/ə/	= [aɪə]	fire
/eɪ/	+	/ə/	= [eɪə]	player
/əʊ/	+	/ə/	= [əʊə]	mower
/ɔɪ/	+	/ə/	= [ɔɪə]	employer

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A pure vowel consists of only one vowel element while a diphthong is made of two vowel elements. A consonant can be defined as a sound, voiced or voiceless in whose pronunciation there is either a complete or partial obstruction or audible friction which prevents the breath stream from escaping freely from the mouth or nose.

Vowel sounds

iː	B**ea**t
ɪ	H**i**t
ʊ	B**oo**k
uː	F**oo**d
e	L**e**ft
ə	**A**bout
ɜː	Sh**ir**t
ɔː	C**a**ll
æ	H**a**t
ʌ	R**u**n
ɑː	F**a**r
ɒ	D**o**g

Consonant sounds

p	Pin
b	Bin
t	To
d	Do
k	Cot
g	Got
tʃ	Church
/dʒ/	Judge
f	Fan
v	Van
θ	Think
ð	The

Picture 26: Vowels and Consonants
(source: https://www.semanticscholar.org/paper/Pronunciation-of-English-Consonants-and-Vowels-and-Liang/11a0b58b8b4853e13ea5f3dcc775d12d2e682506)

1 iː READ	2 ɪ SIT	3 ʊ BOOK	4 uː TOO	5 ɪə HERE	6 eɪ DAY	phonetics
7 e MEN	8 ə AMERICA	9 ɜː WORD	10 ɔː SORT	11 ʊə TOUR	12 ɔɪ BOY	13 əʊ GO
14 æ CAT	15 ʌ BUT	16 ɑː PART	17 ɒ NOT	18 eə WEAR	19 aɪ MY	20 aʊ HOW
21 p PIG	22 b BED	23 t TIME	24 d DO	25 tʃ CHURCH	26 dʒ JUDGE	27 k KILO	28 g GO
29 f FIVE	30 v VERY	31 θ THINK	32 ð THE	33 s SIX	34 z ZOO	35 ʃ SHORT	36 ʒ CASUAL
37 m MILK	38 n NO	39 ŋ SING	40 h HELLO	41 l LIVE	42 r READ	43 w WINDOW	44 j YES

Picture 27: The International Phonetic Alphabet
(source: https://www.englishclub.com/pronunciation/phonemic-chart.htm)

A consonant apart from the vowel is a sound in which the breath is partly obstructed in a form of a barrier or pressure by two vocal organs, has a place of articulation, manner of articulation and its articulation is focused on the vocal organs that form the barrier and the formed sound in those conditions is considered as noise and this is the characteristics of the consonants that defines them as such. Very often consonants combined with a vowel form a syllable which will be discussed further.

Lecture 10: Introducing the phonetic symbols

Table 2. The Consonants

IPA symbol	Example
b	book
p	path
d	dog
t	tenk
k	kill
g	go
tʃ	chalk
dʒ	jem
v	vase
f	fast
ð	this
θ	think
s	skin
z	zoo
ʃ	she
ʒ	measure
h	hike
m	mine
n	none
ŋ	ring
l	long
r	rare
j	yell
w	wink

Table 3. The Vowels

IPA symbol	Example
i:	meet
ɪ	lick
e	met
æ	hat
ʌ	up
ɑː	far
ɒ	on
ɔː	door
ʊ	book
ʊ:	shoot
ɜ	her
ə	computer

Table 4. The Diphtongs

IPA symbol	Example
eɪ	pay
aɪ	pie
ɔɪ	coy
ə ʊ	toe
aʊ	cow
ɪ ə	peer
e ə	pair
ʊ ə	poor

LONG VS. SHORT VOWELS

LONG	SHORT
seek /i:/	sick /ɪ/
peach /i:/	pitch /ɪ/
feel /i:/	fill /ɪ/
least /i:/	list /ɪ/
Luke /u:/	look /ʊ/
caught /ɑ:/	cot /ɑ/
fool /u:/	full /ʊ/
pool /u:/	pull /ʊ/
two /u:/	to /ʊ/

10.4. THE MOST COMMON TRANSCRIPTION ERRORS

For students, when encountering the phonetic transcription for the first time seems like it is something very difficult for them to learn and use further. In order to learn from the mistakes, (Hlebec, 1995) found the most common mistakes the students usually commit and have to avoid. Learning the most common mistakes can improve students' transcription and they are the following:

1. Transcribing proper names with capital letters
2. Transcribing silent letters
3. Words consisting of one syllable do not bear an accent mark when transcribed
4. Transcribing punctuation
5. Confusion between the transcriptions and the spelling (bear in mind that it is not the same)

Here are some examples:

Table 5: The most common transcription errors

Word	Transcription	Mistake	Correct example
England	ˈɪŋglənd	ˈIŋglənd, ˈEŋglənd	ˈɪŋglənd
Chalk	tʃɔːk	tʃɔːlk	tʃɔːk
Chat	tʃæt0	ˈtʃæt	tʃæt
Stop!	stɒp	stɒp!	stɒp
Stop	stɒp	stop	stɒp

Questions to consider:

1. What is IPA?

2. How are sounds classified in the English language?

3. What are thtiphtongs?

4. Which are the most common transcription errors?

5. Which Phonetic Transcription is widely used?

Lecture 11: The distinctive articulatory features

The Distinctive Articulatory Features

The distinctive features are needed in Phonetics and Phonology as the most basic units of the phonological structure of sounds in order to help in the analysis of the phonological theory. Very often distinctive features are categorized in terms of the segments they describe: major class features, manner features, place features etc. The categories further are distinguished on the basis of the phonetic properties of the segments. Since the

inception of the phonological analysis of distinctive features in the 1950s, they have been specified by binary values in order to show whether a segment is present and is marked with a positive value [+] from one hand and on the other with a negative value [−],when the feature is absent.

The Distinctive Feature Composition of Some English Segments

	i	u	e	ɑ	ɪ	w	r	l	p	t	d	θ	ð	n	s	z	ʃ	k	h
Syllabic	+	+	+	+	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−
Consonantal	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	+	+	+	−
High	+	+	−	−	+	+	−	−	−	−	−	−	−	−	−	−	+	+	−
Back	−	+	−	+	−	+	−	−	−	−	−	−	−	−	−	−	−	+	−
Low	−	−	−	+	−	−	−	−	−	−	−	−	−	−	−	−	−	−	+
Anterior	−	−	−	−	−	−	−	+	+	+	+	+	+	+	+	+	−	−	−
Coronal	−	−	−	−	−	−	+	+	−	+	+	+	+	+	+	+	+	−	−
Round	−	+	−	−	−	+													
Tense	+	+	+	+	−	−													
Voice							+	+	−	−	+	−	+	+	−	+	−	−	−
Continuant							+	+	−	−	−	+	+	−	+	+	+	−	+
Nasal							−	−	−	−	−	−	−	+	−	−	−	−	−
Strident							−	−	−	−	−	−	−	−	+	+	+	−	−
Lateral							−	+	−	−	−	−	−	−	−	−	−	−	−

Picture 28: The Distinctive Features
(source: https://www.britannica.com/science/phonetics/Chomsky-Halle-features)

11.1. The distinctive type of articulation

This type of articulation makes the division of sounds into vowels and consonants i.e. sounds with syllabic function and sounds with non-syllabic function (see picture 28) and was discussed in the previous chapter above.

11.2. The distinctive manner of articulation (consonants)
This parameter is related to the kind of closure or the choice of the cavity for the air-stream.

1. Plosives
Plosives are made by making a complete closure between some point and the vocal tract. Pressure builds up behind the closure which is released to create sound.
This group includes the sounds of b, p, k, g, t and d.

2. Fricatives
Fricatives are made by moving two vocal organs together to restrict the release of sound.There are nine English fricative sounds:

1.   v sound**/v/**
2.   f sound**/f/**
3.   voiced th sound**/ð/**
4.   unvoiced th sound**/θ/**
5.   z sound**/z/**
6.   s sound**/s/**
7.   zh sound**/ʒ/**
8.   sh sound**/ʃ/**
9.   h sound**/h/**

3. Affricatives

Affricatives are made by making a complete closure at some point in the mouth, similar to plosives. However, affricatives differ as the air is released slower than a plosive.
English language has two affricate phonemes, /ʧ/ and /ʤ/.

4. Laterals

There is only one lateral in English - the sound l in "lip, clip, milk". Here comes the question why do we say "laterals" since it is only one sound. However, the answer to this question lies in the different pronunciation of "l" in the above-mentioned words. i.e. the l-sound in those words is not the same because there are three "l" sounds in English language:

     a) There is a *light* "l" sound as in the word "lip". In order to feel it, try saying the word

        "KIT"i.e. the "i" vowel as you are pronouncing the l. "*Light l*" comes when a vowel

        follows as in the words: lamp, love, look.This is the sound of "l" when it is followed by

        a vowel.

b) There is a*dark "l"* -sound as in the word "milk". In order to feel the difference, try saying the words when no vowel follows: help, wealthy, fall, mill.
This is the sound of "l" when it is not followed by a vowel. .
c) And there is an *unvoiced "l"* as in the word "clip". In order to understand the difference try to whisper or unvoice the l - sound.
This is the sound of "l" when it follows the sounds /p/ or /k/ just before a vowel in a stressed syllable.
unvoiced "l" : after /p/ or /k/ beginning a stressed syllable. For example: please, climb, clear.
Finally, note that after "sp"- or "sk-", "l" remains voiced: display, exclaim.

11. 3. The distinctive height of the tongue

     The place of articulation of vowels and semi-vowels is determined by the place of the tongue in the oral cavity:

- Low: æ (cat), ʌ (fun), ɑ: (car), ɒ (top), eɪ (wait), eə(hair), aɪ (like), aʊ(mouth), ɔɪ (coin)
- High: /iː/ (need) /uː/ (boot), j, w, r, ɪə, ʊə, aɪ, ɔɪ, eɪ, aʊ, əʊ
- High to mid: /ɪ/ (ship), /ʊ/ (book)
- Mid: e (send), ə (again), ɜ: (heard)ɔː (talk), eɪ, eə, əʊ, ɪə, eə, ʊə

11. 4. The distinctive articulator

This one applies to consonants, vowels and semi-vowels. The distinctive articulator regarding the vowels and semi-vowels involves the tongue position and therefore they can be front, central and back:

Front: iː,j, ɪ, e, æ, aɪ, eɪ, eə, ɪə, ɔɪ, eɪ.

Central: r, ɜː,ʌ, ə, əʊ, aʊ, ɪə, eə, ʊə

Back:ɒ, ɔː,ʊ, uː, ɑː, w, ɔɪ, əʊ, aʊ

For the consonants, the part of the tongue is the decisive factor that defines them phonetically. When the tip of the tongue is involved those sounds are called apical consonants (t,d,θ,ð,n,l). When the blade of the tongue is involved, coronal or *laminal* consonants are produced (s, z). When the back of the tongue is involved *dorsals* are produced: k, g, ŋ. *Apicocoronofrontal* (the tip, blade and the front part of the tongue are activated at the same time) (ʃ, ʒ, tʃ, dʒ). Labials make use of the lower lip (p, b, f, v, m).

11.5. The distinctive force of articulation

According to this feature, there is a certain muscular effort in pronunciation of some consonants and from there is the division of strong (fortis) and weak (lenis) consonants. Those that are pronounced with a stronger breath issue are called strong and weak consonants are those that are pronounced with less force. Some phoneticians say that p, t, k are produced with more force than b, d, g, and that it would therefore be better to give the two sets of plosives, names that indicate that fact; so the voiceless plosives p, t, k are sometimes called fortis and b, d, g are then called lenis (Roach, 2009). The logical explanation of fortis and lenis can be seen in the picture bellow:

Picture 29: Fortis/Lenis
(source: https://slideplayer.com/slide/3556647/)

11.6. The distinctive degree of length

According to the distinctive degree of length or quantity (duration), the vowels can be divided into two groups:

a) short vowels
b) long vowels

According to Peter Roach (2009) it is important to study the time dimension from the point of view of what the listener hears. Very often the length is associated with the subjective impression that is distinct from physically measurable duration i.e. the term is used as a synonym with duration. Length is important in many ways in speech: in English and most other languages, stressed syllables tend to be longer than unstressed. Vowels in English usually come in pairs consisting of long and short sounds i.e. contrasting short vowels i, e, æ, ʌ, ɒ, ʊ, ə with long vowels iː , ɑː , ɔː , ɜː , uː.

