

E-book

FUNDAMENTALS OF PHONETICS AND PHONOLOGY

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У навчально-методичному посібнику висвітлюються основні положення фонетичної теорії англійської мови. Більшість розділів супроводжуються практичними вправами. Матеріал відібраний у відповідності до програми державного стандарту і подається у логічно-зростаючому порядку за своєю складністю і структурою, що дозволить студенту-філологу систематизувати свої знання з практичної фонетики і фонології.

Посібник розрахований на викладачів та студентів факультетів романо-германської філології.

PHONETICS AS A SCIENCE. PHONEME.

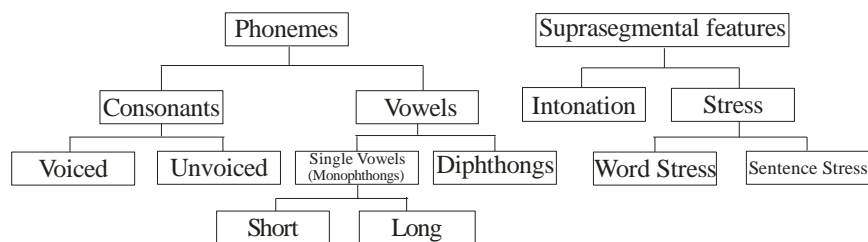
The study of pronunciation consists of two fields: *phonetics* and *phonology*.

Phonetics is a science, which deals with pronunciation and the phonetic structure of a language. It refers to the study of speech sounds.

Pronunciation includes the system of all the phonetic means of expression in speech – speech sounds, word-stress, and intonation. All of them are important and should not be underestimated in studying a language.

In order to understand how something works it is often useful to break it down into its constituent parts. The following diagram shows a breakdown of the main features of pronunciation.

Features of Pronunciation



Phonetic investigations may be carried out in different areas, thus a phonetician may work in one or more of the following areas:

- the anatomical, neurological and physiological bases of speech (known as *physiological phonetics*)
- the actions and movements of the speech organs in producing sounds (*articulatory phonetics*)
- the nature and acoustics of the sound waves which transmit speech (*acoustic phonetics*)
- how speech is received by the ears (*auditory phonetics*)
- how speech is perceived by the brain (*perceptual phonetics*)

Phonetics is a wide-ranging field, and it does not necessarily have a direct connection with the study of language itself. While the phonetic disciplines listed above can be studied independently of one another, they are clearly connected: speech organs move to create sounds, which travel in sound waves, which are received by the ears and transmitted to the brain.

Phonetics as a science began to be developed in the 19th century. The factors that stimulated its development were:

1. more thorough acquaintance with the functioning of the human speech apparatus;
2. the investigation of many linguists who studied languages that had no alphabets;
3. the compiling of alphabets for such languages.

So, phonetics is a branch of linguistics, which deals with the physical reality of speech sounds. It studies the articulation and their acoustic qualities and the physical characteristics and sound perception.

Phonology is primarily concerned with how we interpret and systematise sounds. It deals with the system and pattern of the sounds which exist within particular languages. The study of the phonology of English looks at the vowels, consonants and suprasegmental features (stress and intonation) of the language. Within the discipline of phonology, when we talk about vowels and consonants, we are referring to the different sounds we make when speaking, and not the vowel and consonant letters we refer to when talking about spelling. Much work in phonological study deals with generalisations concerning the organisation and interpretation of sounds that might apply across different languages.

Phonemes, word-stress and intonation are phonetic means of semantic expression in speech, since the substitution of one phoneme for another or an alteration in word-stress changes the word itself.

e.g. [bæd], [bed], [bi:d]

Baudouin de Courtenay, professor of the Kazan University, was the first to expound the theory of the phoneme. In his treatise “On the Comparative Study of the Grammar of Slavonic Languages” he clearly defines the difference between a phoneme and a speech sound. He treats a phoneme as a semantically differentiating unit, and a speech sound as a unit of speech not connected with any meaning. This differentiation

proved to be highly fruitful and made it possible to establish mutual relations between the sound and the phoneme.

So, the phoneme is the smallest articulatory unit of a given language, which can be associated with sense notions and can differentiate words.

e.g. pat [pæt] pet [pet]

sit [sɪt] seat [si:t]

Phonemes are the different sounds within a language. Although there are slight differences in how individuals articulate sounds, we can still describe rather accurately how each sound is produced. When considering meaning, we see how using one sound rather than another can change the meaning of the word. It is this principle which gives us the total number of phonemes in a particular language. For example, the word *rat* has the phonemes [ræt]. If we change the middle phoneme, we get [ru:t] *root*, a different word. But if we pronounce [r] in a slightly different way, the word doesn't change, and we still understand that we mean the same thing. Although different people may pronounce this sound slightly differently, yet they manage to understand each other. These different pronunciations of [r] are known as *allophones*.

An actually pronounced speech sound is always a variant of a phoneme, which is called an allophone. Different allophones of one and the same phoneme are speech sounds, which have one or more features in common, and at the same time differ from one another in some degree because of the influence upon them of their position, adjacent speech sounds and their purely phonetic factors.

e.g. eight [eɪt] – eighth [eɪtθ]

[t] in “eight” is pronounced with the tip of the tongue pressed against the alveoli. It's an alveolar consonant.

[t] in “eighth” is pronounced with the tongue pressed against the upper teeth. It is a dental consonant.

Among the variants of one and the same phoneme there's always one that preserves all the articulatory-acoustic features of the phoneme, which are listed in its phonetic definition,

e.g. [t] – forelingual, apical, alveolar, plosive, voiceless consonant.

It is usually the sound, which would be pronounced by a native speaker in isolation. This sound is called *principle* variant of the phoneme, and all the other variants of the same phoneme are called *subsidiary*.

The theory of the phoneme continued to be investigated by many other scholars, among them D.Jones, W.F.Twaddell, E.Sapier, L.Scherba

PHYSIOLOGY OF SPEECH

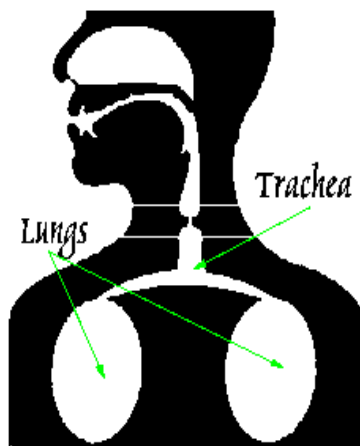
Vocal Tract

Subglottal System

Sound in human language is produced by the regulation of airflow from the lungs through the throat, nose, and mouth. This airflow is altered in various ways by different aspects of this speech system. The first major segment of the speech system is the *subglottal system*. This subglottal system (See Picture 1) comprises the lungs, diaphragm and trachea.

The lungs are basically a pair of balloon-like sacs that inflate or deflate by the action of the diaphragm, a muscle just under the lungs, attached to them. When the diaphragm is lowered, the lungs inflate, and when the diaphragm is raised, air is pressed out of the lungs, allowing them to deflate.

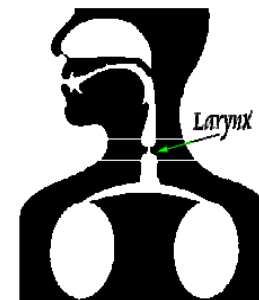
When this air is pressed out of the lungs, air travels up the trachea, or windpipe, to the larynx, the next major segment of the speech system.



Picture 1

The Larynx

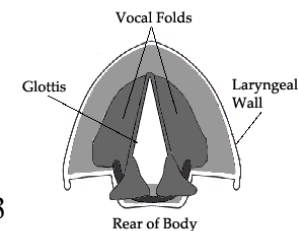
The *larynx* is a mass of cartilage at the top of the trachea. It is commonly called the voicebox. (See Picture 2)



Picture 2

The larynx contains folds of muscle called the *vocal folds* (sometimes called vocal cords). These vocal folds (See Picture 3) are connected to the larynx by the arytenoid cartilage at the front, but the other ends are left free. The opening between the vocal folds is known as the glottis. These folds can be relaxed, letting air flow freely through the glottis, or tensed, so that the air vibrates as it passes through the glottis.

Sounds that are produced with relaxed vocal folds are known as *voiceless* sounds, and sounds that are produced with tensed vocal folds are known as *voiced* sounds. If the folds are only partially closed, a whispered sound is produced. We can check it by putting one of our fingers on the larynx and when producing, for instance, the English [z] – we shall feel the vibration of the vocal cords and hear voice. But if we produce the English sound [s], we shall feel no vibration and no voice.

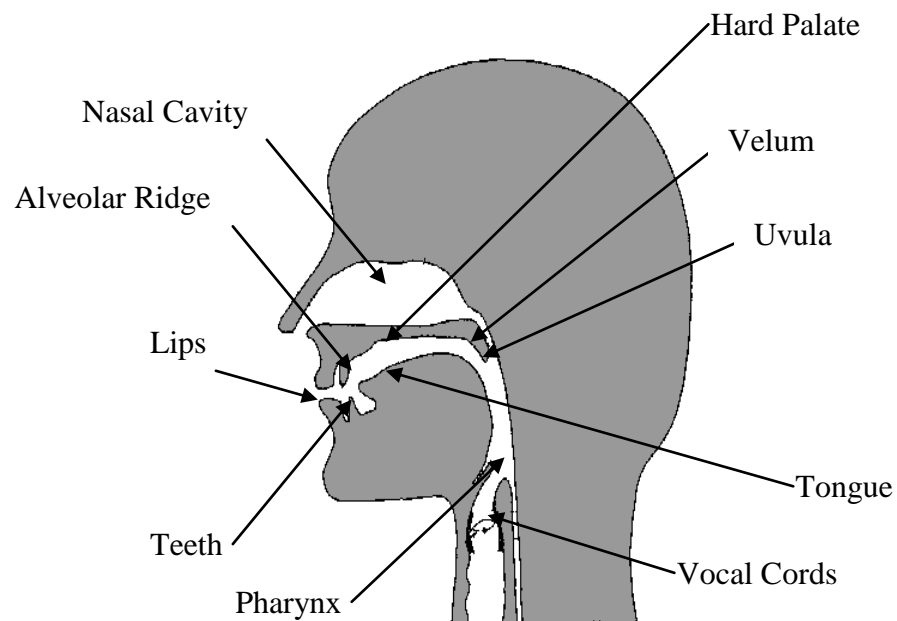


Picture 3

Above the Larynx

The area above the larynx consists of three main areas: the pharynx, the nasal cavity, and the oral cavity. The pharynx consists of the area above the larynx and below the uvula. The oral cavity is the area from the back of the throat to the mouth. The major parts of the oral cavity that are used in speech production are the uvula, the velum, the tongue, the hard palate, the alveolar ridge, the teeth, and the lips. The uvula is that fleshy blob that hangs down in the back of the throat. The velum is the soft palate, and the alveolar ridge is a mass of hard cartilage behind the teeth.

The following graphic shows these major parts of the area, which is also known as the *supraglottal system*.



Summary

The human speaking apparatus consists of the following main parts, which participate in the formation of speech sounds:

The air stream released by *the lungs* comes to *the larynx*, which contains *the vocal cords*. When we breathe out, the vocal cords are in a relaxed position. But if the tense vocal cords are brought together, the air stream, which comes from the lungs makes them vibrate, and we hear some voice. The air stream coming out of the larynx passes through *the pharynx*. Then goes *the soft palate*, which directs the air stream either to *the mouth* or to *the nasal cavity*. The soft palate is the remotest part of the palate from the teeth. Most of the palate is hard. This hard part of the palate is divided into two sections: *the hard palate* (which is the highest part), and *the alveolar ridge*.

The teeth ridge is very important for the English sound formation as many consonants here are formed with the tongue touching it. The lower teeth are not very important for making speech sounds, while the upper teeth take an active part in the production of many of them.

The most important organ of speech is *the tongue*. Phoneticians divide the tongue into four sections: *the tip, the blade, the front, and the back of the tongue*.

The lips can take up various positions while producing speech sounds. They can be firmly brought together or be apart, neutral, rounded or protruded forward.

* * *

All the organs of speech can be classified into two groups:

- active (movable and taking an active part in the sound formation) – the vocal cords, the tongue, the lips, the soft palate, the back wall of the pharynx, the lower jaw, the lungs.
- passive – the teeth, the alveoli, the hard palate, the walls of the mouth and the nasal cavity.

CLASSIFICATION OF SPEECH SOUNDS

The work of speech organs necessary for making speech sounds is called *articulation*.

According to the specific character of articulation, especially according to the presence or absence of the obstruction speech sounds are divided into *vowels* and *consonants*.

The most substantial difference between vowels and consonants is that in the articulation of vowels the air passes freely through the mouth cavity, while in making consonants an obstruction is formed in the mouth cavity or in the pharynx and the flow of the air meets a narrowing or complete obstruction.

Vowels have no fixed place of articulation, the whole of the speaking apparatus takes part in their formation, while the articulation of consonants can be localized, an obstruction or a narrowing for each consonant is formed at a definite place of the speaking apparatus.

In producing vowels all the organs of speech are tense, while in making consonants, the organs of speech are tense only in the place of obstruction. Voice prevails in vowels while in most consonants noise prevails over voice.

Vowels are syllable forming sounds while consonants are not, as a rule.

Besides these two main types of speech sounds there is an intermediate type called *sonorant*. Sonorants have features common to both vowels and consonants.

Like a consonant, a sonorant is characterized by an obstruction as well as by a concentration of muscular tension in the place of obstruction. In making sonorants voice prevails over noise; while in all other consonants (both voiced and unvoiced), noise prevails over voice. This is why under certain conditions sonorants [n] and [l] *become syllabic*.

However, since sonorants are more often non-syllabic, they are usually considered among consonants.

Syllabic Consonants

In certain circumstances in English, a consonant can constitute the centre (or peak) of a syllable instead of a vowel. It is clear that whereas a word like *sad* [sæ d] has one syllable, a word like *sadder* [ˈsæ də] has two. There is clearly a vowel articulated in the second, albeit unstressed, syllable after the consonant [d]. However, in words like *sudden* and *saddle*, the matter is not so clear, because the consonant [d] can be followed by either the consonant [n] or [l] without a vowel intervening. If you pronounce these words correctly, you should notice that the blade of the tongue maintains some kind of constriction as you proceed from the [d] to the [n] or [l] – there cannot possibly, therefore, have been a vowel in between!

In cases like these, the [n] of *sadden* and the [l] of *saddle* constitute the centre of the second, unstressed, syllable and are considered to be syllabic peaks. They typically occur in an unstressed syllable immediately following the alveolar consonants, [t, s, z] as well as [d].

PHONETIC ALPHABET

Spelling does not always reflect the phonetic structure of a word. This is especially true of the English language where owing to the peculiarities of its historical development, there is a great difference between the spelling of a word and its pronunciation. It is necessary to use a special alphabet to show the pronunciation of English words, because the ordinary English alphabet does not have enough letters to represent all the sounds of the language.

It is an unfortunate feature of the English language, that the way its words are spelt does not always match the way its words are pronounced, in the simple and systematic way of other languages. For instance, in most accents of English, the letter “a” is not pronounced the same in the two words *gather* and *father*; and although the two words *father* (‘the male parent’) and *farther* (‘the more distant’) are pronounced the same, at least in most accents in England and Wales, they are spelt differently. There are, in fact, two sides to this mismatching of spelling and pronunciation: a single vowel letter of the alphabet can represent at least two vowel sounds; and a single vowel sound can be represented by at least two different spellings. Another example is the double “o” in *brood* and *brook* – two different vowel sounds, but the same spelling; and *brood* (what birds do) and *brewed* (past tense of the verb *brew*) – two different spellings, but the same vowel sound. This mismatching is found amongst consonants too. The letter “t” in *rat* and *ration* represent very different consonant sounds; double “s” occurs in both *pass* and *passion*, but whereas *passion* and *ration* rhyme, their identical [ʃ] sound is spelt differently. Have you noticed that the first double “s” in the word *possess* is pronounced differently from its second “s”, and that the second double “s” of the word *possession* is different again. The variation amongst consonant letters and consonant sounds is not as great and as mystifying as it is amongst vowel letters and sounds, but it certainly adds to the impression of an unhelpful, perhaps even an unnecessary, complication in the matching up of spelling and pronunciation of words in English. Rather often consonant letters represent nothing in pronunciation, like the “b” in *debt*, the “c” in *muscle*, the “d” in *handkerchief*, etc.

But there is also the case of a consonant sound not being spelt at all: if you compare the pronunciation of the beginning of the two words *youthful* and *useful*, you will notice that the [j] sound is spelt with the letter “y” in the first word, but is not spelt at all in the second; compare *view* and *few* too, where the [j] sound is spelt with the letter “i” in *view*, but not in *few*.

Thus, for the study of the pronunciation of words in English, an extra set of symbols is needed to extend the use of the letters of the alphabet. The use of such phonetic symbols, as they are usually called, to represent pronunciation is not necessary for most languages because the correspondence between spelling and pronunciation is pretty straightforward, but in the case of a few languages like English, it is necessary. Therefore, for scientific and practical purposes phonetic transcription is used in order to avoid ambiguity in representing sounds in writing.

The following list contains all the symbols of the phonetic alphabet with examples of the words in which the sounds that they refer to are found:

Vowels:

[i:]	seat [si:t], feel [fi:l]
[ɪ]	sit [sɪt], in [ɪn]
[e]	set [set], pet [pet]
[æ]	cat [kæt], match [mætʃ]
[ɑ:]	march [mɑ:tʃ], after [ˈɑ:ftə]
[ɒ]	pot [pɒt], gone [gɒn]
[ɔ:]	port [pɔ:t], law [lɔ:]
[ʊ]	good [gʊd], could [kʊd]
[u:]	food [fu:d], group [gru:p]
[ʌ]	much [mʌtʃ], front [frʌnt]
[ɜ:]	turn [tɜ:n], word [wɜ:d]
[ə]	collect [kəˈlekt], until [ənˈtɪl]

[eɪ]	take [teɪk], wait [weɪt]
[aɪ]	mine [maɪn], light [laɪt]
[ɔɪ]	oil [ɔɪl], boy [bɔɪ]
[əʊ] / [ʊ]	no [nəʊ], open [ˈəʊpən]
[aʊ]	house [haʊs], now [naʊ]
[ɪə]	hear [hɪə], deer [dɪə]
[eə] / [ɛə]	air [eə], where [weə]
[ʊə]	tour [tʊə], poor [pʊə]

[g]	go [gəʊ], rug [rʌg]
[m]	my [maɪ], come [kʌm]
[n]	no [nəʊ], on [ɒn]
[ŋ]	sing [sɪŋ], finger [ˈfɪŋɡə]
[l]	love [lʌv], hole [hɜːl]
[r]	round [raʊnd], carry [ˈkæri]
[w]	well [wel], white [waɪt]
[j]	young [jʌŋ], yell [jel]
[h]	house [haʊs], holiday [ˈhɒlɪdi]

Consonants:

[p]	pull [pʊl], cup [kʌp]
[b]	bull [bʊl], rob [rɒb]
[f]	ferry [ˈferi], life [laɪf]
[v]	very [ˈveri], live [lɪv]
[θ]	think [θɪŋk], bath [bɑːθ]
[ð]	then [ðen], with [wɪð]
[t]	take [teɪk], set [set]
[d]	day [deɪ], red [red]
[z]	zoo [zuː], days [deɪz]
[s]	sing [sɪŋ], rice [raɪs]
[ʃ]	show [ʃəʊ], wish [wɪʃ]
[ʒ]	pleasure [ˈpleɪʒə], occasion [əˈkeɪʒən]
[tʃ]	cheap [tʃiːp], catch [kæʃ]
[dʒ]	jail [dʒeɪl], bridge [brɪdʒ]
[k]	case [keɪs], take [teɪk]

The above provided list of sounds clearly shows us the prevalence of English sounds over the letters. In the English alphabet there are 26 letters, which represent 44 sound phonemes: 20 vowels and 24 consonants.