11. 7. The distinctive composition

This feature is about the composition of the phonemes i.e. whether it consists of one or two sounds. Some compound consonants in English are called affricates and they consist of a plosive and fricative (these features were discussed in details above). When speaking about vowels, the compound sounds are called diphthongs and they are described as two vowel symbols (also mentioned before). However, short vowels are always monophtongs, while long vowels are monophtongs or diphthongs depending on their composition.
Finally, a cluster of three vowel elements is called a triphtong and is seen as a sequence of two phonemes. The differences between them can be visually seen in the picture below:

Monophthongs							Diphthong	Example				
	Front		Central		Back		Closing			Centring		
	long	short	long	short	long	short	/eɪ/	/beɪ/	bay	/ɪə/	/bɪə/	beer
Close	iː	ɪ			uː	ʊ	/aɪ/	/baɪ/	buy	/eə/	/beə/	bear
Mid		e	3ː	ə	ɔː		/ɔɪ/	/bɔɪ/	boy	/ʊə/	/bʊə/	boor
Open		æ			ɑː	ɒ	/əʊ/	/bəʊ/	beau			
							/aʊ/	/baʊ/	bough			

Triphthongs							
As two syllables	Triphthong	eɪ ə	aɪ ə	ɔɪ ə	aʊ ə	əʊ ə
-	-	layer	tyre	employer	power	slower
-		player	fire	soya	shower	lower

Picture 30: Monophtongs, diphtongs and triphtongs
(source: http://phoneticsoftheenglishlanguage.blogspot.com/2015/03/monophthongs-diphthongs-and-consonants.html)

Questions to consider:

1. Which are the distinctive articulatory features?
2. Which sound are called semi-vowels?
3. Which sounds are plosives and how are they articulated?
4. Which sounds are nasals?
5. How are fricatives pronounced?
6. Which sounds are called affricatives?
7. What are the levels of the height of the tongue?
8. Which are strong/weak sounds?
9. How do you explain the degree of length in vowel phonemes?

Lecture 12: Summary and revision of part one

This script is written according to the syllabus for the subjects Phonetics and Phonology in English language and its content consists of the basic concepts and processes that students need to understend and get more knowledge in terms of improving their pronunciation. It is very important to point out the most essential purpose of Phonetics which is to explain how to pronounce the standard English chosen as such by the local population in England - Great Britain.This script gives answers to the questions such as why it is necessary to learn the theory related to Phonetics and Phonology, which means that theoretical knowledge is necessary for anyone who is interested in learning and understanding the use of sounds in the English language.

The first part starts with an introduction to phonetics. This lecture discusses the basic goals of studying phonetics and begins with the speech process. The next part is dedicated to the speech organs where a detailed explanation of the organs and its importance is given. The script proceedswith detail explanation of the sound system.The next topic is devoted to the differences between phonetics and phonology, as well as their connection to other sciences. The next topic is devoted to study methods and techniques in phonetics, where there is a detailed explanation of the technology used in the past and today for phonetic research and measurements. The next two topics are devoted to phonemes and allophones as voice segments and ways to distinguish them. This is followed by a detailed introduction to the phonetic alphabet in the English language, with some accompanying short thought exercises, and ends with the different classifications of sounds in the English language. What is important considering this part of the course devoted to Phonetics is to give clear instruction and theory to students in order to master the sounds and the phonetic alphabet. What is expected by the end of the course is students to be able to transcribe most of the words and be able to distinguish a transcribed text into a written text. Also it is important to learn and master the theory of pronouncing words i.e. the places and types of articulation in order to be able to get acquainted with the phonological features of the sounds in the next course Phonology (see pic 30).
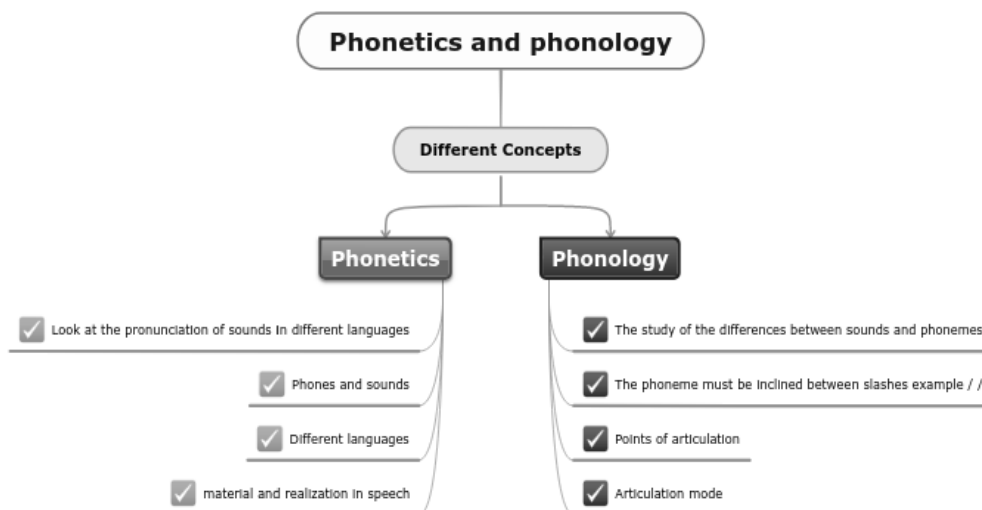
Picture 31: Phonetics vs. Phonology
(source: https://www.mindomo.com/da/mindmap/phonetics-and-phonology-e4d1360aa0c94313be2fa916f0c6e45a)

PART TWO: PHONOLOGY

> *Phonology: the relationship between*
> *sounds and their meaning;*
> *The Non-Distinctive Features*

Lecture 1: Introduction to Phonology

Phonology or the study of sounds deals with the sound nature of language and its functional meaning. Sounds, accent, intonation can be seen as functional elements of the language system that fulfill different role in that sense. The basic functional element is the sound and the study of phoneme has a central place in Phonology. Every sound as segment of speech fulfills a different role in the language system. As mentioned previously, Phonology studies the relationship of sounds and their meaning. More precisely, phonology is about putting into practice what you have studied in the previous course. The second part of the script deals with the non-distinctive features of the sounds, having in mind the distinctive features too. Without acquiring the distinctive features, students will not be able to learn the non-distinctive features. If distinctive features put the phonemes into categories for showing contrast between different groups of sounds, the non-distinctive features are the ones that are predictable for any sound. By learning the rules it can be predicted what to expect in a certain phonological environment.

1.1 The non - distinctive articulatory features

The articulatory features exist and are used in order to help us understand and know the sounds along with their general characteristics and some additional characteristics.
Regarding the non-distinctiveness, there are twelve non-distinctive features.
They are:

1.   Non-distinctive type of articulation
2.   Non-distinctive manner of articulation
3.   Non-distinctive height of the tongue
4.   Non-distinctive articulator
5.   Non-distinctive force of articulation
6.   Non-distinctive degree of length
7.   Non-distinctive composition
8.   Non-distinctive tongue position
9.   Non-distinctive degree of voicing
10.   Non-distinctive lip position
11.   Non-distinctive type of explosion
12.   Non-distinctive point of articulation

Non-distinctive type of articulation

According to the type of articulation, sounds are generally divided into two main groups: vowels and consonants.Vowels are also called vocoids, whereas consonants are also called contoids.Vocoids are sounds pronounced when there aren't any closures in the vocal tract. Contoids are sounds made with a closure in the vocal tract, so that the airstream cannot flow freely. Vocoids and contoids phonologically follow the language rules and exceptions.

Vowels and consonants are considered as such according to phonetic criteria.

The closure of a contoid can be:

- Complete, when typical contoids are realized (e.g. when plosives are pronounced)

- Partial/Incomplete, when the contoidal nature of the sound is less noticeable. This closure is not complete. It can be realized as a slight narrowing (e.g. when fricatives are produced). It can also be realized as a combination of a complete closure at one place and the lack of a closure at another place (e.g. when nasals, affricates, and laterals are produced).

Non-distinctive manner of articulation

Regarding the non-distinctive manner of articulation, nasalized vowels are recognized. The nasalized vowels are produced when the speaker involves the nasal cavity additionally to the oral cavity. The nasalized vowels are not valued nor considered as natural, nor are they considered as being native sounds of English. These are sounds purely borrowed by the French language.

E.g. *bonbon* /bõ:bõ:/

They are a result of dialectal or idiolectal usage ('idiolectal' refers to an individual behavior or pronunciation of words which is typical only of a specific person, not of the community).

The non-distinctive height of the tongue

The non-distinctive height of the tongue concerns /ə/, /ɪ/, and /uː/
The schwa vowel /ə/ usually appears in a low position. It can appear in an even lower position when immediately followed by a pause. The phoneme /ə/ is in its highest position when immediately followed by a velar (e.g. *ago* /əˈgəʊ/).The sound /ɪ/ appears in a lower position that its usual one, when it is followed by a pause (e.g. *money* /ˈmʌni/, *honey* /ˈhʌni/ etc).The phoneme /uː/ is realized as lower than usual when it is immediately preceded by /j/ (e.g. *few* /fjuː/, *stew* /stjuː/ etc.)

The non-distinctive articulator

Sometimes, the articulator of certain sounds can be a non-distinctive parameter. This is why we can say that there is a non-distinctive articulator as a non-distinctive articulatory feature. Semi-vowels can have contoid allophones. According to its articulator as a non-distinctive parameter, the phoneme /r/ is (apico) coronal, /j/ is frontal, whereas /w/ is labial. The nasal sound /n/ can have a <u>labial</u> instead of an apical articulation, while the point of articulation is dental. This is due to the influence of the following /f/ or /v/,and the closeness of the tip of the tongue and the lower lip (e.g. *convey* /kəɱˈveɪ/). Thus, the allophone [ɱ] is realized, which is identical to the labio-dental allophone of the phoneme /m/. The following implementation of the non-distinctive articulator is specific to colloquial speech in certain parts of England.It refers to the glottal stop /ʔ/. Some speakers of certain English dialects produce the glottal stop by holding the vocal cords tightly closed with the lung air pent up behind them, and then the closure is suddenly released by widening the cords.