ENGLISH VOWELS

Monophthongs and Diphthongs

English vowel phonemes are divided into two large groups: *monophthongs* and *diphthongs*. This division is based on the stability of articulation.

A *monophthong* is a pure (unchanging) vowel sound. In its pronunciation the organs of speech do not change their position throughout the duration of the vowel; e.g. [ɪ], [e], [æ], [ɒ], etc. In most educated, standard, accents of English – not only in UK, but also around the world – this vowel requires a relatively steady tongue position.

Diphthongs are described as sequences of two vowels pronounced together, the two vocalic elements being members of the same syllable.

Thus, a *diphthong* is a complex sound consisting of two vowel elements pronounced so as to form a single syllable. In the pronunciation of a diphthong the organs of speech start in the position of one vowel and glide gradually in the direction of another vowel, whose full formation is generally not accomplished. The first element of an English diphthong is called *the nucleus*. It is strong, clear and distinct. The second element is rather weak. It is called *the glide*.

In English the movement of the tongue has three possible directions:

- either higher towards the front of the roof of the mouth, that is, in the general direction towards [ɪ] vowel; (front closing)
- or higher towards the back, that is, in the general direction towards the [ʊ] vowel; (back closing)
- or towards a central area, that is, in the general direction of the [ə] vowel. (centring)

These three directions are called *front closing*, *back closing*, and *centring*, respectively.

There are eight diphthongs in English: three front closing with a glide towards [ɪ]: [eɪ], [ɔɪ], [aɪ], two back closing ones with a glide towards [ʊ]: [aʊ], [ɜʊ], three centring with a glide towards [ə]: [ɪə], [eə], [ʊə]. According to the position of the more prominent element in the diphthong we have already divided diphthongs into *falling* diphthongs – if

the prominent element comes first – and *rising* diphthongs – if the less prominent element comes first. All English diphthongs belong to the first category.

An additional term is used to describe the combination of three vowel sounds, a *triphthong**.

e.g. [aʊə] as in *our, power*; [aɪə] as in *hire, fire, tyre*; [ɔɪə] as in *employer*, [eɪə] as in *layer*, [ɜʊə] as in *mower*.

The very existence of triphthongs in present-day English is a controversial problem. The actual pronunciation of these vocalic sequences tends either to break them into the diphthong and the following simple vowel [ə], e.g. *buyer* [baɪ-ə], or to reduce the diphthong to a simple vowel followed by [ə], e.g. *buyer* [baɪə].

Besides these diphthongs, there are two vowels in English [i:], [u:] which may have a diphthongal pronunciation, that is in the articulation of these vowels the organs of speech change their position but very slightly. These vowels are called *diphthongized vowels* or *diphthongoids*.

* Kelly, Gerald. How to teach pronunciation. Bluestone press, Charlbury, Oxfordshire, UK. 2001

PHONOGRAM

The letter symbols that stand for the different speech sounds are called phonograms. A phonogram of two letters that represent a single speech sound is called a digraph. In other words, a digraph is a combination of two letters (a cluster) pronounced as one sound phoneme. We will use the term “*digraph*” only for the two-letter combinations that stand for the six consonant sounds, which are not represented by any one single letter in the English alphabet: *sh*, *th* (voiced), *th* (unvoiced), *ch*, *wh*, and *ng*.

e.g. shell, push, thumb, tooth, whether, church, whisper, long, sing.

A consonant blend is another term, which stands for a true blending of two, sometimes three, consonant sounds in a syllable or word, with no vowel sound between them. A blend may occur in initial, medial, or final position in a word.

Initial consonant blends:

s- *st* – stop, *sp* – spill, *sl* – slam, *sn* – snag, *sc* – scat, *sk* – skin, *sw* – swam, *sm* – smog

-l *bl* – black, *cl* – clap, *fl* – flag, *gl* – glass, *pl* – plan, *sl* – slip

-r *br* – brag, *cr* – crab, *dr* – drill, *fr* – frog, *gr* – grass, *pr* – prop, *tr* – trap, *thr* – thrash, *shr* – shrink

-w *sw* – swim, *tw* – twin, *qu* [kw] – quit

Initial three-sound blends:

scr – scrap, *str* – string, *spr* – spring, *spl* – splash, *squ* – squid

Final consonant blends:

nd – band, *nk* – mink, *nt* – punt, *ct* – fact, *ft* – tuft,

st – past, *sk* – risk, *mp* – bump, *lk* – elk, *lt* – tilt,

pt – wept, *lp* – yelp, *lm* – helm, *nch* – pinch

Final three-sound blends:

xt [kst] – next

Other final three-sound blends occur in the plurals of words having a two-sound blend in their singular form, *e.g. hands, risks, stamps, elks*, etc.

A final four-sound blend occurs in the plural form of the word ‘*texts*’ [teksts] as it already has a three-sound blend in its singular form.

Medial consonant blends:

e.g. velvet, problem, magnet, cutlet, tandem, stampede, transit, transgress, transplant, etc.

The pronunciation of vowel digraphs in a stressed position does not depend on the type of syllable. Some common features characteristic of digraphs make it possible to classify them into the following three groups:

- Digraphs pronounced as diphthongs, *e.g. ei* – [ˈveɪn]; *oi* – [ɔɪl];
- Digraphs pronounced as monophthongs, *e.g. au* – [ˈɔːgəst];
- Digraphs in which only one letter is pronounced in its alphabetical variant and the other (not pronounced) does not affect the general sounding of the digraph, *e.g. ai* – [meɪd] / *maid*; *eu* – [ˈnjuːtrəl] / *neutral*.

However, not always vowel clusters are digraphs. Sometimes they are free combinations of vowels, forming two syllables. Then, the first letter is pronounced as in the open syllable, and the second forms an unstressed syllable.

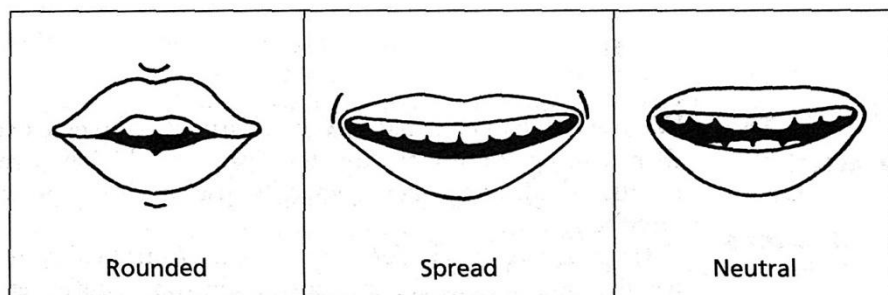
e.g. diet [ˈdaɪət], *trial* [ˈtraɪəl], *duel* [ˈdjuːəl].

CLASSIFICATION OF VOWELS

Vowels are articulated when a voiced airstream is shaped using the tongue and the lips to modify the overall shape of the mouth. The differences in the shape of the mouth are caused by different positions of the tongue and the lips. It is easy to see and feel the lip differences, but it is very difficult to see or to feel the tongue differences, and that is why a detailed description of the tongue position for a certain vowel does not really help us to pronounce it well. English speakers generally use twelve pure vowels (monophthongs) and eight diphthongs.

If you try saying [i:] [e] [æ] [ɒ] [ɔ:] [u:] out loud, you should be able to feel that your tongue changes position in your mouth, yet it doesn't actually obstruct the airflow. Try moving smoothly from one sound to the next, without stopping. You will also be aware of the shape of your lips changing, and your lower jaw moving. It is these basic movements which give vowels their chief characteristics.

If we take a 'snapshot' view of lip positions, this is what we see:



Rounded: the lips are pushed forward into the shape of a circle. Example sound: [ʊ]

Spread: the corners of the lips are moved away from each other, as when smiling. Example sound: [i:]

Neutral: the lips are not noticeably rounded or spread. Example sound: [ə]

English monophthongs can be classified according to the following principles:

- According to the tongue position;
- According to the lip position;
- According to the length of the vowel;
- According to the degree of tenseness;

According to **the position of the tongue** vowels are divided into five groups: front, front-retracted, central, back-advanced and back. This classification is according to the horizontal movement of the tongue.

Front vowels are those which are produced with the bulk of the tongue in the front part of the mouth while the front of the tongue is raised in the direction of the hard palate, forming a large empty space in the back part of the mouth. The English front vowels are [i:], [e], [æ].

Front-retracted vowels are those which are produced with the bulk of the tongue in the front part of the mouth, but somewhat retracted. There is only one front-retracted monophthong in English: [ɪ].

Central vowels are those in which the central part of the tongue (the centre is that part of the tongue which is opposite the juncture between the hard and the soft palate) is raised towards the juncture between the hard and soft palate. English central vowels are [ʌ], [ɜ:], [ə].

Back-advanced vowels are those, which are produced with the bulk of the tongue in the back part of the mouth, but somewhat advanced, e.g. [ʊ].

Back vowels are those, which are produced with the bulk of the tongue in the back part of the mouth, while the back of the tongue is raised towards the hard palate. The English back vowels are [ɑ:], [ɔ:], [u:], [ɒ].

According to **the height of the raised part of the tongue** (or its vertical movement) vowels are divided into three groups: close or high vowels, open or low vowels, mid-open or mid vowels.

When the tongue comes rather close to the palate and the air flows through the passage without causing audible friction, the resulting vowels are called **close or high**. The English close or high vowels are [i:], [ɪ], [u:], [ʊ].

When the tongue is lowered and a wide air passage is formed between the tongue and the roof of the mouth, the resulting vowels are called **open or low**. The English open vowels are [æ], [ɑ:], [ɒ], [ʌ].

Mid-open vowels are those in the production of which the tongue is raised half way between the close and open positions, e.g. [e], [ɜ:], [ə], [ɔ:].

According to the *position of the lips* vowels are divided into *rounded (labialised)* and *unrounded (non-labialised)*.

Rounded vowels are those in the production of which the lips are more or less rounded. The English rounded vowels are [ɔ:], [ɒ], [u:], [ʊ].

Unrounded vowels are produced when the lips are spread or neutral, e.g. [i:], [ɪ], [e], [æ], [ɑ:], [ʌ], [ɜ:], [ə].

According to the *length* vowels may be *long* or *short*.

Short vowels: [ɪ], [e], [æ], [ɒ], [ʌ], [ʊ], [ə].

Long vowels: [i:], [ɜ:], [ɑ:], [ɔ:], [u:].

According to *the degree of tenseness* vowels are divided into *tense* and *lax*.

Tense vowels are produced when the organs of speech are tense. All the English long vowels are tense.

Lax vowels are those, which are produced with lesser tenseness of the speech organs. All the English short vowels are lax.

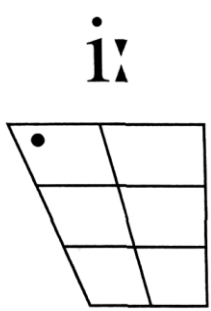
In addition to the above principles, the English vowels are also classified according to *the character of their end*. From this point of view they may be *checked* and *unchecked*.

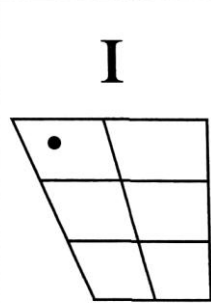
Checked vowels are those, which are pronounced without any lessening the force of utterance towards their end. They have, therefore, a strong end. The English short vowels under stress are checked. So are the English long vowels and diphthongs when followed by voiceless consonants, e.g. [bed], [nɒt], [pʊl], [spi:k], [taɪp].

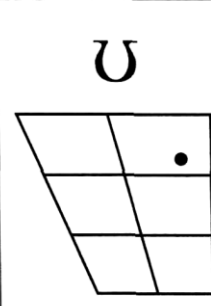
Unchecked vowels are pronounced with lessening the force of utterance towards their end. The English long vowels and diphthongs under stress followed by voiced consonants or in open syllables are unchecked, e.g. [fri:], [kɑ:d], [taɪm], [ˈwɪndəʊ], [ˈfɑ:ðə].

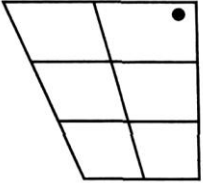
Close Vowels

For close vowels the tongue is quite high in the mouth. Moving from [i:] through to [u:], we also notice the different positions of the tongue; [i:] is a front vowel, and [u:] is a back vowel.

	<p>Characteristics The front of the tongue is slightly behind and below the close front position. (The 'close' position is where the tongue is closest to the roof of the mouth.) Lips are spread. The tongue is tense, and the sides of the tongue touch the upper molars.</p> <p>As in . . . <i>bead, key, cheese, scene, police, people, quay</i></p>
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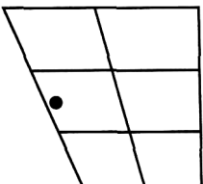
	<p>Characteristics The part of the tongue slightly nearer the centre is raised to just above the half-close position (not as high as in /i:/). The lips are spread loosely, and the tongue is more relaxed. The sides of the tongue may just touch the upper molars.</p> <p>As in . . . <i>hit, sausage, biggest, rhythm, mountain, busy, women, sieve</i></p>
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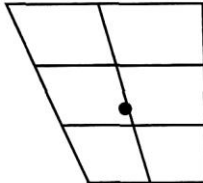
	<p>Characteristics The part of the tongue just behind the centre is raised, just above the half-close position. The lips are rounded, but loosely so. The tongue is relatively relaxed.</p> <p>As in . . . <i>book, good, woman, push, pull</i></p>
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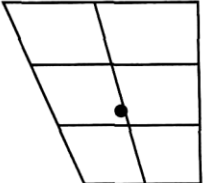
	<p>Characteristics The back of the tongue is raised just below the close position. Lips are rounded. The tongue is tense.</p> <p>As in . . . <i>food, rude, true, who, fruit, soup</i></p>
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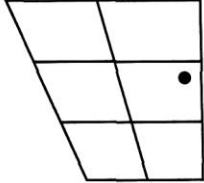
Mid Vowels

For mid vowels the tongue is neither high nor low in the mouth. Moving from [e] through to [ɔ:], we also notice the different positions of the tongue; [e] is a front vowel, and [ɔ:] is a back vowel.

	<p>Characteristics The front of the tongue is between the half-open and half-close positions. Lips are loosely spread. the tongue is tenser than for /ɪ/, and the sides of the tongue may touch the upper molars.</p> <p>As in . . . <i>egg, left, said, head, read (past), instead, any, leisure, leopard</i></p>
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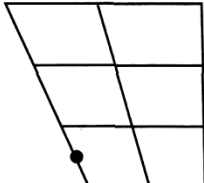
	<p>Characteristics: The centre of the tongue is between the half-close and half-open positions. Lips are relaxed, and neutrally spread.</p> <p>As in . . . <i>about, paper, banana, nation, the</i> (before consonants)</p> <p>Commonest vowel sound in English. Never stressed, and many unstressed vowels tend towards this sound. Differs from other phonemes, in that its contrast with similarly articulated long sound /ɜ:/ does not involve a change of meaning. Gets its name from Hebrew /jəwa:/, meaning 'emptiness', or 'nothing'.</p>
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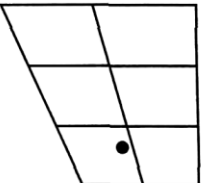
	<p>Characteristics The centre of the tongue is between the half-close and half-open positions. Lips are relaxed, and neutrally spread.</p> <p>As in . . . <i>shirt, her, word, further, pearl, serve, myrtle</i></p>
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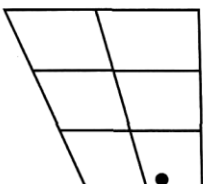
	<p>Characteristics The back of the tongue is raised to between the half-open and half-close positions. Lips are loosely rounded.</p> <p>As in . . . <i>fork, call, snore, taught, bought, board, saw, pour, broad, all, law, horse, hoarse</i></p>
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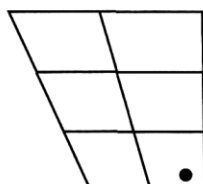
Open Vowels

For open vowels, the tongue is low in the mouth. Moving from [æ] through to [ɒ], we also notice the different positions of the tongue; [æ] is a front vowel, and [ɒ] is a back vowel.

	<p>Characteristics The front of the tongue is raised to just below the half-open position. Lips are neutrally open.</p> <p>As in . . . <i>bat, attack, antique, plait</i></p>
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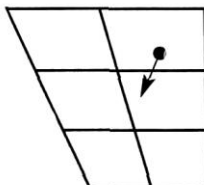
	<p>Characteristics The centre of the tongue is raised to just above the fully open position. Lips are neutrally open.</p>
	As in . . . <i>run, uncle, front, nourish, does, come, flood</i>

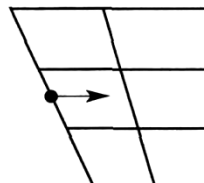
	<p>Characteristics The tongue, between the centre and the back, is in the fully open position. Lips are neutrally open.</p>
	As in . . . <i>far, part, half, class, command, clerk, memoir, aunty, hearth</i>

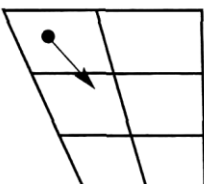
	<p>Characteristics The back of the tongue is in the fully open position. Lips are lightly rounded.</p>
	As in . . . <i>dog, often, cough, want, because, knowledge, Australia</i>

The following tables show the characteristics of the eight diphthong sounds, in the same manner as the previous vowel tables.

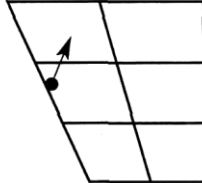
Centring Diphthongs ending in [ə]

	<p>Characteristics The glide begins in the position for /ʊ/, moving forwards and down towards /ə/. The lips are loosely rounded, becoming neutrally spread.</p>
	As in . . . <i>*sure, moor, tour, obscure</i>
	<i>*Quite a rare diphthong. Many speakers replace it with /ɔː/</i>

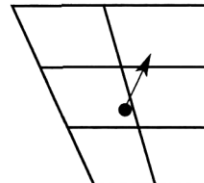
	<p>Characteristics The glide begins in the position for /e/, moving back towards /ə/. The lips remain neutrally open.</p>
	As in . . . <i>where, wear, chair, dare, stare, there</i>

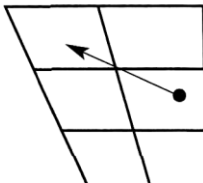
	<p>Characteristics The glide begins in the position for /ɪ/, moving down and back towards /ə/. The lips are neutral, but with a small movement from spread to open.</p>
	As in . . . <i>beer, beard, fear, pierce, Ian, here, idea</i>

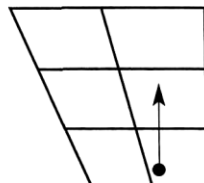
Closing Diphthongs ending in [ɪ]

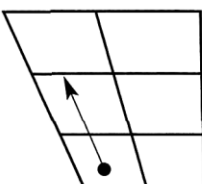
eɪ	<p>Characteristics The glide begins in the position for /e/, moving up and slightly back towards /ɪ/. The lips are spread.</p>
	<p>As in . . . <i>cake, way, weigh, say, pain, they, vein</i></p>