In RP, this sound can occur in the following cases:

- Preceding the articulation of a vowel, especially after another vowel (e.g. *geometry* [dʒɪˈʔɒmɪtri], *a letter in a box* [ə ˈletəʔɪn ə bɒks])
- Replacing /p/, /k/, and especially /t/ at the end of a syllable when there is no vowel to follow (e.g. *hate* /heɪʔ/, *football* /ˈfʊʔbɔːl/, *that table* /ðæʔˈteɪbl/. This is called glottaling and is informal. Because this refers most often to the phoneme /t/ it is known as t-glottalization.
- Reinforcing an accented /p/, /t/, /k/, /tʃ/ at the end of a syllable (e.g. *leap* /liːʔp/, *teaching* /ˈtiːʔtʃɪŋ/). Here, the closure in the mouth occurs simultaneously with the glottal closure, which is called glottalization.
- When unaccented, /ɪ/ is a little fronted, so that it resembles /iː/
- Depending on the speaker, the first element of /aʊ/ covers the whole range from front-to-central to back.
- In the pronunciation of the conservative variant of RP, /ʌ/ is realized as back to central, since it has historically developed from /ʊ/
- In the pronunciation of the advanced variant of RP, /ɑː/ is realized as retracted, as if to fill in the gap left by the raised /ɒ/

The non-distinctive force of articulation

The non-distinctive force of articulation refers to the phenomenon called aspiration.
Aspiration occurs when a strong plosives ([p], [t], and [k] are followed by a vowel and at the beginning of an accented syllable i.e. when they occur before a stressed vowel and there is no [s] in front of the voiceless stop. Thus, they cannot be aspirated after [s] if occurring before an unstressed vowel, or if there is a glide or liquid between the stop and the vowel (and then the liquid/glide is considered voiceless = [r̥])

Examples (with narrow transcription)

Aspirated	**IPA**		**Not aspirated**	**IPA**
pot	[pʰɑt]		spot	[spɑt]
top	[tʰɑp]		stop	[stɑp]
cot	[kʰɑt]		Scot	[skɑt]
oppose	[əpʰówz]		plop	[pl̥ɑp]
Tacoma	[təkʰówmə]		prop	[pr̥ɑp]
potato	[pətʰéjɾow]		twist	[tw̥ɪst]
cat	[kʰæt]		cube	[kj̊ub]
tame	[tʰejm]		hippy	[hípi]
kite	[kʰajt]		lucky	[lʌ́ki]

Picture 32: Aspiration
(source: https://www.studocu.com/my/document/universiti-teknologi-mara/linguistics-in-language-teaching/rule-for-english-aspiration/21353251)

The non-distinctive degree of length

The non-distinctive degree of length refers to duration, i.e. how long a sound lasts.
The duration of vowels changes and is generally reduced when a vowel is followed by a strong consonant. The duration of a vowel is lengthened when it is followed by a weak consonant.This happens regardless to long or short vowel.This produces allophonic variations in length.

E.g. *bit* /bɪt/, *bid* /bɪd/, *beat* /biːt/, *bead* /biːd/.

The phoneme /ɪ/ is slightly shorter in the word *bit* /bɪt/ than the same phoneme in the word *bid* /bɪd/.

The phoneme /iː/ is slightly shorter in the word *beat* /biːt/ than the same phoneme in the word *bead* /biːd/.

The combination of distinctive and non-distinctive degrees of length produces four degrees.

Under identical conditions, the longest is a phonemically long vowel followed by a weak consonant, e.g. *bead* /biːd/ /biː:d/.

A little shorter is a phonemically short vowel followed by a weak consonant, e.g. *bid* /bɪd//bɪ.d/.

Still shorter is a phonemically long vowel followed by a strong consonant, e.g. *beat* /biːt/.

The shortest is a phonemically short vowel followed by a strong consonant, e.g. *bit* /bɪt/.

When a weak plosive is without explosion and devoiced it becomes virtually identical with a strong plosive without explosion.

The hearer can differentiate between the two only through the degree of length of the preceding vowel.A slight variation in the duration of the vowel preceding a weak or strong consonant helps to identify the consonant indirectly, e.g. as in the minimal pair *beat* /biː.t#/ and *bead* /biː:d#/.

A noticeable free variation is the lengthening of the vowel /æ/ as pronounced by younger generations.

Regarding the consonants, the greatest duration is that of fricatives, whereas the shortest is that of the flapped [ɾ].

The non-distinctive composition

Diphthongs can be divided into closing and centering.

A closing diphthong is a diphthong that provides a certain closure which appears for the second element, i.e. when the second element of a diphthong is closer than the first, an impression of closing is created.

Closing diphthongs are: /eɪ/, /aɪ/, /ɔɪ/, /əʊ/, and /aʊ/

In centering diphthongs the second element is a central vowel. They always end in /ə/.

Centering diphthongs are: /ɪə/, /eə/, and /ʊə/.

Centering diphthongs are classified into falling and rising.

Falling diphthongs are /ɪə/and /ʊə/.

English diphthongs are usually realized with the first element more prominent than the second. The impression of prominence is achieved by means of the length, stress, and openness of the first element. Such diphthongs are termed falling.

When /ɪə/and /ʊə/ occur in a stressed syllable, the force of the stress falls on the first element, which is more prominent owing to the strong stress, and the diphthong is falling.

When /ɪə/ and /ʊə/ occur in an unstressed syllable, their first element is left without the support from stress and it becomes less prominent than the second, more open element. This is symbolized as [ĭə] and [ŭə].

Such diphthongs are called rising diphthongs.The first element of a rising diphthong may be replaced by a semi-vowel /j/ or /w/, thus reducing its prominence even more.

E.g. *glorious* ['glɔːrɪəs] or ['glɔːrjəs], *influence* ['ɪnflʊəns] or ['ɪnflwəns], associate [ə'səʊʃɪət] or [ə'səʊʃjət]. There has been a tendency of diphthongization of the long close vowels.

For instance, /iː/ and /uː/ tend to be a little lax at the beginning, whereas /eə/ is sometimes realized as [eː] and /ɪə/ as a fronted variant of [ɜː]Triphthongs are diphthongs to which /ə/ is added, as in the words *hour* /'aʊə/ and *fire* /'faɪə/.When /ə/ within a triphthong does not constitute a separate morpheme, i.e. is devoid of meaning, the second element of the diphthong can be omitted. This phenomenon is called levelling. Levelling occurs when the second element of a triphthong is omitted and the first and third element remain active.

E.g. tower /'taʊə / ['taə] [tɑː],
    fire /'faɪə/ ['faə] ['fɑː],
    shower /'ʃaʊə/ ['ʃaə] ['ʃɑː]

Thus, the pronunciation of some different words may be almost completely equalized, as in the case of *shire*, *shower* and *Sha*, or*tower* and *tar*, or *fire* and *far*. Levelling is not possible in a triphthong when /ə/ constitutes a distinct morpheme.
E.g. *slower* /'sləʊə/, *higher* /'haɪər/, and *employer* /ɪm'plɔɪə/.
Triphthongs can be reduced to monophthongs in rapid colloquial speech. However, foreign students are not advised to imitate such speech.

The non-distinctive tongue position

The tongue position as a non-articulatory feature refers to the consonants.
Palatalized (or clear) sounds are produced when the middle of the tongue is raised towards the hard palate.
Velarized (or dark) sounds are produced when the back of the tongue is raised in the direction of the soft palate.
The phoneme /l/ is palatalized when immediately followed by a vowel or /j/, e.g. *lily* /'lɪli/, *love* /lʌv/, *lord* /lɔːd/ etc.
The phoneme /l/ is velarized when followed by a consonant, e.g. *killed* /kɪɫd/, *billed* /bɪɫd/ etc.
Sounds made when the tip of the tongue is curled back towards the hard palate are termed retroflex, as in the case of the typical allophone of /r/.

The non-distinctive degree of voicing

The non-distinctive degree of voicing refers to consonants.
All strong consonants are voiceless.
All weak consonants are voiced.
Untypically, all weak consonants are devoiced, i.e. partially voiced or voiceless when immediately preceded or followed by a pause or a strong consonant.
E.g. devoiced allophones of the phoneme /g/ may be found in the articulation of good /gʊd/ [#g̊ʊd], not good /nɒt gʊd/ [nɒt ʻg̊ʊd], etc.
There are consonants which are:
partially voiced – those are the weak consonants which are unaspirated,
and fully voiced – those are the strong consonants which are aspirated.

The non-distinctive lip position

The non-distinctive lip position refers to vowel sounds, which can be:

- Rounded, e.g. /uː/
- Unrounded/Spread, e.g. /iː/
- Neutral, e.g. /ɑː/ or /e/

All the English vowels follow the tendency manifested in the majority of languages of the back vowels being rounded and the rest unrounded.
The neighbouring vowel influences the lip position when consonants are articulated. For instance, the phoneme /p/ in *peel* /piːl/ is unrounded and spread, whereas in *pool* /puːl/ the same phoneme is rounded.Some speakers pronounce /r/ with slight lip rounding.

The non-distinctive type of explosion

The non-distinctive type of explosion refers to the sudden release of air, therefore to plosives. The release of air can differ in different situations.
*An oral explosion*occurs when the closure is suddenly released, so that the pent-up air escapes through the mouth. It is the common, typical way of producing explosion, e.g. peel, boss, lucky, etc.
*A lateral explosion*occurs when a plosive is immediately followed by /l/; the closure for the latter sound is made simultaneously with the closure for the plosive, so that the compressed air has no possibility of escaping directly through the mouth and is used for the articulation of /l/, e.g. gamble, battle, eagle, etc.
*A nasal explosion*occurs when a plosive is followed by a homorganic nasal, i.e. a nasal formed with the same articulator as the plosive, e.g. in the clusters /bm, pm, tn, dn, kŋ and gŋ/ and in *stop me*, *sudden*, *bacon*, etc.
An unexploded plosive occurs when a plosive is immediately followed by another plosive, affricate, or a silence. In these cases, the release is delayed. The listener is hardly able to identify the presence of the plosive. In such cases, it is best to follow the context.

The non-distinctive point of articulation

The non-distinctive point of articulation refers to the consonants.
Labials are contoids which are produced with the upper lip as a point of articulation.
The sounds /b, p, m/ are labials typically.
The sounds /f/ and /v/ may be labial when preceded by /b, p, m/ as in *camphore'*/kæmfə/ and *triumvirate* /traɪˈʌmvɪrɪt/.
For the semi-vowel /w/ the upper lip is brought near the lower lip in all positions. When this becomes conspicuous and bilabial friction issues, /w/ is considered as a labial.
Dentals are sounds which are produced with the teeth as a point of articulation.
The phonemes /θ/ and /ð/ are always dental, whereas the phonemes /f/ and /v/ are typically dental.
The phonemes /p, b, m, m/ and /t, d, n, l/ can be untypically dental.
Alveolars are sounds which are produced when the alveolar ridge is the point of articulation. This central zone is fully exploited for articulation. Thus, most English contoids are aveolars, e.g. /t, d, s, z, n, l/.
Postalveolars are sounds which are produced by using a part of the tongue at the back of the alveolar ridge, as in the case of the most common contoid variant of /r/.
All typical alveolars become postalveolars when immediately followed by /r/, e.g. *already*.
Palatoalveolars are sounds which are produced when a part of the tongue is in contact with the alveolar ridge, while at the same time another part is raised toward the hard palate. This is in the articulation of /ʃ, ʒ, tʃ, dʒ/.

Palatals are sounds which are produced when the tongue is raised towards the hard palate. The only palatal is /j/ in its contoid variant.
Velars are sounds which are produced when the soft palate is used. These are /k, g, ŋ/ in all positions.

Questions to consider:

1. What is the difference between vocoids and contoids?
2. Which sounds are called semi-vowels and why?
3. Explain aspiration and give examples!
4. What is a glottal stop?
5. Explain the different level of vowel length!
6. What is levelling?
7. Which are the positions of the tongue?
8. Which are the possible lip positions?
9. Explain the types of explosions!
10. How are the sounds divided in terms of the point of articulation?

Lecture 2: The Distribution of Phonemes

The position of the phonemes

As the name tells, the distribution of phonemes is connected to all the possible places that phonemes can and their combinations which are called phonotactic rules.
The position of the phonemes can be:

- at the beginning, which is called initial position
- in the middle, which is called medial position
- at the end of a syllable, or word, which is called the final.

Phonotactics is a branch in phonology that deals with restrictions in a language on the permissible combinations of phonemes. Itactually defines the permissible syllable structures, consonant clusters, and vowel sequences by the means of the phonotactic constraints. There are many restrictions or constraints in the distribution of English phonemes.It is very important to know that certain combinations and positions of phonemes are impermissible and never occur. However, they can occur only when we use foreignisms.