Closing Diphthongs ending in [ʊ]

əʊ	<p>Characteristics The glide begins in the position for /ə/, moving up and back towards /ʊ/. The lips are neutral, but change to loosely rounded.</p>
	<p>As in . . . <i>go, snow, toast, home, hello, although</i></p>

ɔɪ	<p>Characteristics The glide begins in the position for /ɔ:/, moving up and forward towards /ɪ/. The lips start open and rounded, and change to neutral.</p>
	<p>As in . . . <i>toy, avoid, voice, enjoy, boy</i></p>

aʊ	<p>Characteristics The glide begins in a position quite similar to /ɑ:/, moving up towards /ʊ/. The lips start neutral, with a movement to loosely rounded. The glide is not always completed, as the movement involved is extensive.</p>
	<p>As in . . . <i>house, loud, down, how, bough</i></p>

aɪ	<p>Characteristics The glide begins in an open position, between front and centre, moving up and slightly forward towards /ɪ/. The lips move from neutral, to loosely spread.</p>
	<p>As in . . . <i>high, tie, buy, kite, might, cry, eye</i></p>

CLASSIFICATION OF CONSONANTS

The quality of consonants is determined by the following conditions:

- *The active organs of speech, which form the obstruction (consequently the place of obstruction).*
- *The manner of the production of noise (the way of forming obstruction).*
- *The work of the vocal chords.*

According to *the active organs of speech* consonants are divided into labial, lingual and pharyngeal.

Labial. In producing labial consonants the obstruction is formed by the lips. Labial consonants are subdivided into *bilabial* and *labio-dental*. When articulating bilabial consonants the obstruction is formed by the two lips being brought together, e.g. [p], [b], [m], [w]. In pronouncing labio-dental consonants the obstruction is formed by the lower lip being pressed against the upper teeth, e.g. [f], [v].

Lingual. In pronouncing lingual consonants the obstruction is formed by the tongue. Lingual consonants are divided into forelingual, mediolingual and backlingual.

In articulating **forelingual** consonants the obstruction is formed by the front part of the tongue. According to *the shape of the tongue* forelingual consonants are subdivided into apical, dorsal and cacuminal.

a) **Apical.** In articulating apical forelingual consonants the obstruction is formed by the blade of the tongue, including the tip, against either upper teeth or the alveolar ridge, e.g. [θ, ð, t, d, n, l, s, z, (ʒ,ʃ)].

b) **Dorsal.** In articulating dorsal forelingual consonants the obstruction is formed by the blade and the front of the tongue, excluding the tip, against the upper teeth or the alveoli. The tip of the tongue is lowered. The English consonant phonemes ([ʃ], [ʒ]), [ç], [ʝ] are considered by some scientists to be dorsal, though dorsal forelingual consonants are more characteristic of Ukrainian rather than English. Thus, in Ukrainian, for example, palatalized consonants are dorsal.

c) **Cacuminal.** In pronouncing cacuminal forelingual consonants the obstruction is formed by the tip of the tongue being raised against the back part of the alveolar ridge. Only one sound [r] in English is cacuminal.

According to *the place of obstruction*, forelingual consonants are subdivided into *dental* and *alveolar*, *palato-alveolar* and *post-alveolar*.

Dental consonants are subdivided into dental and interdental. In articulating forelingual dental consonants the obstruction is formed by the tongue and the back of the teeth, while in pronouncing forelingual interdental consonants, the tip and the blade of the tongue are placed between the teeth. English [θ], [ð] are interdental (or dental).

Alveolar consonants are articulated with the tip of the tongue against the alveolar-ridge, e.g. [t, d, n, l, s, z].

Palato-alveolar consonants are articulated by the tip and the blade of the tongue against the alveoli or the back part of the alveolar ridge, while the front of the tongue is raised in the direction of the hard palate, e.g. [ʃ, ʒ, ç, ʝ].

Post-alveolar consonants are articulated by the tip of the tongue against the back part of the alveolar ridge, English [r].

Mediolingual consonants (or palatal) are articulated by the front of the tongue raised towards the hard palate, e.g. English [j].

Backlingual (or velar) consonants are articulated by the back of the tongue against the soft palate, e.g. English [k, g, ŋ].

Pharyngeal. In pronouncing pharyngeal consonants the narrowing is formed in the pharynx, which is slightly contracted: English [ħ].

According to *the manner of the production of noise* consonants are divided into three large groups: *occlusive consonants*, *constrictive consonants*, and *affricates*.

I. **Occlusive** consonants. In making occlusive consonants the active organs of speech form a complete obstruction. Occlusive consonants are subdivided into *plosives* and *occlusive (or nasal) sonants*.

In pronouncing *plosives* the articulating organs form a complete obstruction, which is suddenly broken by the pressure of the air exhaled from the lungs and a kind of “explosion”, called plosion, is heard.

e.g. [p, b, t, d, k, g].

In making *occlusive sonants*, or nasals the active organs of speech form a complete obstruction. The air passage through the mouth is blocked, the soft palate is lowered and the air passes through the nasal cavity, e.g. [n, m, ŋ].

II. Constrictive consonants. In making constrictive consonants the active organs of speech do not block the air-passage completely, but form a narrowing of the air-passage. Constrictive consonants are divided into *fricatives and constrictive sonants*.

In making *fricative consonants* the active organs of speech form a narrowing through which the air passes with audible friction, e.g. [f, v, θ, ð, h, s, z, ʃ, ʒ].

In pronouncing *constrictive sonants* the active organs of speech form an obstruction or a narrowing of the air-passage wide enough for the air to pass through without producing audible friction. Constrictive sonants may be:

Central (Approximants), when the flow of the air passes along the central line of the tongue.

e.g. [j, r, w].

Lateral, when the tongue forms a complete obstruction against the alveoli and the air passes along the sides of the tongue: English [l].

III. Affricates. In pronouncing affricates, the articulating organs form a complete obstruction at first and then they are slowly released, forming a narrow air-passage. The air is blocked at first by the complete obstruction and then escapes with a hissing sound, e.g. [tʃ, ʃ].

According to *the work of the vocal chords* consonants are divided into two groups – voiced and voiceless.

In pronouncing *voiceless consonants* the vocal chords are not made to vibrate: [p, t, f, s, ʃ, θ, ʃ, k, h].

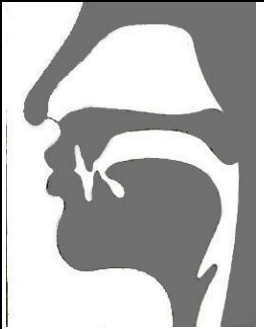
In pronouncing *voiced consonants* the vocal chords are made to vibrate, so that “voice” is produced during their articulation: [b, d, m, w, v, n, z, ʒ, ð, l, r, j, g, ŋ].


The voiceless sounds are usually accompanied by a puff of air known as *aspiration*; there is no aspiration with a voiced sound.

Unvoiced consonants are normally more strongly articulated, held, and/or released with greater energy and pressure than are their voiced counterparts. Voiceless consonants tend to be *fortis*, or strong sounds. Voiced consonants tend to be *lenis*, or weak sounds.

Plosives.

Plosives occur when a complete closure is made somewhere in the vocal tract. Air pressure increases behind the closure, and is then released ‘explosively’. Plosive sounds are also sometimes referred to as stops.

	p	<i>Characteristics:</i> Bilabial sound: total closure is made using both lips. The soft palate is raised. [p] is voiceless and fortis. At the beginning of the word it is pronounced with aspiration. <i>Examples:</i> [pɪn], [kæp], [ˈhæpən]
	b	<i>Characteristics:</i> Bilabial sound: total closure is made using both lips. The soft palate is raised. [b] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [bɪn], [kæb], [ˈkæbɪdʒ]

	t	<i>Characteristics:</i> Alveolar sound. Closure is made by the tongue tip against the alveolar ridge. The soft palate is raised. [t] is unvoiced and fortis. <i>Examples:</i> [tu:], [hæt], [ˈhɒtə]
	d	<i>Characteristics:</i> Alveolar sound. Closure is made by the tongue tip against the alveolar ridge. The soft palate is raised. [d] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [du:], [hæd], [ˈhɑ:də]

	k	<i>Characteristics:</i> Back-lingual sound. Closure is made by the back of the tongue against the soft palate. [k] is unvoiced and fortis. <i>Examples:</i> [kɒt], [pɪk], [ˈpæ kɪt], [kjʊː]
	g	<i>Characteristics:</i> Back-lingual sound. Closure is made by the back of the tongue against the soft palate. [g] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [gɒt], [pɪg], [fəˈɡet]

Affricates.

Affricates occur when a complete closure is made somewhere in the mouth, and the soft palate is raised. Air pressure increases behind the closure, and is then released more slowly than in plosives.

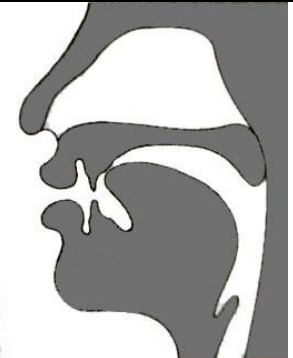
	tʃ	<i>Characteristics:</i> Palato-alveolar sound. The tongue tip, blade and rims close against the alveolar ridge and side teeth. The front of the tongue is raised, and when the air is released, there is audible friction. The soft palate is also raised. [tʃ] is unvoiced and fortis. <i>Examples:</i> [tʃɜːtʃ], [ˈneɪtʃə]
	dʒ	<i>Characteristics:</i> Palato-alveolar sound. The tongue tip, blade and rims close against the alveolar ridge and side teeth. The front of the tongue is raised, and when the air is released, there is audible friction. The soft palate is also raised. [dʒ] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [dʒʌ dʒ], [ˈlɑːdʒə]

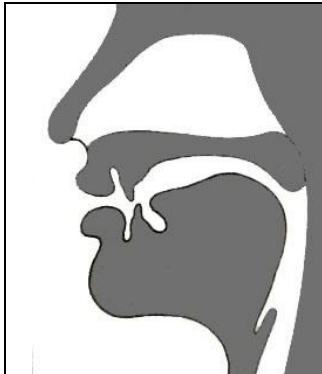
Fricatives.

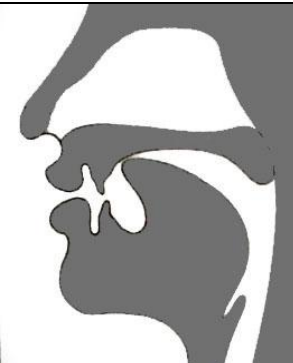
Fricatives occur when two vocal organs come close enough together for the movement of air to be heard between them.

	f	<i>Characteristics:</i> Labio-dental sound. The lower lip makes light contact with the upper teeth. The soft palate is raised. [f] is unvoiced and fortis. <i>Examples:</i> [fæ n], [hʊːf], [ˈkæ feɪ], [feɪz]
	v	<i>Characteristics:</i> Labio-dental sound. The lower lip makes light contact with the upper teeth. The soft palate is raised. [v] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [væ n], [hʊːvz], [ˈkʌvə], [əˈbʌv]

	θ	<i>Characteristics:</i> Dental sound. The tongue tip makes light contact with the back of the top front teeth. Or, tongue tip may protrude between upper and lower teeth. The soft palate is raised. [θ] is unvoiced and fortis. <i>Examples:</i> [θɪŋ k], [bɑːθ], [ɪmæ θɪˈmæ tɪks]
	ð	<i>Characteristics:</i> Dental sound. The tongue tip makes light contact with the back of the top front teeth. Or, tongue tip may protrude between upper and lower teeth. The soft palate is raised. [ð] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [ð ə], [bɛɪð], [ˈfɑːð ə]

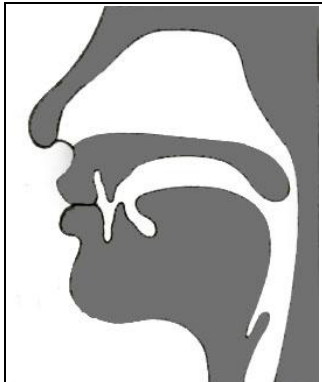
	S	<i>Characteristics:</i> Alveolar sound. The tongue tip makes light contact with the alveolar ridge. The soft palate is raised. [s] is unvoiced and fortis. <i>Examples:</i> [sju:], [ðɪs], [ˈaɪsi]
	Z	<i>Characteristics:</i> Alveolar sound. The tongue tip makes light contact with the alveolar ridge. The soft palate is raised. [z] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>Examples:</i> [zu:], [ðɪz], [ˈleɪzi]


	h	<i>Characteristics:</i> A glottal sound. Air passes from the lungs through the open glottis, causing audible friction. Tongue and lip position is that of the following vowel sound. The soft palate is raised. [h] is unvoiced. <i>Examples:</i> [həˈlɪzʊ], [bɪˈhaɪnd]
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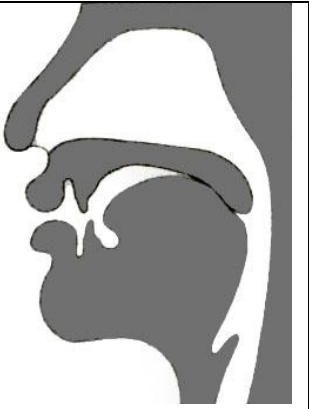
	ʃ	<i>Characteristics:</i> Palato-alveolar sound. The tongue blade makes light contact with the alveolar ridge, and the front of the tongue is raised. The soft palate is also raised. [ʃ] is unvoiced and fortis. <i>Examples:</i> [ʃi:], [fɪʃ], [ˈneɪʃ(ə)n]
	ʒ	<i>Characteristics:</i> Palato-alveolar sound. The tongue blade makes light contact with the alveolar ridge, and the front of the tongue is raised. The soft palate is also raised. [ʒ] is voiced and lenis. At the end of the word the sound is usually devoiced. <i>*This sound does not occur as an initial sound in English, and is rare as a final sound.</i> <i>Examples:</i> [beɪʒ], [ˈmeʒə]

Nasals.

Nasal sounds occur when a complete closure is made somewhere in the mouth, the soft palate is lowered, and air escapes through the nasal cavity.

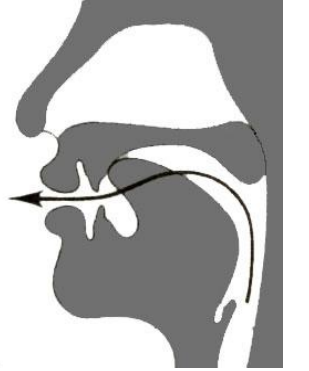
	m	<i>Characteristics:</i> A bilabial sound. Total closure is made by both lips. The soft palate is lowered, and air passes out through the nasal cavity. [m] is voiced, but may be devoiced after [s], for example (as in <i>smart</i>) <i>Examples:</i> [mɔ:], [ru:m], [ˈkæm(ə)rə]
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	n	<p><i>Characteristics:</i> An alveolar sound. The tongue blade closes against the alveolar ridge, and the rims of the tongue against the side teeth. The soft palate is lowered, and air passes out through the nasal cavity. [n] is voiced, but may be devoiced after [s], for example (as in <i>snow</i>)</p> <p><i>Examples:</i> [nɜʊ] (no), [ɒn], [ˈɪnfənt], [nɜʊ] (know)</p>
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	ŋ	<p><i>Characteristics:</i> A back-lingual sound. The back of the tongue closes against the soft palate. The soft palate is lowered, and air passes out through the nasal cavity. [ŋ] is voiced.</p> <p><i>Examples:</i> [sɪŋ], [sɪŋk], [ˈsɪŋɪŋ], [ˈsɪŋkɪŋ]</p>
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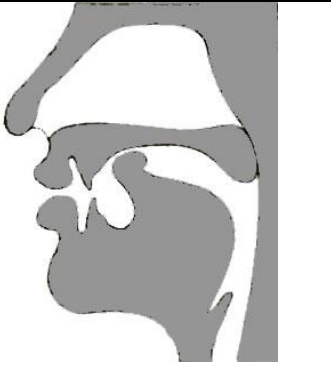
Lateral.

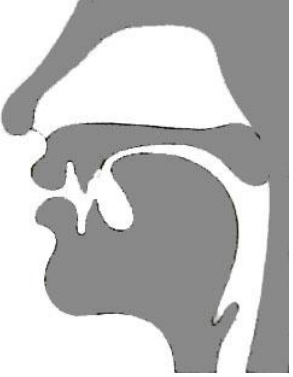
The lateral is so called because, in this sound, the airflow is around the sides of the tongue.


	l	<p><i>Characteristics:</i> A lateral sound. A partial closure is made by the blade of the tongue against the alveolar ridge. Air is able to flow around the sides of the tongue. The soft palate is raised. [l] is voiced.</p> <p><i>Examples:</i> [lɪv], [pʊ:l], [ˈpʊ:lɪŋ]</p>
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Approximants.

Approximants occur when one articulator moves close to another, but not close enough to cause friction or to stop the airflow.

	r	<p><i>Characteristics:</i> An post-alveolar sound as the tongue tip is held just behind (not touching) the alveolar ridge. Back rims of the tongue touch upper molars. The soft palate is raised. [r] is voiced.</p> <p><i>Examples:</i> [red], [ˈhɑri]</p>
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	j	<p><i>Characteristics:</i> A palatal semi-vowel. The tongue is in the position of a close front vowel (similar to [ɪ]). The soft palate is raised. The sound glides quickly to the following vowel. [j] is voiced.</p> <p><i>Examples:</i> [jes], [jʌŋ], [ˈjuːzʊəl], [fjuː], [kjuː], [ˈedʒv(ɜː)kɔɪt], [sjuːt]</p>
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	w	<p><i>Characteristics:</i> A labio-velar semi-vowel. The tongue is in the position of a close back vowel (similar to [ʊ]). The soft palate is raised. The sound glides quickly to the following vowel. [w] is voiced.</p> <p><i>Examples:</i> [wuːd], [wɔːk], [wet], [wi:t], [ˈhɔːlweɪ]</p>
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Note that [w] and [j] are sometimes referred to as ‘semi-vowels’. This is because they are made without a restriction to the airflow, unlike the other consonants. But they act in a consonant-like way; we say *an apple*, but we say *a pear*, *a watermelon* and *a yam*. All three approximants are important linking sounds in connected speech.

WORD STRESS

If we try to say the following words to ourselves (*qualify*, *banana*, *understand*), we will easily notice that all of them have three identifiable syllables, and one of the syllables in each word sounds louder than the others: so we get *QUALify*, *baNAna*, and *underSTAND*. (The syllables indicated in capitals are the stressed syllables.) Each stressed syllable, in a word in isolation, has a change in the pitch, or the level of the speaker's voice, and the vowel sound in that syllable is lengthened.

Stress can fall on the first, middle or last syllables of words, as is shown in the table below:

Ooo	oOo	ooO
SYLlabus	enGAGEment	usheRETTE
SUBStitute	baNAna	kangaROO
TECHnical	phoNETic	underSTAND

If you have any difficulty initially in recognizing where the stress falls, try making the word in question the last word in a short sentence, and saying it over a few times (for example, *I don't understand*). This should help you to ascertain the pattern for the word you are considering. Another idea is to say the word in question as though you have been completely taken by surprise (for example, SYLlabus? baNAna? kangaROO?).