Here are some rules for the permissible and impermissible combinations of phonemes:

- For example, the phoneme /ŋ/ never occurs initially in words or syllables.
- Two consonants occurring initially are allowed only if they are followed by a semi-vowel or a lateral.
E.g try /traɪ/, please /pliːz/, cubicle /ˈkjuːbɪkl/
This is not always possible.
- Initially impermissible combinations of consonants are: tm-, zg-, gs-, kʃ-, ns-, vz-, ðw-, fp-, etc.
- Initial plosives, /s/ and /θ/ may form consonant clusters with /l/ and semi-vowels or when a different articulator is used.
E.g. *please* /pliːz/, *blouse* /blaʊz/, *clothes* /kləʊðz/, *glorious* /ˈglɔːrɪəs/
This is not possible with: pw-, bw-, dl-, tl-, sr-, etc.
- Initial semi-vowels, affricates, /ð/ and /z/ are not followed by another consonant.
E.g. jr-, rd-, tʃl-, ðv-, zl-, etc.
- Initial /l/ can only be followed by the semi-vowel /j/ in an accented syllable.
E.g. *value* /ˈvæljuː/
- Impermissible combinations with /l/ in initial position are: lm-, lw-, lt-, etc.
Consonant clusters including three consonants containing the sequences
[s + strong plosive + l] or [s + strong plosive + semi-vowel] are possible.
E.g. *splash* /splæʃ/, *student* /ˈstjuːdənt/, *squeeze* /skwiːz/.
- Some impossible combinations are: sbl-, zbl-, ztj-, spn-, etc.
- Consonant clusters including three consonants containing the sequences
[s + strong plosive + l] or [s + strong plosive + semi-vowel] are possible.
E.g. *splash* /splæʃ/, *student* /ˈstjuːdənt/,
squeeze /skwiːz/.
- Some other impossible combinations are: sbl-, zbl-, ztj-, spn-, etc.
- Monosyllabic words never end in a short vowel. They may end in a diphthong or a long vowel.
- Long vowels never appear in front of /ŋ/, except sometimes in the words *seeing* /ˈsiːɪŋ/ and *being* /ˈbiːɪŋ/.These words are usually pronounced /ˈsiːɪŋ/ and /ˈbiːɪŋ/
- The greatest number of consonants that can accumulate at the beginning of a word is three.
E.g. *street* /striːt/ and *stroke* /strəʊk/.
The greatest number of consonants that can accumulate at the end of a word is four.
E.g. *sixths* /sɪksθs/,*prompts* /prɒmpts/, *thousandths* /ˈθaʊzəntθs/

Questions to consider:

1. What are phonotactic rules?

2. What is phonotactics?

3. In which positions can the phonemes occur?

4. What is a consonant cluster?

5. What is the greatest number of consonants that can appear at the beginning of a word?

6. What is the greatest number of consonants that can appear at the end of a word?

Lecture 3: Phonemic Variations

> *Coarticulation, Assimilation,*
> *Coalescence, Gradation, Elision,*
> *Linking*

In allophonic variations, allophones are varied within a single phoneme.In phonemic variations, a phoneme changes, while the morpheme remains the same. Like allophonic variations, phonemic variations can be positional or free.These variations are used in an attempt to provide successful communication without much of an effort regarding the articulation. Endeavouring to effect a successful communication with the least effort in articulation, the speaker modifies the adjacent sounds (usually identifying them or producing them as fairly similar), which is called **coarticulation**.

Positional phonemic variations are facultative: the speaker may choose whether to realize the variation or not. If the speech is more rapid, casual, or familiar, and if the given word has been mentioned before, it is more likely that a phoneme will be substituted for another.
Positional phonemic variations include: **assimilation, coalescence, gradation, elision, and linking.**

- Assimilation

Assimilation is when two sounds change or fuse into a third one which is completely new.
Assimilation may happen within a word or between two words, especially when the final sound of the first word has an influence on the initial sound of the second word and they result in something totally different that we can hear, but not see in spelling.As a matter of fact, the word *assimilation* itself represents anexample of assimilation, where the original prefix {ad} (from the Latin preposition meaning *to* or *towards*) has changed its shape to {as} (Михальчук, et.al., 2021).This is because we always produce words and put them into connector speech, rather than producing words in isolation.
As a formula assimilation is explained with the following formula: when the phoneme A is replaced with the phoneme B under the influence of the phoneme C:

$$A + B = C \quad \text{(A and C are similar phonemes)}$$

Explanation:
E.g. *a good bye*/ gʊd|baɪ/ > / gəbbaɪ/
In this case, the bilabial plosive /d/ in the word good is replaced by the alveolar plosive /b/ under the influence of the following phoneme. Consequently, the phoneme /d/ (A) has been replaced with the phoneme /b/ (B) under the influence of /ʊ/ (C), which results in greater similarity between /b/ and /m/, which are both labials.
Phoneme A and phoneme C need to bear some similarity.Phonemic variations are often minimal because a single feature is changed, but more than one feature may sometimes be involved. In the given example, only the distinctive feature 'apical' has been changed, whereas the features 'consonant', 'plosive', and 'weak' have remained the same.
Assimilation is a phenomenon that exists not as a result of a bad spoken language nor as a sloppy usage of language, but it is rather a situation that happens in the normal, rapid

speech, especially depending on the tempo, the type of the communication situation, dialogue or discussion, and sometimes the social class of the speakers. Assimilation is important because it appears generally in the informal communications rather than the formal and the upper class accents.

- Dissimilation

Besides assimilation there is the opposite phenomenon, which is called dissimilation. Dissimilation is a process used in order to develop clarity in speech and to develop proper pronunciation.
Dissimilation is considered as an unimportant or irrelevant process.

- Types of phonemic variations

The articulatory parameters within which phonemic variations may be realized are:
   • Phonemic variations according to the manner of articulation
   • Phonemic variations according to the articulator
   • Phonemic variations according to the force of articulation
Regarding the manner of articulation, in this category of assimilation, the plosives blend into nasal, and the fricatives blend into nasals.

Examples:
good morning /gʊd ˈmɔːnɪŋ/ > /gʊmˈmɔːnɪŋ/
   individual /ˌɪndɪˈvɪdjʊəl/ > /ɪnnɪˈvɪdjʊəl/
   London /ˈlʌndən/ > /ˈlʌnnən/
   wonderful /ˈwʌndəfʊl/ > /ˈwʌnnəfʊl/

- Phonemic variations according to the articulator

This variation refers to the apicals and the coronals.
More precisely, it refers to those of them which already have numerous allophonic variations according to the point of articulation, thus shifting the articulator over two or three different positions: /t, d, n, s, z/.

Although an apical with a variety of points of articulation, the phoneme /l/ is not replaced by any other phonemes because it is the only lateral.

Phonemic variations according to the articulator
The phoneme /t/ may change into /p/ and /k/.
The phoneme /d/ may change into /b/ or /g/.
The phoneme /n/ may change into /m/ or /ŋ/
The phoneme /s/ may change into /ʃ/.
The phoneme /z/ may change into /ʒ/

Examples:

a red book /ə ˈred ˈbʊk/ > /ə ˈreb ˈbʊk/
admit /ədˈmɪt/ > /əbˈmɪt/
a bad girl /ə ˈbæd ˈgɜːl/ > /ə ˈbæg ˈgɜːl/

- Phonemic variation according to the force of articulation

Generally, according to the force of articulation, this phonemic variation changes phonemes from weak to strong. The rule applies to the fricatives and affricates, and therefore this type of assimilation has four options or four forms:

- Progressive, when the influence is done on the following sound, such as the example of *happen* /ˈhæpən/ > /ˈhæpəm/ and *organ* /ˈɔːgən/ > /ˈɔːgəŋ/ Here, the preceding sounds /p/ and /g/ influence the following sound /n/ to change into /m/ and /ŋ/ respectively.
- Regressive, when the influence is done on the preceding sound, as in the phrase *with toys* /wɪð ˈtɔɪz/ > /wɪθ ˈtɔɪz/
- Complete, or total assimilation, when a consonant is fully assimilated with another one, for example *horseshoe* /hɔːs ˈʃuː/ > /ˈhɔːʃʃuː/
- Incomplete, or partial assimilation, when the assimilee is being partially changed, but
- the sounds remain to be different, as in on board /ˈɒn ˈbɔːd/ > /ˈɒnbɔːd/.

- Coalescence

Coalescence is a phonological variation in which two adjacent phonemes A and B change resulting in a third phoneme C, which preserves the main features of the original articulators. It is a special type of assimilation when both consonants influence each other and they result in/form a totally new sound:

As a formula, the adjacent phonemes A and B blend or change into a third phoneme C:

$$A + B = C$$

The phoneme A is always a coronal /t, d, s, z/.
The phoneme B is always frontal /j/, always in an unstressed position
The phoneme C, or the result, would be an affricate /ʃ, ʒ, tʃ, dʒ/

Examples:

don't you /ˈdəʊnt juː/ > /ˈdəʊntʃʊ/

Sometimes, coalescence within a single word occurs and remains permanent.
Examples:

Christian /ˈkrɪstjən/ > /ˈkrɪstʃən/

- Linking

Linking as a phenomenon appears in connector speech. The term refers to a link between a sound which is generally not articulated in British English speech and we have it only in spelling.
Words whose pronunciations end in centering diphthongs and the vowels /ɑː, ɔː, ɜː, ə/, but are spelled with a final *r,* activate the pronunciation of this letter if they are followed by a word beginning with a vowel.
Since *r* in these cases conjoins or links two words, such usage of this consonant is termed **linkingr.**

Examples:
later in time /ˈleɪtəˈr ɪn ˈtaɪm/
fire and water /ˈfaɪər ənd ˈwɔːtə/

Under the same conditions, some speakers insert the glottal stop.
Even when there is no corresponding *r* in spelling, it is pronounced when a word ends in a vowel and the following word begins with a vowel as well. Such /r/ is called **intrusive**.
E.g. China and Japan /ˈtʃaɪnər ənd ʤəˈpæn/

- Gradation

Gradation refers to function/grammar words.
Function/grammar words belong in the restricted class of the words of speech (auxiliary verbs, conjunctions, prepositions, pronouns and articles). They all have grammatical meaning. Function words are usually unstressed in speech; their vowels are usually unprominent /ə, ɪ, ʊ/ or reduced; some of their consonants are elided. They are stressed only for the sake of contrast or when the speaker is hesitating. Such forms are called **weak forms.** The much rarer unelided and unreduced forms are called **strong forms**. In addition to function words, there are several nouns which can manifest alteration of strong and weak forms. Weak forms are always unstressed.
Strong forms can be either stressed or unstressed.

The rule of <u>linking r</u> applies in cases of weak forms as well.
For example, this means that the form *for* /fə/ is expanded by a /r/ if immediately followed by a vowel, and this refers to /f/ as well.
The principles of assimilation extend to weak forms as well.
Thus, *and* next to /p/ or /b/ can, instead of /n/, be realized as /m/, or next to /k/ or /g, it can be realized as /ŋ/.
E.g. /ˈbred m ˈbʌtə/

Some weak forms of different morphemes can converge to a same form.
This phenomenon is called neutralization.
The morphemes *are*, *a*, and sometimes *her*, *of*, and *or*, may have a weak form /ə/.
The morphemes *are* and *or* may be pronounced as /ər/.
The morphemes *have* and *of* can be realized as /əv/.
The morphemes *as* and *has* can be realized as /əz/.
The morphemes *is*, *has* and *does* can be realized as /s/ or /z/.
The morphemes *had* and *would* can be realized as /d/.

The words which alternate /ə/ and /ʊ/ (*do, to, into*) follow the following rule:
-    The vowel /ʊ/ appears when a vowel or /w/ follows immediately;
-    The vowel /ə/ appears when a consonant follows immediately.
E.g.

Have they gone to Africa? /hæv ðeɪ gɒn tʊ ˈæfrɪkə/
Have they gone to Greece? /hæv ðeɪ gɒn tə griːs/
The variant /d/ occurs immediately in front of /j/.
The variants of the weak forms which contain /ə/ or in which the vowel is elided do not occur at the end of a sense group (the group of words delimited by a pause).
E.g.
Where have they gone to? /weə həv ðeɪ ˈgɒn tuː/
Where has she come from? /weə hæz ʃiː kʌm frɒm/

The beginning of a sense group is even more prominent than the end.
In this position, the weak forms of the words *and, as, at, is, till, will, would* are not allowed.

In this position, only the weak forms of the words *had, has, have,* and *who* which retain /h/ can be used.