* * *

What are the characteristics of stressed syllables that enable us to identify them? There are two different ways of approaching this question:

- 1) *considering what the speaker does in producing stressed syllables and*
- 2) *considering what characteristics of sound make a syllable seem to a listener to be stressed.*

In other words, we can study stress from the point of view of *production* and of *perception*; the two are obviously closely related, but are not identical. The production of stress is generally believed to depend on the speaker using more muscular energy than is used for unstressed syllables. Measuring muscular effort is difficult, but it seems possible, according to experimental studies, that when we produce stressed syllables, the muscles that we use to expel air from the lungs are more active, producing higher subglottal pressure.

It seems probable that similar things happen with muscles in other parts of our speech apparatus.

Many experiments have been carried out on the perception of stress, and it is clear that many different sound characteristics are important in making a syllable recognisably stressed. From the perceptual point of view, all stressed syllables have one characteristic in common, and that is *prominence*; stressed syllables are recognised as stressed because they are more prominent than unstressed ones. What makes a syllable prominent? At least three different factors are important:

Most people seem to feel that stressed syllables are louder than unstressed. In other words, *loudness* is a component of prominence. However, it is important to realise that it is very difficult for a speaker to make a syllable louder without changing the other two characteristics. The *length* of syllables has an important part to play in prominence. If one of the syllables is made longer, there is quite a strong tendency for that syllable to be heard as stressed.

Every pitch is said on some *pitch*, which is an essentially a *perceptual* characteristics of speech. If one syllable is said with a pitch that is noticeably different from that of the others, this will have a strong tendency to produce the effect of prominence.

Generally the above mentioned factors work together in combination, though syllables may sometimes be made prominent by means of only one or two of them. The strongest effect is produced by pitch, and length is also a powerful factor. Loudness has much less effect.

Placement of stress within a word

As is well known, English is not one of those languages where word stress can be decided simply in relation to the syllables of the word, as can be done in French (where the last syllable is usually stressed), Polish (where the syllable before the last – the penultimate syllable – is stressed) or Czech (where the first syllable is stressed).

Word stress in English is free, but it always falls on a particular syllable of a word, e.g. *'finish*, *re'sult*, *edu'cation*.

The position of word stress in English is the product of its historical development. It has been influenced by different tendencies.

The oldest of them is the *recessive tendency*, according to which the root syllable (the semantic unit of the word) is stressed. So the majority of words of Germanic origin have stresses on the first root syllable, e.g. 'clever, 'body, 'water, 'singing.

If words are formed with the prefixes with no referential meaning the stress is shifted on to the root syllable, which is not initial in this case, e.g. be'gin, be'fore, mis'take.

The second tendency is the result of the mutual influence of Germanic and French accentual patterns. It is known as the *rhythmic tendency*, which manifests itself in stressing the third syllable from the end, e.g. 'situate, ar'ticulate.

Most disyllabic words (words with two syllables) have recessive stress, e.g. 'finish, 'answer, be'hind, re'sult. Though some disyllabic French borrowings retain the primary stress, e.g. ma'chine, po'lice.

Rhythmic stress is especially common for verbs with the suffixes -ate, -fy, -ize.

e.g. 'situate, 'qualify, per'sonify, ar'ticulate, 'improvise.

Levels of stress

So far, we have looked at syllables in terms of being either stressed or unstressed. In fact within longer words syllables can have different degrees of stress. To be more theoretically accurate, we should consider all syllables in terms of their level of stress, rather than its presence or absence, particularly when dealing with words in isolation. Daniel Jones, in *An Outline of English Phonetics* cites the word *opportunity*, which has five levels of stress as seen below. '1' indicates the greatest level of stress, and '5' the least.

2 4 1 5 3
[pə'tju:nɪti]

However, Jones' example seems a little excessive for our purposes, and many commentators agree that in English there are three degrees of word stress:

- stressed syllables (primary stress)
- half-stressed syllables (secondary stress)

unstressed syllables.

The prominence that results from pitch movement, or tone, gives the strongest type of stress, which is called primary stress. In some words we can observe a type of stress that is weaker than primary stress but stronger than unstressed syllables; such type is called secondary stress. It is manifested in polysyllabic words with the primary stress on the third or on the fourth syllable from the beginning.

e.g. 1popu'larity, re1spon'si'bility.

In words with the primary stress on the third syllable the secondary stress usually falls on the first syllable.

e.g. 1deco'ration.

But if the primary stress falls on the fourth or fifth syllable, the secondary stress is on the second syllable, e.g. ar1ticu'lation, ex1perimen'tation.

Consequently, the position of the secondary stress is often that of the primary stress in the original word.

e.g. 1possible – 1possi'bility
ne'gotiate – ne1goti'ation.

Words with two primary stresses

There are several large groups of words in the English language with two equally strong stresses. These words consist of two morphemes. The use of the second strong stress is caused by the semantic significance of both equally stressed elements of the word, e.g. 're'write, 'four'teen.

The following groups of words have two primary stresses:

Polysyllables (words with two or more syllables) with separable prefixes having their own meaning:

Negative prefixes un-, dis-, non-, in- (and its variants ir-, il-, im-), e.g. 'un'able, 'un'known, 'unpre'pared, 'disap'pear, 'discon'nect, 'non'final, 'in'accurate, 'il'literate, 'imma'terial, 'ir'regular, etc.

re- (meaning repetition), e.g. 're'write, 're'organize;

mis- (meaning wrong), e.g. 'misunder'stand, 'mis'print;

pre- (meaning 'before'), e.g. 'prehis'toric;

ex- (meaning 'former'), e.g. 'ex-'wife, 'ex-'minister;

under-, sub- e.g. 'under'change, 'sub'conscious;

inter- e.g. 'inter'change.

Some other rarely used prefixes: anti- 'anti'fascist;

vice- ¹vice¹president;
 ultra- ¹ultra¹violet;
 out- ¹out¹spread.

Sometimes words lose the stress on the prefix in everyday usage, e.g. un¹usual, im¹possible.

The stress on the prefix is also lost in words, which are not used without these prefixes, e.g. dis¹dain, dis¹courage.

Numerals from 13 to 19 including.

e.g. ¹thir¹teen, ¹four¹teen...

Compound numerals, e.g. ¹twenty-¹five, ¹forty-¹four.

Compound adjectives, e.g. ¹well-¹known, ¹kind-¹hearted, ¹half-¹minded.

Phrasal verbs, e.g. to ¹give ¹in, to ¹take ¹off, etc.

Stress in Compound Words

Compound words are words composed of separable root morphemes.

The spelling of compound words differs. They may be spelled as one word, with a hyphen or as two separate words. Among compound words we find compound nouns, adjectives and verbs.

The stress in a compound word depends on the semantic value of its constituents. When the first element restricts the second one or introduces some contrast, is stressed, while the second element of the compound remains unstressed. This is the case with the majority of compound nouns. They are usually single-stressed,

e.g. ¹reading-room, ¹writing-table, ¹apple-tree, ¹raincoat, etc.

This type of word stress in compound nouns differentiates compounds from word combinations in which every word is stressed, e.g.

¹blackbird – дрізд ¹black ¹bird – чорний птах

¹blackboard – класна дошка ¹black ¹board – чорна дошка

¹strong-box – сейф ¹strong ¹box – міцний ящик

Double stressed compound nouns are comparatively rare. In such compounds both elements are equally important, e.g. ¹gas-¹stove, ¹ice¹cream, ¹absent-¹mindedness.

Compound adjectives have generally two stresses because both elements are equally significant in them, e.g. ¹well-¹bred, ¹bare-¹footed, ¹first-¹class.

Compound adjectives with only one stress on the first element occur when the second element is semantically weak, e.g. ¹childlike, ¹springlike, ¹oval-shaped.

Compound verbs have stresses on both elements as they are of equal semantic significance, e.g. to ¹give ¹out, to ¹turn ¹on, etc.

All the above-mentioned words with two equally strong stresses are subjected to the influence of English rhythm in connected speech.

Thus, in a double stressed word the first element is weakened if it is preceded by another stressed syllable. Similarly, the second element loses its stress if it is followed by a stressed syllable,

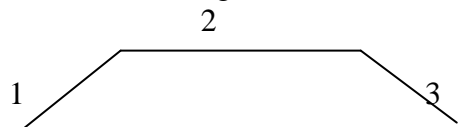
e.g. an [˜]un⁽¹⁾known \ land

[˜]quite⁽¹⁾un \ known

JUNCTION OF SPEECH SOUNDS

Every speech sound pronounced in isolation has three stages of articulation. They are:

- The on-glide (the initial stage);
- The retention (the middle stage);
- The off-glide (the final stage).



The *on-glide* is the stage during which the organs of speech move away from a neutral position to take up the position necessary for the articulation of a consonant or a vowel. The on-glide produces an audible sound.

At the *retention stage* the organs of speech are kept for some time either in the same position or move from one position to another.

The *off-glide* is the stage during which the organs of speech move back to a neutral position. The off-glide of most sounds is not audible but plosives [p, t, k, g, b, d].

Sounds in actual speech are seldom pronounced by themselves, but are usually joined to other sounds within words, phrases and sentences. Thus, in order to pronounce a word consisting of more than one sound, it is necessary to properly join the sounds together. In English there are two principle ways of linking two adjacent speech sounds:

Merging of stages *Interpenetration of stages*

The type of junction depends on the nature of the sounds that are joined together.