The weak form /z/ of the morpheme *is* can be used when the preceding word ends in a vowel or a voiced consonant other than /z, ʒ, ʤ/.
The weak form /z/ of the morpheme *is* can be used when the preceding word ends in a voiceless consonant other than /s, ʃ, ʧ/.
The weak form /z/ of the morpheme *is* can be used when the preceding word ends in a vowel or a voiced consonant other than /z, ʒ, ʤ/.
The weak form /z/ of the morpheme *is* can be used when the preceding word ends in a voiceless consonant other than /s, ʃ, ʧ/.
The strong form of the negative word *not* is used when in conjunction with a weak form of an auxiliary verb.

The weak form of the negative word not is used when in conjunction with a strong form of an auxiliary verb.

E.g.
He is not. /hɪ z 'nɒt/ /hɪ 'ɪznt/
The variant /hʊ/ of the interrogative *who* is used only when it is followed by or unstressed /ɪ/

E.g.
Who are they? /hʊ ə 'ðeɪ/
Who is she? /hʊɪz 'ʃiː/
The existential *there* is used only with its weak forms.

E.g.
There's a flower in the vase. /ðəz ə 'flaʊə ɪn ðə 'vɑːz/
In a combination of a preposition and an unstressed pronoun, the preposition to can also be unstressed, but both the strong and the weak form can be used.

E.g.
I gave it to you. /aɪ 'geɪv ɪt tuː jʊ/ or /aɪ 'geɪv ɪt tə jʊ/
Adverbial particles are stressed.

E.g.
Put it down. /pʊt ɪt 'daʊn/
Turn off. /tɜːn 'ɒf/
Some common verbs can be used with their weak forms if unstressed, in very rapid speech, and in the vicinity of the primary accent.

Such verbs are:
Come /kəm, km/
Get /gət, gt/
Put /pət, pt/
Sit /sət, st/

- Elision:

The following kinds of elision are distinguished:
- According to the characteristics of the elided sounds;
- According to the size of the unit within which elision takes place;
- According to time dimension.

Examples of   elision of /ə/

bachelor	/ˈbætʃ(ə)lə/
camera	/ˈkæm(ə)rə/
collision	/k(ə)ˈlɪʒən/
essentially	/ɪˈsenʃ(ə)li/
fatally	/ˈfeɪt(ə)li/
February	/ˈfebr(ə)ri/
government	/ˈgʌv(ə)nmənt/
history	/ˈhɪst(ə)ri/
honourable	/ˈɒn(ə)rəbl/
insolent	/ˈɪns(ə)lənt/

elision of I

because	/bɪˈkɒz/ > /pkɒz
difficult	/ˈdɪf(ɪ)kəlt/
excited	/ɪkˈsaɪtɪd/ > /kˈsaɪtɪd/
family	/ˈfæm(ɪ)li/
geography	/dʒɪˈɒgrəfɪ/ > /ˈdʒɒgrəfɪ/
geometry	/dʒɪˈɒmɪtrɪ/ > /ˈdʒɒmɪtrɪ/

The phoneme /l/ is subject to elision when immediately followed by a consonant, and therefore velarized, and usually at the same time preceded by the back vowel /ɔ:/.
Since /ɔ:/ and [ɫ] use the same part of the tongue and sound similarly, the phoneme /l/ can be elided without detriment to the pronunciation of the word.
Allright /ɔ:(l)ˈraɪt/
Almanac /ˈɔ:(l)mənæk/
Already /ɔ:(l)ˈredi/
Other cases of elision of individual consonants in positions other than interconsonantal or clusters of two consnants, occur in very rapid colloquial speech:
certainly /ˈsɜ:tən(l)i/
expected /ɪ(k)sˈpektɪd/
extraordinary /(ɪk)sˈtrɔ:dnri/
Most of the so-called free phonemic variations are not free from a socio-linguistic point of view.Tendencies in the use of certain variants can be established depending on the origin, profession, or the social status of the speaker.

Questions to consider:

1. What is coarticulation?

2. What is assimilation?

3. What is coalescence?

4. What is linking?

5. What is gradation?

7. What is elision?

8. What are free phonemic variations?

Lecture4: Fortition and Lenition

In order to understand fortition and lenition you need to be familiarized with the already mentioned notions aspiration, glottalization, elision i.e. the material from the 1 mid-term
Fortition – from Latin 'fortis', which means 'strong'
Lenition – from Latin 'lenis', which means 'weak'
In certain cases, it is important to convey the information on a definite phoneme to the hearer most precisely. In other cases, a phoneme is only intimated by the speaker, and relying on the context and redundancy. In order to convey the information properly and correctly, we ought to pronounce sounds clearly and strongly. This process is called fortition. The opposite process is when sounds are pronounced in a weak form/manner. This process is called lenition or weakening.Fortition, or the strengthening process, reinforces segments or sequences. For example, fortition reinforces insertions.
(Insertions occur when an extra sound is placed between two sounds. For example, when we make the plural form of the word *dress*/dres/, we get *dresses* /ˈdresɪz/; here the extra sound is /ɪ/, which means /ɪ/ is the insertion here.)
Fortition also refers to the reinforcing of the lengthening of words. This happens when we have a consonantal lengthening within syllables, words, and phrases.
Fortition usually occurs in formal speech. Accented syllables are the most important. Therefore, fortition occurs in stressed positions.

The means of actualization for fortition are:

- Aspiration, i.e. when a strong plosive is followed by a vowel and at the beginning of an accented syllable (*time* [tʰaɪm], *pull* [pʰʊl])
- Glottalization, i.e. reinforcing an accented /p/, /t/, /k/, /ʧ/ at the end of a syllable (e.g. *leap* /liːʔp/, *teaching* /ˈtiːʔʧɪŋ/). Here, the closure in the mouth occurs simultaneously with the glottal closure

Lenition

Lenition, or the weakening process, refers to weakening segments and sequences which typically include ease of the articulatory processes, such as assimilation, sound reduction etc. Lenition usually occurs in casual and rapid speech. Lenition is achieved in unstressed syllables in casual, rapid speech.

The means of actualization for lenition are:
- The replacement of /t/ by a corresponding fricative between vowels; instead of a complete closure for a typical /t/, a narrowing /s/ is produced. E.g. 'important' /ɪmˈpɔːtənt/ > /ɪmˈpɔːsənt/

- The flapping of /t/ in American English; Americans use a softer variant of /t/

- Pronouncing /d/ instead of /t/ in American English; Indian speakers sometimes pronounce /r/ instead of /t/

- Glottaling, i.e. replacing /p/, /k/, and /t/ at the end of a syllable when there is no vowel to follow (e.g. *hate* /heɪʔ/, *football* /ˈfʊʔbɔːl/, *that table* /ðæʔˈteɪbl/

- Lack of explosion, i.e. when a plosive is immediately followed by another plosive, affricate, or a silence. In these cases, the release of air is delayed.

- Elision, i.e. omission of sounds.

Referring to both vocoids and contoids (vowels and consonants), there is a particular scale of prominence.
Among vocoids, it starts from low vowels as the most prominent sounds, followed, in diminishing order, by high vowels and semi-vowels.

1. Low vowels

2. High vowels

3. Semi-vowels

Among contoids, the scale of prominence starts from plosives as the most prominent sounds, followed by fricatives, nasals, laterals, and semi vowels.

1. Plosives

2. Fricatives

3. Nasals

4. Laterals

5. Semi-vowels

It is important to know that not every sound is a good example for those processes.

Archiphoneme

The schwa vowel /ə/, which is typical for English, is not always pronounced in a typical manner. In cases of very slow and emphatic speech, /ə/ can be realized as a different or more prominent monophthong, reflecting the way it is spelled.For instance, the name 'Arthur' can be pronounced as /ˈɑːθə/ or /ˈɑːθʊə/. The second variant is not conventional.
It is as if there was another phoneme underlying this phoneme.
Such a sound is referred to as archiphoneme. There are three definitions of an archiphoneme:

- An archiphoneme is a phonological unit which expresses the common features of two or more phonemes which are involved in neutralization
- An archiphoneme is a class of phonemes consisting of a pair sharing all distinctive features, except one, which is voicing
- An archiphoneme is a linguistic unit which is abstract and represents two or more phonemes, but their distinction is neutralized
- The phoneme /ŋ/ is another example of an untypical phoneme verging on another phoneme, i.e. /n/. This is proved by its restricted distribution and its variant representation in spelling with *ng*.
- The contrast between /θ/ and /ð/ is obscured by paucity of minimal pairs (*wreath* (n.) /riːθ/ vs. *wreathe* (v.) /riːð/)
- Cases of free phonemic variation with /ə/ may also be considered as a kind of lenition,
- like *orchestra*/ˈɔːkestrə/ and /ˈɔːkəstrə/

Lecture 5: The Syllable

> *A syllable: a unit of the phonological structure of any language, which is usually larger than the phoneme and smaller than the morpheme*

Syllables are necessary to help us with our communication.As a definition, a syllable is a unit of the phonological structure of any language, which is usually larger than the phoneme and smaller than the morpheme.The number of syllables within a word usually depends on the number of vowels.Therefore, one vowel is essential for a syllable. The syllable is a unit which is felt by speakers intuitively.The various definitions of the syllable can be classified into three major groups:

1. Physiological
2. Perceptual
3. Phonological

The physiological and perceptual are phonetic.
According to the pulse theory, the syllable corresponds to the physical increase of the air pressure, which emanates from the chest pulse and can be measured objectively.
The chest pulse refers to the muscular activity and the lung movement that happens within the speaking. The chest pulse theory refers to the number of chest pulses and their increase of air pressure, which actually determines the number of syllables.

Perceptual

This one refers to the theory of prominence.
According to this view, every syllable consists of a central sound which is more prominent and sonorous than the surrounding sounds. However, there are many discrepancies in this theory.For example, this theory cannot explain why /s/ in *spine* is not syllabic, even though the fricative /s/ is more prominent than the neighbouring plosive /p/.For this theory to function, an additional provision has been introduced: that of extra length for contoids.
Phonetic theories cannot solve the issue of syllable boundaries and sometimes even the number of syllables is not identical in phonetic and phonological views.
For example, from the phonetic point of view, the thriphthong /əʊɪ/ in the word *going* /ˈgəʊɪŋ/ or the sequence /iːɪ/ in the word *seeing* /ˈsiːɪŋ/ constitute one syllable each, although this counters the linguistic analysis and the speakers intuitive feeling.
Perceptually, there is a feeling that there are two syllables with two peaks in the pronunciations [ˈglɔːrɪəs] and [ˈglɔːrjəs] of the word glorious, but there is no way to determine the division between the two syllables which is obvious in the latter variant: both pronunciations are equally possible.

Phonological

In the phonological approach, the emphasis is placed on the manner in which phonemes combine into larger units and a connection with morphology is established. Thus, if a combination of particular sounds is known to be allowed at the beginning or the end of a morpheme, the sequence that contains the combination will be divided so that one part belongs to one syllable and the rest to the other syllable.
For example, the words *going* /ˈgəʊɪŋ/ and *seeing* /ˈsiːɪŋ/ contain two syllables each, i.e. are considered as bisyllabic. Their two syllabic sounds are vocoids belonging to different

morphemes. This is the case with the word *haystack* /ˈheɪstæk/ as well. It is divided into /heɪ/ and /stæk/ because in this way the two morphemes are separated, while the integrity is maintained.

Both phonetic and phonological approaches to the syllable have place in English phonetics. The sound that is the most prominent in a syllable is called syllabic sound, and all the others are non-syllabic sounds.Words containing a single syllable are called monosyllabic, whereas words containing more than one syllable are called polysyllabic. A syllable ending in a vowel is called an open syllable, whereas a syllable ending in a consonant is called a closed syllable.Open syllables are a little longer than closed ones.The syllable is sometimes brought into association with accent, intonation, and aspiration. Thus, since aspiration occurs when a strong plosive is in the beginning, aspiration is an indication of the beginning of a syllable.Some other morphological phenomena are connected to the concept of the syllable. So, the formation of comparative and superlative in English depends on the numbers of syllables of the given adjective. Monosyllabic adjectives mostly compare synthetically, whereas polysyllabic adjectives compare analytically.

Questions to consider:

How many syllables are there in the words?

1. painted
2. rented
3. walked
4. landed
5. caused
6. laughed
7. folded.

Answers:

1. 2 syllables 2. 2 syllables 3. 1 syllable 4. 2 syllables 5. 1 syllable 6. 1 syllable 7. 2 syllables

Lecture 6: Accent and stress

> *Accent vs. Stress, Pitch, Isochrony, Rhythm, Different positions of the accent*

It is really important to distinguish the words accent to their dubious meanings apart from stress. the word "accent" has numerous meanings as a noun and a verb. Here are some of the explanations: "An effort in speech to stress one syllable over adjacent syllables also;the stress thus given a syllable a word with the accent on the second syllable; a distinctive manner of expression: such as a: a way of speaking typical of a particular group of people and especially of the natives or residents of a regionspoke with a Russian accent or an individual's distinctive or characteristic inflection, tone, or choice of words—usually used in pluraland as a verb means to give special attention or prominence to (something)TV shows that accent youth: to make (something) more emphatic, noticeable, or distinct columns that

accent the vertical lines of the building or to pronounce (part of a word) with greater stress or force" (*Marriem-Webster Online*). On the other hand, the word "stress" also means something else if you consider it outside the box of Phonetics and Phonology.

The main definition according to Hlebec (1995) is that " Accent is a relative prominence of a syllable in a word or a group of words or an utterance due to stress and/or pitch and stress is the degree of force used for the pronunciation of a syllable."

Two types of stress can be distinguished in English:

- strong, which is used in the pronunciation of stressed syllables
- weak, which is used in the pronunciation of unstressed syllables.

Pitch is the height of tone, which is reflected as higher or lower frequency of vibration (Hlebec, 1995).

A syllable can have a primary accent if the pitch varies inside the syllable, a secondary accent if the pitch level changes, and a tertiary accent if the stress is just strong without any pitch changes. In English, the entire articulatory force is concentrated on stressed syllables, whereas little force remains for unstressed ones. This influences the quality and quantity of syllabic sounds in stressed versus unstressed syllables.

Long and low vowels preponderate in stressed syllables.

Syllabic consonants and the least prominent vowels /ɪ, ʊ, ə/ occur in unstressed syllables.

They are not prominent due to their shortness and little space between the tongue and the palate, and the small aperture between the lips.

In British English, the vowel /ə/ occurs in unstressed syllables only, except for the untypical pronunciations of *just* /dʒəst/ and *because* /bəˈkəz/

Oral communication is carried out in utterances, by means of words in connected speech. A description of accentuation in isolated words may be reached through generalization and indication of potential properties abstracted from real speech flow.

Primary accent may be preceded, but never followed, by secondary accent. According to the general intonation pattern, no important tonic change may follow primary accent.

Secondary accent must be at some distance from primary accent.

At least one unaccented syllable must intervene between secondary and primary accent.

In derivatives, secondary accent may occur on a syllable immediately preceding primary accent. Awareness of the existence of another, bound morpheme affects its emphasis by stress. Speakers may differ in their interpretation whether a part of a word is a distinct morpheme or not, which is reflected on the pronunciation.

Accent sometimes shifts within individual words.

The reasons for that word accent shift may be:

- When a word is used attributively
- In some recent tendencies
- When the part of speech is changed
- When a word occurs as a part of certain derivates
- Word accent shifts when a word is used attributively

Words that have a varying place of their primary and secondary accent are often called double stress words. In such words, the secondary stress is normally prominent, but since accented syllables tend to be separated by one unaccented syllable, the first stress is often emphasized.

Some double stress words are marked by two primary accents, which gives way to a shorter way of transcribing both variants.

Word accent shifts when the part of speech is changed

More than a hundred pairs of words with the same or very similar spelling, differ in the place of their accent. Nouns and adjectives have accent on the first syllables, whereas verbs have accent on the last one.

Derivatives

The accentuation of suffixed derivatives and words with identifiable endings are realized through the effect of the following factors:
1. If such a word has a stress-imposing suffix, the latter will be solely responsible for the accentual pattern of the word. The following suffixes are stress-imposing and they:
   - Take primary accent (-ade, -ate, -ee, -eer, etc.)
   - Cause primary accent to be on the syllable immediately preceding the suffix (-ia, -ian, -ic, -icle, -ify, etc.)
   - Place the accent two syllables before the suffix (-ant, -ence, -oid, etc.)
2. If the suffix is stress-neutral, it cannot effect the accent shift, and the accent is that of simpler cognate forms, derived or non-derived.
Secondary accent of derivatives preserves the place of the former primary accent of a cognate simple word unless this causes two stressed syllables to come together.

Compounds

Compounds can have primary accent on the first element, which is called front or early accent.
This type of accent occurs with the following types of compounds:
   - Noun compounds representing metonymic and other non-metaphoric figures of speech
   - Compounds between elements whose meaning 'used for' is created
   - Compounds whose first element achieves categorization of the second element. A contrast with other categories of the same sphere is understood.
Metonymy is a figure of speech in which a thing or concept is referred to by the name of something closely associated with that thing or concept. It is the use of a linked term to stand in for an object or concept.
For the sake of emphasis, compounds may change the place of accent.
The so-called back accent or late accent, i.e. the accentual pattern with the primary accent on the second element and a possible secondary accent on the first element, occurs:
   - In compounds which contain metaphors and other comparisons according to similarity
   - In compounds in which the first element does not bring about categorization
The following collocations are not compounds but free connections of an adjective and a noun, i.e. noun phrases, and they have a double stress, usually realized as late stress:
   - 'mad doctor' - a doctor who is mad
   - 'moving van' – a van that is moving
   - 'dark room' – a room which is dark
Either of the members of these phrases can take the nuclear accent in the particular utterance depending on emphasis and the focus of information.

Sentence

Stressed and unstressed syllables in connected speech alternate and this alteration is called RHYTHM. Rhythm is the combination of stressed and unstressed syllables in the sense of movement in speech, marked by the stress, timing, and quantity of syllables.
Isochrony is the tendency to equalize the duration of the intervals between stressed syllables.For such tendency to be achieved, the length of unstressed syllables varies according to their number.The tendency is to speed up the pronunciation of unstressed syllables which make up the more numerous group, in order to maintain a more or less equal

interval between the stressed syllables. This can be represented more conspicuously in the form of rhythmic groups (or feet).Another possibility to represent stress wholes visually is to gather unstressed syllables around stressed ones which make a meaningful connection within so-called stress-groups.

Questions to consider:

1. What is accent?
2. How does accent differ in different speech parts?
3. What is rhythm?
4. What is isochrony?

Lecture 7: Intonation

Intonation: rising, falling

Stress and intonation are strongly related.In actuality, they can't be separated.They are interrelated.Intonation, or the way the voice rises and falls when speaking—the "song of the language"—concerns how we say things as opposed to what we say.The stressed word patterns in sentences follow the same rules as the stressed syllable patterns in words.Additionally, depending on the meaning or emotion we wish to portray, the voice tends to rise, fall, or remain flat (surprise, anger, interest, boredom, gratitude, etc.).Therefore, intonation conveys the speaker's mood.In English, rising intonation and falling intonation are the two main intonation patterns.In the examples that follow, a downward arrow (↘) denotes a drop in intonation and an upward arrow (↗) denotes an increaseOnce more, these are patterns that native English speakers typically employ rather than rules.Just keep in mind that intonation adds attitude or mood and that substantive words are stressed.This intonation explanation is meant to act as a generic how-to for learners.They shouldn't experience any unwarranted anxiety as a result!Remember that a written explanation will never be a replacement for speaking with a native speaker in person.The greatest way to learn attitude intonation is to converse and listen to native English speakers.

Falling Intonation(↘)

(At the end of the phrase, the voice's pitch drops.)The most prevalent intonation pattern in English is falling intonation.It frequently appears in declarations, instructions, informational inquiries (wh-questions), affirmative question tags, and exclamations.

Statements:

o   Here is the weather ↘forecast.
o   Sunny weather is expected at the end of the ↘week.

- o   We should spend time together more ⬊often
- o   I'm going for a walk in the ⬊park.

- **Commands**
  - o   Write your surname⬊here.
  - o   Show me what you've ⬊ written.
  - o   Leave it on the⬊desk.

- **Wh- questions (requesting information.)**
(questions beginning with 'who', 'what', 'why', 'where', 'when', 'which', and 'how')
  - o   What country do you come⬊from?
  - o   Where do you⬊work?
  - o   Which of them do you ⬊prefer?

- **Questions Tags**
  - o   He thinks he's so clever, doesn't ⬊he?
  - o   She's such a nuisance, isn't⬊she?

- **Exclamations**
  - o   You don't⬊say!
    - o   What a beautiful⬊voice!
    - o   That's a ⬊surprise!

Rising Intonation(⬈)
(The pitch of the voice rises at the end of a sentence.)
Rising intonation invites the speaker to continue talking.
It is normally used with yes/no questions, and question tags that are real questions.

- **Yes/no Questions**
(Questions that can be answered by 'yes' or 'no'.)
  - o   Do you like your new ⬈ teacher?
  - o   Have you finished ⬈ already?
  - o   May I borrow your ⬈ dictionary?
  - o   Do you have any ⬈ magazines?
  - o   Do you sell ⬈ stamps?

- **Questions tags that show uncertainty and require an answer (real questions).**
  - o   We've met already, ⬈ haven't we?
  - o   You like fish, ⬈ don't you?
  - o   You're a new student ⬈ aren't you?
  - o   The view is beautiful, ⬈ isn't it?

Very often aa combination of rising and falling intonation is used in the same sentence.
The combination is called Rise-Fall or Fall-Rise intonation.

Rise-Fall Intonation(⬈ ⬊)
(The intonation rises and then falls.)
It is merely used for choices, lists, unfinished thoughts and conditional sentences.

- **Choices (alternative questions.)**
  - o   Are you having ⬈ soup or ⬊ salad?

- Is John leaving on ↗ Thursday or ↘ Friday?
- Does he speak ↗ German or ↘ French?
- Is your name ↗ Ava or ↘ Eva?

- **Lists (rising, rising, rising, falling)**
  Intonation falls on the last item to show that the list is finished.
  - We've got ↗ apples, pears, bananas and ↘ oranges
  - The sweater comes in ↗ blue, white pink and ↘ black
  - I like ↗ football, tennis, basketball and ↘ volleyball.
  - I bought ↗ a tee-shirt, a skirt and a ↘ handbag.

- **Unfinished thoughts (partial statements)**
  In the responses to the following questions, the rise-fall intonation indicates reservation.
  The speaker hesitates to fully express his/her thoughts.
  - Do you like my new handbag? Well the ↗ leather is ↘ nice... (but I don't like it.)
  - What was the meal like? Hmm, the ↗ fish was ↘ good... (but the rest wasn't great).
  - So you both live in Los Angeles? Well ↗ Alex ↘ does ... (but I don't).

- **Conditional sentences**
  (The tone rises in the first clause and falls gradually in the second clause.)
  - If he ↗ calls, ask him to leave a ↘ message.
  - Unless he ↗ insists, I'm not going to ↘ go.
  - If you have any ↗ problems, just ↘ contact us.

Fall-Rise Intonation (↘ ↗)
(The voice falls and rises *usually within one word.)*

The main function of fall-rise intonation is to show that the speaker is not certain of the answer they are giving to a question, or is reluctant to reply (as opposed to a falling tone used when there is no hesitation). It is also used in polite requests or suggestions.

- **Hesitation/reluctance:**
  - So you'd be willing to confirm that? ...Well ... I ↘ sup ↗ pose so ...
  - You didn't see him on Monday?   I don't quite ↘ re ↗ member ...

- **Politeness-Doubt-Uncertainty: (You are not sure what the answer might be.)**
  - Perhaps we could ↘ vis ↗ it the place?
  - Should we ↘ cop ↗ y the list?
  - Do you think it's ↘ al ↗ lowed?

Here are some useful tips for learners considering intonation:

- ✓ You can practice your pronunciation by listening to brief recordings of commonplace conversations and then "shadow reading" the script, or reading it together with the recording while maintaining the same emphasis and intonation as the speaker.
- ✓ The technique can be repeated until the student's voice resembles the recording.

- ✓ It's also a good idea to write down or record some samples of typical conversations (either from real life or from dialogues in movies or television shows) and then repeat them as frequently as you can while mimicking the speakers' accents and intonations.
- ✓ Learning English emphasis, rhythm, and intonation can also be done by listening to contemporary English music.
- ✓ Start by singing (or reciting aloud) the music lyrics that you like. It will improve your pronunciation for sure!

Questions to consider:

1. What is intonation and why is it important for the language understanding?
2. Which are some of the most commonly used I patterns of intonation?

Lecture 8:Speech varieties

> *American, British and Australian Variety; Cockney, RP*

Speakers of a language manifest all kinds of differences, which makes languages stratified on every level – phonological, morphological, lexical, syntactic and semantic and in three dimensions – temporal, spatial, andsocial. This makes their varieties and dialects. Nevertheless, it remains the case that although spoken American and British English are generally mutually intelligible, there are enough differences to cause occasional misunderstandings or at times embarrassment. Written forms of American and British English as found in newspapers and textbooks vary little in their essential features, with only occasional noticeable differences in comparable media. This kind of formal English, particularly written English, is often called standard English. An unofficial standard for spoken American English has also developed, as a result of mass media and geographic and social mobility. This lecture will focus on the background of British and American English along with comparative analysis of British and American pronunciation. Within British English pronunciation, one speech variety, the so-called Received Pronunciation, is recognized which will be also discussed and it is really important when speaking about English pronunciation.Speakers of a language manifest all kinds of differences, which makes languages stratified on every level – phonological, morphological, lexical, syntactic and semantic, in three dimensions – temporal, spatial, and social. This makes their varieties and dialects. Varieties in the pronunciation of a language, including intonation, are often called accents. An accent as a speech variety is a way a person pronounces words depending on the area/country they come from. 'Language transfer' is the transfer of linguistic specifics acquired in the native tongue to the second or foreign language. Present-day English is divided into a number of varieties in pronunciation. 'Englishness refers to all the English language varieties that have been used and are still used worldwide. Regarding this, there is the Scottish English, American English, Australian English, New Zealand English, South African English, Irish English (Hiberno).Very often when working with students from different backgrounds it is obvious that they speak the language differently. Students at "Goce

Delcev" University study the course Phonetics and Phonology during their second year of studies and consider this course a very difficult one. The reason for that is the fact that within the course, rules about pronunciation in terms of RP (received pronunciation) are taught and they are accustomed to following the American variety because they are more exposed to it.

From one hand, dialect is a form of language that is spoken by people that belong to a certain area within a country. Dialects may contain different grammar rules and different vocabulary. According to Etman and Beex (2015) dialect can be defined as the language characteristics of a specific community. As such, a certain dialect can be recognized by the speaker's used phonemes, pronunciation, and traits such as tonality, loudness, and nasality. However, differences in pronunciation according to temporal dimension amount to phonetic differences between younger and older generations as well.Social dialects concern distinctions among social and professional strata and classes. On the other hand, geographical dialects refer to various areas in which a variety of English is spoken.

Sometimes it is even possible to identify speech characteristics of a part of a town (East End in London, Brooklyn in New York, etc.). However, more attention is paid to specific features of wider regions (Scotland, Ireland, England, Canada, Eastern or Southern States, Australia etc.).Idiolect is an individual's distinctive and unique use of language, including speech. This unique usage encompasses vocabulary, grammar, and pronunciation.

8.1 Received Pronunciation (R.P)

Within British English pronunciation, one speech variety, the so-called Received Pronunciation, is recognized. RP is neither geographical nor social dialect, since in present-day English it is not associated with any specific region or social circle in Britain. It originated as a local speech of the upper class of the southeast England and of London, as a political, cultural and economic center. In the recent past, RP was associated with highly educated people and with the speech of BBC announcers. RP does not enjoy its former prestige, since nowadays all kinds of dialects are used in formal and public communication. Nowadays, with introducing the term in Phonetics and Phonology, students find this term obsolete and tend to avoid it but are still eager to learn more about it However, RP has become a model to which speakers measure their own dialect and the future of RP is in the mouths of posh young things who if anything were liable to sound even posher than their elders (Gimson, 1970). RP is also a model imitated in countries in which English is taught as a foreign language if British English is chosen.

8.2 American vs. British Variety

English Language Teaching (ELT) and Language Testing industries have always had a major influence on the propagation of certain beliefs about which accents should be preferred over others. The reference accent for British English is called Received Pronunciation (RP), nowadays somewhat more neutrally also referred to as BBC (English). The term was originally coined by Daniel Jones (1918) and was supposed to reflect the speech of educated Southern schoolboys, i.e. students attending public schools. It is often also referred to as 'the Queen's English' or 'Oxford English', but both of these terms are rather inapplicable because both accents show clear differences, at least in comparison to mainstream RP. John Wells' Accents of English (1982) gives an excellent outline of the different types of RP, which is really notable because it also makes one realize that RP is not something clearly tangible and eternally fixed, but an accent that keeps on changing and shows a high degree of variability, just like any other. One of the main and most important facts about RP, however, is that it is an accent that is only spoken by about 3-4% of the British population.

The reference accent for American English is called General American and is to some extent based on the speech of the more prestigious New England states, but also shows considerable variation. The English language was first introduced to America by British colonization, beginning in the early 17th century. Similarly, the language spread to numerous other parts of the world as a result of British trade and colonization elsewhere and the spread of the former British Empire, which, by 1921, held sway over a population of about 470-570 million people: approximately a quarter of the world's population at that time.

Over the past 400 years, the form of the language used in America – especially in the United States – and that used in the British Isles have diverged in a few minor ways, leading to the dialects now occasionally referred to as American English and British English. Differences between the two include pronunciation, grammar, vocabulary (lexis), spelling, punctuation, idioms, formatting of dates and numbers, and so on, although the differences in written and most spoken grammar structure tend to be much more minor than those of other aspects of the language in terms of mutual intelligibility. A small number of words have completely different meanings between the two dialects or are even unknown or not used in one of the dialects. One particular contribution towards formalizing these differences came from Noah Webster, who wrote the first American dictionary published in 1828 with the intention of showing that people in the United States spoke a different dialect from Britain, much like a regional accent (Chapman, 2002).

Nevertheless, it remains the case that although spoken American and British English are generally mutually intelligible, there are enough differences to cause occasional misunderstandings or at times embarrassment – for example, some words that are quite innocent in one dialect may be considered vulgar in the other. Written forms of American and British English as found in newspapers and textbooks vary little in their essential features, with only occasional noticeable differences in comparable media (comparing American newspapers to British newspapers, for example). This kind of formal English, particularly written English, is often called «standard English». An unofficial standard for spoken American English has also developed, as a result of mass media and geographic and social mobility.
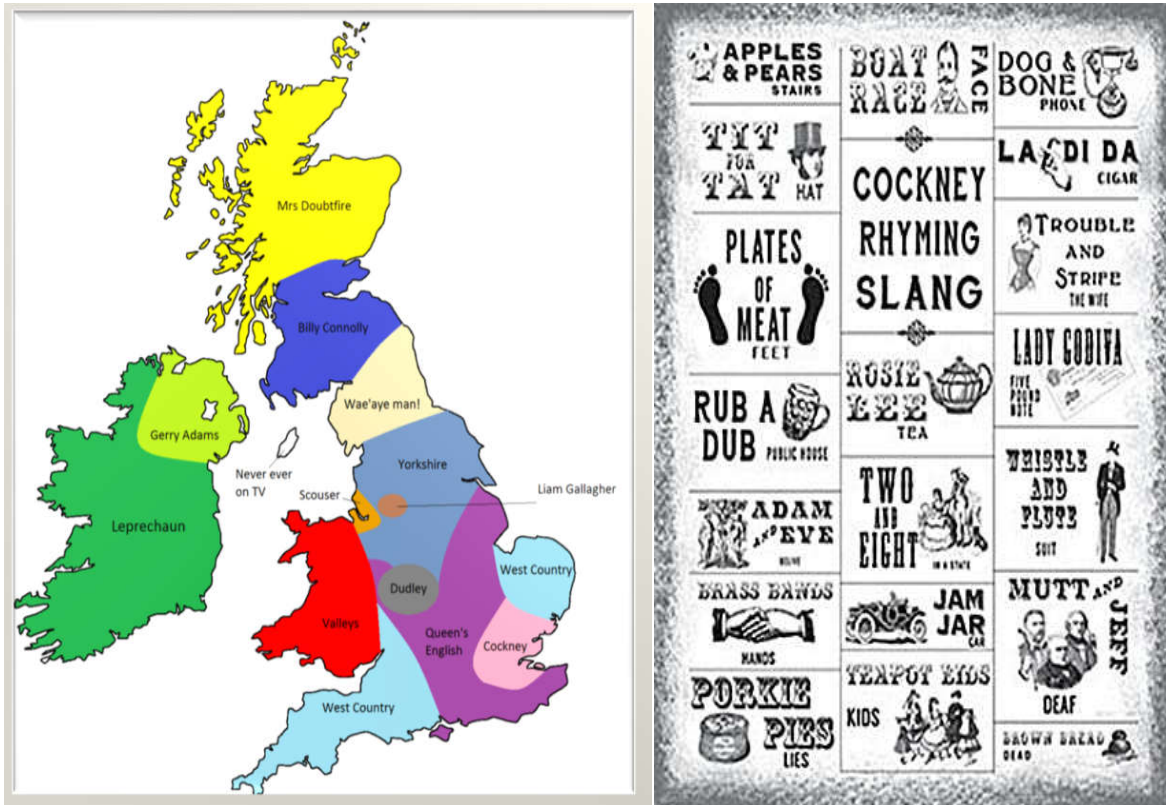
Finally, English exists in the world today as a means of international communication; as a way for people from different social groups to communicate with each other and to fulfill this function it would seem that variation in the language needs to be curtailed to a certain extent. Thus, if the language becomes too diverse it will not remain mutually comprehensible across different social groups. So, there are two impulses at work that are seemingly incompatible, or perhaps even in conflict, and the question is how to render them as consistent, as both being part of the existence of a single entity we call 'English'. Even though today's young people are more exposed to the American variety, it is better to learn the rules of RP first and then choose the variety that suits you. What is important in this sense is to achieve successful communication no matter the variety or the accent.

8.3 Cockney

Cockney is actually an English dialect traditionally used by the working-class Londoners. Anyone from London, especially from the East End, is frequently referred to as a "cockney."
Long time ago, this was considered a late Middle English phrase from the 14th century that literally meant "cocks' egg" (i.e., a little or faulty egg, supposed to come from a rooster—which, of course, cannot produce eggs) has historically been associated as a term with negative connotation (a pampered or spoiled child). Nowadays, the situation is different. Most outsiders consider everyone from London to be a "Cockney", despite the fact that modern Londoners, particularly those from the city's East End, use the term with pride. A person who was born within hearing distance of the church bells of St. Mary-le-Bow, Cheapside, in the City of London, is best described as a Cockney in both the geographical and cultural aspects.

Questions to consider:

1. What is RP?
2. Which variety of English language do you prefer and why?
3. What is Cockney?

Picture 33 Where and how is Cockney spoken?

(sources: https://cockneydialect.wordpress.com/2017/06/18/features/
https://www.amazon.co.uk/Cockney-Rhyming-Slang-Small-Sign/dp/B00IHE2PRC)

Lecture 9: Spelling to sound correspondences

> *Spelling to sound correspondences: a tool for teachers and adults to improve pronounciation*

A child's understanding of letter-sound relationships is one of the aspects that mostly affect their ability to learn to read.This has an impact on how quickly a child can identify a letter and recall the sound it "says."There is a widespread belief, though, that English has too many irregular spellings for instruction to be centered on teaching kids how to sound out words. It is difficult to pronounce terms like: the, were, are, one, and what, when trying to sound them out.The 26 letters of the English alphabet are used to represent the more than 44 sounds found in English speech, either individually or in combination.However, it is not simply that there are not enough letters to go around to allow for a very simple, one-to-one correlation between a letter and its sound. Many English words are borrowed from other languages, and their spellings can be peculiar.The terms that appear in print the most frequently tend to have worse, irregular spellings. English spellings can seem particularly perplexing when compared to other alphabetic languages.Unfortunately, educators now educate kids to recall words as entire forms rather than teaching them the alphabet because they believe that the English language is so irregular.The English language appears to be far more irrational than one may imagine based on the frequency of words with unusual spellings.The truth is that the English language is not irregular enough to support teaching youngsters to memorize every word they come across, one at a time, in no particular order, but exactly as they occur in non-graded storybooks.

The focus on inconsistencies is actually misleading when it comes to training a youngster to read rather than to spell.The spelling-to-sound relationships required for reading are much more regular than the letter-sound relationships required for spelling. The letter f stands for the /f/ sound with which the word fan was heard early in . But the sound /f/ can be written in many different ways, such as f, ff, ph, andgh. When teaching children to read, the most common letter-sound relationships can be taught first. With almost all consonants, there is an ideal correspondence, one to one, between a letter and its sound. These 21 letter shapes and the sounds they represent are almost entirely predictable.

Vowels are the most irregular, but can be t- r – d w-th – t th-m. If the letter vowel correspondences are taught in sequence from the most common spelling to the less common sound associations, they will be easier for children to learn and practice. Words with more common short vowel pronunciations (cat, pet, sit, stand) can be taught before words with less common long vowel pronunciations (ate, bit, cone; or wait, eat, tie, boat).

If the position of the letters in the words is taken into account, the spelling is more accurate than we think. For example, if the letters f, l, s and z appear at the end of a word, they are duplicated: puff, sell,buzz.

The systematic regularity of groups of letters makes English more regular. For example, the group of letters -igh always represents the sound /I/ (eye), as it is heard in the words night and me.If letter vowel correspondences are taught in sequence from the most common spelling to the less common sound associations, they will be easier for children to learn and practice. If we take into account the position of the letters in the words, the spelling is more accurate than we think. For example, the group of letters -igh always represents the sound /I/ (eye), as it is heard in the words night and me.

To sum up, spelling to sound correspondences can be a tool for teachers and/or adults to:

❖ verify consonant sound/spelling correspondence;
❖ develop their knowledge of the vowel system;
❖ develop their ability to teach it.

<div style="border:1px solid">**Glossary of some of the most important phonetic and phonological terms**</div>

- accent: the relative prominence of a syllable in a word due to stress or pitch
- allophone: phonetically similar bundles of distinctive and non-distinctive features and members of the phoneme
- alveolarridge:thesmall bonyridge behindtheupper frontteeth
- alveolar: a sound produced near or on the alveolar ridge
- articulatory organs – (or articulators): are the different parts ofthe vocal tract that can change the shape of the air flow.
- aspiration: when a strong plosive /p,t,k/ is immediately followed by a vowel and that occurs at the beginning of an accented syllable
- assimilation - phonemic variation in which a certain phoneme is replaced by another one
- assimilation: when a phoneme "A" is replaced by a phoneme "B" under the influence of a third phoneme "C"
- coalescence - phonemic variation in which a certain phoneme is replaced by a third phoneme and preserves the main feature
- coarticulation - modification of adjacent sounds for better communication
- complementary distribution: when one allophone or variation of a phoneme operates in a separate context from another
- consonant cluster:a sequence of consonants at the beginning or end of a syllable
- consonant: a sound in which the breath is partly obstructed in a form of a barrier or pressure by two vocal organs
- cockney: a native of East London, traditionally one born within hearing of Bow Bells (living in East London)
- dialect:refers to a variety of a language used by a group of people and distinguished by its grammar and lexis.
- diphthong: a vowel requiring two articulations, a nucleus an da glide.
- egressive:sounds created by expelling the air from the lungs out through the mouth or nose.
- elision - omission of sounds
- ellipsis: the deletion of certain sounds in connected speech.
- final position: the position of a sound at the end of a syllable or word.
- fortis:a fortis sound involves greater effort, that is,muscular tension,to produce and is usually voiceless.
- free phonemic variations - different phonemes with identical meanings in the same environment

- frequency: the speed of vibration of the vocal folds.
- fricative:a term applied to the manner of articulation of consonants where the constriction of the airflow between articulators causes friction(e.g./s//z/).
- glottal stop: if the vocal folds are tightly closed (i.e. the glottis is tightly shut) a stop sound can be produced when pent up air behind the closure is suddenly released.
- glottal:sounds made where the vocal folds are the articulators(e.g./h/).
- glottis:the space between the vocal folds or cords.
- gradation - changes in speech only for grammar words
- ingressive:sounds created while breathing in or inhaling.
- initialposition:the position of a sound at the beginning of a syllable or word.
- intonation:the pitch pattern of speech.
- intrusive'r':when it ispossible to hear linking/r/ when there is no'r'in the spelling of the word.For example,'lawandorder'–'lawrandorder'.
- IPA:stands for theInternational Phonetic Association.
- labial:a sound articulated with the lips.
- labiodental:place of articulation involving the upper lip and the lower teeth,suchas/f/.
- labio-dental:sounds produced with the top teeth and bottom lip.
- larynx(alsoknownasthevoice-box):an organ at the top of the windpipe,containing the vocal cords which produce voice.
- lateral: describes a manner of articulation of consonants where contact between articulators restricts central airflow so that the air escapes around the sides or laterally,as in /l/.
- linking - inserting certain sounds in connected speech, such as linking "r"
- medial position:a consonant is in medial position(or intervocalic position)when it comes between vowel sounds,as the /t/ in butter.
- minimal pair :when sounds occurring in identical environments produce a difference in meaning in only one sound,for example,curl vs girl.
- monophthongs: or pure vowels: where the tongue remains in a relatively stable position throughout the articulation.
- nasalcavity:the upper part of the vocal tract inside the nose.
- nasal: a consonant sound ,produced with the softpalate lowered so that air passes through the nasal cavity, such as /n/.
- palate: the roof of the mouth which can be subdivided into the hard and the soft palate (velum).
- palato-alveolar:describessoundsproducedjustbehindthealveolarridge.
- phoneme - bundle of distinctive features which make up a speech unit

- phonetics:the scientific description of speech sounds across languages,unrelated to a specific language.
- phonology:the study of sound patterns within a particular language
- phonotactics: study of sequences of phonemes i.e. restrictions on which phonemes can go together at the beginning,middle or end of syllables and native speakers know these rules subconsciously.
- pitch range:refers to the upper and lower limits of a speaker's vocal pitch.
- pitch:the perceived level of the voice,based on frequency.
- plosives:sounds which make a complete stoppage of the air stream,forexample,/p//t/.
- post-alveolar: sounds where the tip of tongue falls just behind the gumridge and before the hard palate,also termed palato-alveolar,forexample,/ʃ/in'sheep'.
- redundancy - the possibility to predict the presence of a linguistic unit based on knowledge of sounds
- RP:Received Pronunciation – a term used to define a variety of southern English which is commonly used as the standard pronunciation model,despite the fact that few people speak it in its full form
- schwa:isthemostfrequentlyocurringvowelinEnglish.Itonlyoccursinunstressedsyllables.
- segmental phonology:is concerned with describing individual phonemes or sound segments.
- sonorants:a term covering nasals,approximants and vowels. The sonority of a sound is its inherent loudness or strength.
- sonority: the loudness of a speech sound compared to other sounds.
- speech - the activity of human organism by which sounds of a language are produced, transmitted through the air and received
- speech organs or speech mechanism: the organs in the various parts of the speech mechanism which modify the air expelled from the lungs on its way through the throat, mouth and nose.
- Standard English: this generally refers to the use of standard syntax or lexis.however,it does not necessarily imply standard pronunciation, so for instance Standard English could be spoken with a non-standard,regional accent,rather than RP.
- stress:refers to the relative prominence of a syllable within a word(i.e.wordstress),oraword within in a thought group (i.e.nuclear stress).
- suprasegmental phonology: the study of these broader aspects of the sound system such as syllables, words and connected speech.
- syllabic consonant: when a vowel occurring between one consonant and a final sonorant consonant is elided(e.g.suddensʌdn̩)./l,n,m,ŋ,r/ all occur as syllabic consonants.

- syllable: a phonological unit between a word and a phoneme which normally contains at least a single vowel as the nucleus.
- triphthong:a vowel composed of three sounds,a rapid glide from one sound to another and then to a third.
- unvoiced/voiceless sound: describes sounds where the vocal cords do not vibrate.
- uvula:this is the soft,fleshy hanging tip that falls from the base of the soft palate
- velar: a velar sound is produced at the velum, or the soft palate.
- vocoid:phonetic term describing sounds that do not obstruct the airflow–typically vowels.
- voiced sound:a sound produced with vibration of the vocal cords.
- voiceless sound: when the vocal folds are held wide apart, as in relaxed breathing, air passes through freely.
- vowel elision:when a vowel is elided or disappears.
- vowel insertion: involves adding an additional vowel to ease a difficult articulation.
- weak syllable:a syllable which is unstressed and typically contains a short vowel or schwa.
- whisper:a voice quality setting where the folds are brought close together but without vibration.
- word stress: or 'accent' refers to the syllable or syllables of a word which stand out from the remainder by being more prominent.

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БИОГРАФСКИ ПОДАТОЦИ

Натка Јанкова Алаѓозовска е родена на 15.01.1986 во Струмица каде го завршила основното и средното образование. Додипломските и постдипломските студии ги завршила на универзитетот „Св.Св. Кирил и Методиј" во Велико Трново, Република Бугарија. На крајот на постдипломските студии добила стипендија за тримесечен престој во Обединетото Кралство на Универзитетот Волверхемптон каде работела на нејзината магистерска теза. Од ноември 2008 година работи како наставник по англиски јазик во СОУ „Никола Карев" во Струмица, а во ноември 2009 се стекнува со титулата магистер по филолошки науки.

Од септември, 2011-та година до јуни 2019-та год. работи како визитинг лектор на Факултетот за странски јазици на Универзитетот ФОН во одделението во Струмица. Во тој период има присуствувано на повеќе конференции во земјата и странство и има објавено доста стручни трудови од различни области и тоа: интеркултурна комуникација, англиска литература, методика на наставата по англиски јазик, англиски јазик во струка и други.

До сега има одржано повеќе обуки за наставници по англиски јазик ориентирани кон методика за предавање и изучување англиски јазик. Во декември 2016-та година добива стипендија за 10-неделен онлајн курс за наставници по англиски јазик од областа на англиски јазик во струка одржан од професори од Универзитетот Орегон од САД, а истиот е стипендиран од Американската амбасада и се стекнува со сертификат за обучувач од гореспоменатата област.

По многубројните активности, во декември 2015-та година се запишува на докторски студии на Универзитетот на Југоисточна Европа во Тетово. Во ноември 2017 год. го остварува и својот студиски престој на престижниот „Јеил" и познатата библиотека во склоп на универзитетот каде собира податоци за својата докторска теза. На 19.02.2019 год. се стекнува со титулата доктор по филолошки науки по одбранетата теза насловена „ Познавање на интеркултуролошка комуникација кај наставниците по англиски јазик".

До сега има објавено над 30 трудови и една монографија во две изданија.Од ноември, 2019-та година, работи како доцент од областа англистика на филолошкиот факултет во склоп на Универзитетот „Гоце Делчев" - Штип и ги предава предметите фонетика, фонологија и морфологија на англискиот јазик.