C+V – me [mi:], she [ʃi:]

V+C – at [æt], ask [ɑ:sk]

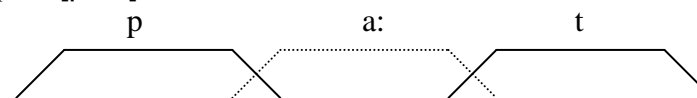
C+C – pupil [pju:pəl], table [teɪbəl]

V+V – reality [rɪ'ælɪti], meander [mɪ'ændə]

Merging of Stages

Merging of stages takes place if two neighbouring sounds of different nature (c+v, v+c) are joined together. In this case the end of the preceding sound penetrates into the beginning of the following one.

e.g. *part* [pɑ:t]



The end of [p] merges with the beginning of [ɑ:] and the end of [ɑ:] merges with the beginning of [t]. It has already been stated that merging of stages usually takes place when sounds of different nature are joined together, that is to say the sounds articulated:

by different organs of speech

e.g. c+v – *me* [mi:]

v+c – *arm* [ɑ:m]

by different parts of the tongue

e.g. c+v – *give* [gɪv]

v+c – *eagle* [i:gl]

both by different organs of speech and by different parts of the tongue

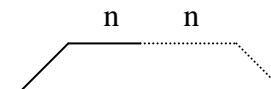
e.g. c+v – *we* [wi:]

v+c – *he was* [hi: wɔ:z]

Interpenetration of Stages

Interpenetration of stages usually takes place when two identical sounds are joined together. In such a case the second sound penetrates into the beginning of the preceding one.

e.g. *unknown* [ˌʌn'nəʊn]

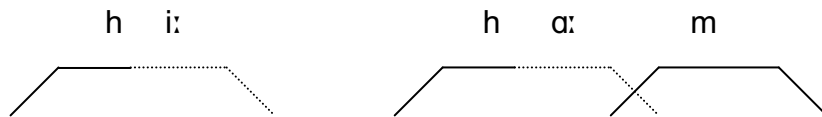


Although there is no interruption in the articulation of both sounds, we do not pronounce one long [n:], but we hear two sounds quite distinctly. This is due to the change in the tenseness of articulation.

Also sounds of different nature articulated by different organs of speech are joined together by means of interpenetration of stages. This is true for the consonant [h] when linked to a vowel. During the articulation of [h] the tongue is prepared for the pronunciation of the following vowel.

e.g. he [hi:],

harm [hɑ:m]



The on-glide of the vowel partly coincides with the on-glide of [h].

THE SYLLABLE

The syllable is a very important unit. Most people seem to believe that, even if they cannot define what a syllable is, they can count how many syllables there are in a given word or sentence. If they are asked to do this, they often tap their finger as they count, which illustrates the syllable's importance in the rhythm of speech. As a matter of fact, if one tries the experiment of asking English speakers to count the syllables in, say, a tape-recorded sentence, there is often a considerable amount of disagreement.

The syllable may be defined both phonetically and phonologically. Phonetically (that is, in relation to the way we produce them and the way they sound), syllables are usually described as consisting of a centre which has little or no obstruction to airflow and which sounds comparatively loud.

All the syllables are of four kinds:

- a minimum syllable, that is a syllable having only one vowel in isolation. *e.g. I [aɪ], are [ɑ:]*
- syllables having an onset, that is they have one or more (but not more than three) consonants before the syllable centre. *e.g. go [gɔʊ], bar [bɑ:], key [ki:], more [mɔ:]*
- syllables having a coda with no onset, that is they have one or more (but not more than four) consonants after the syllable centre. *e.g. am [æ m], ease [i:z]*
- syllables having both an onset and a coda. *e.g. run [rʌ n], fill [fɪ l]*

Looking at the syllables from the phonological point of view is quite different. Here the syllables are studied functionally, namely, methods of syllable division and their formation are investigated, which we are going to talk about on the following pages.

The syllable is a speech unit, which consists of a sound or a sound sequence one of which is heard to be more prominent than the other.

Syllable Formation

The most prominent sound being the peak or the nucleus of a syllable is called *syllabic*. Syllabic sounds are generally vowels and sonants. The latter become syllabic when joined to a preceding consonant. A syllabic sonant is marked by the sign [ˀ], *e.g. [ˀl], [ˀn]*, if it is necessary to show in phonetic transcription. The sonants [w, j, r] are not syllabic.

A word consisting of only one vowel sound represents a separate syllable, *e.g. I [aɪ], are [ɑ:]*. In case of a diphthong the peak of a syllable is formed by its nucleus. *e.g. place [pleɪs]*

Many words in English such as *parcel, level, special, person* and the like could be pronounced with the neutral vowel before the sonant, thus making it non-syllabic.

e.g. [ˀpɑ:səl], [ˀlevəl], [ˀspeʃəl], [ˀpɜ:sən]

In all these words the second prominent sound or the peak is formed by [ə].

Some words in English not having any vowel-letter before the final sonant may be pronounced in both ways.

*e.g. puzzle [ˀpʌzɪ], [ˀpʌzəl]
ruffle [ˀrʌfl], [ˀrʌfəl].*

On the other hand, many words having a vowel-letter before the final sonant are pronounced without the neutral vowel, whereby the sonant is syllabic.

*e.g. garden [ˀgɑ:dŋ]
lesson [ˀlesn]
pupil [ˀpju:pɪ].*

So if a sonant is preceded by a vowel sound, it loses its syllabic character and the syllable is formed by the vowel.

Syllable Division

It is not difficult to count how many syllables a word contains by noticing the peaks or the most prominent sounds in it. However, it is not generally easy to determine precisely the syllable boundary.

Sometimes the beginning of a syllable is marked by a stress.

e.g. create [kriˈeɪt], *concern* [kənˈsɜːn].

In other cases the transition from one vowel sound to another indicates the separation of syllables, *e.g. seeing* [ˈsiːɪŋ], *bluish* [ˈbluːɪʃ]. But there are cases when it is almost impossible to determine the syllable boundary, *e.g. extra* [ˈekstrə]. It's quite evident that there are two syllables in this word as there are two peaks in it. But the syllable division may be marked like this: [ˈe-kstrə], [ˈek-strə], [ˈeks-trə], [ˈekst-rə], [ˈekstr-ə].

Most general syllable division rules are as follows:

1. An intervocalic consonant tends to belong to the following syllabic sound, *e.g. about* [ə-ˈbaʊt], *writing* [ˈraɪ-tɪŋ]. This is true for cases when a consonant is preceded by a long vowel or diphthong.

But in case of a short stressed vowel followed by a consonant, there are three viewpoints concerning the syllable boundary:

- the intervocalic consonant belongs to the short vowel preceding it in order to make it checked.
e.g. pity [ˈpɪt-i], *coffee* [ˈkɒf-i], *better* [ˈbet-ə];
- the intervocalic consonant belongs to the vowel following it.
e.g. pity [ˈpɪ-ti], *coffee* [ˈkɒ-fi], *better* [ˈbe-tə];
- the syllable boundary goes through the consonant.
e.g. [ˈpɪti], coffee [ˈkɒfi], better [ˈbetə];

2. Intervocalic combination of consonants belongs to the following syllabic sound, if such combinations are typical of English.

It is reasonable to admit that the syllable boundary in the word naturally [ˈnæʃrəli] is placed between [ʃ] and [r], [ˈnæʃ-rəli] as [æʃ] and [rə] are possible word final and initial sequences, while the word final [æ] and initial [ʃrə] do not occur in English.

Types of Syllables

Every vowel letter in the English language has at least four different pronunciations. It depends upon the type of syllable in which the vowel letter occurs. The type of syllable, in its turn, is determined by the letters, which follow the stressed vowel sound. Thus, it is a general practice to divide all the syllables into four types.

The *first type of syllable* is called **open** and is subdivided into *absolutely open syllables* and *graphically open syllables*. Here the stressed vowel has its alphabetical pronunciation.

The *absolutely open syllable* is the one ending in a vowel (a minimum syllable or a syllable with just an onset), *e.g. me* [mi:], *no* [nɔ:].

The *graphically open syllables* are called that because phonetically they are closed, but graphically they end in the letter “e”, which is not pronounced. It only shows that the syllable is open, and the vowel sound of that syllable is pronounced as in the absolutely open one.

e.g. face, nice, life, lame [feɪs], [naɪs], [laɪf], [leɪm]

The *second type of syllable* is called **closed**. Here a stressed vowel is followed by one or several consonants (except “r”).

e.g. pen [pɛn], *not* [nɒt].

A vowel letter in the closed syllable makes a short vowel sound. Consonants preceding the vowel don't influence the pronunciation of the vowel.

Syllables in which a vowel is followed by “r” refer to *the third type of syllable*.

The letter ‘r’ is not pronounced, it only makes the preceding vowel longer.

e.g. arm [ɑːm], *fork* [fɔːk]

In case of “double r”, as well as any other double consonant, the stressed vowel of a two-syllable word is pronounced as in the closed syllable.

e.g. marry [ˈmæri], *sorry* [ˈsɒri], *letter* [ˈletə].

The syllable boundary goes through the intervocalic consonant.

The fourth type of syllable resembles the graphically open one. The difference lies in the consonant between the stressed vowel and the final 'e'. This consonant is the letter "r".

e.g. *pure* [pjʊə], *more* [mɔː], *fare* [feə].

Pronunciation of vowels in the four types of syllables

Letter Type of syllable	a	o	u	e	i/y
I	[eɪ] name	[ɜʊ] note	[juː] tune	[iː] me	[aɪ] time, type
II	[æ] map	[ɒ] not	[ʌ] but	[e] spend	[ɪ] sit, myth
III	a+r [ɑː] park	o+r [ɔː] port	u+r [ɜː] fur	e+r [ɜː] her	i/y+r [ɜː] girl, myrtle
IV	a+re [eə] parents	o+re [ɔː] more	u+re [jʊə] pure	e+re [ɪə] here	i/y+re [aɪə] fire, tyre

Modification of English vowels

REDUCTION

Sounds in connected speech can be reduced change their quality or even fall out when unstressed. This phenomenon is called reduction. Reduction is closely connected with the development of the phonetic structure of the language, its grammatical system and vocabulary.

Depending on the character of the change reduction may be *quantitative* and *qualitative*.

Different degrees of length of English vowels according to if they are stressed or unstressed may illustrate the case of quantitative reduction, i.e. shortening of a vowel sound in unstressed position. It affects mainly long vowels, e.g. *he* [hi: - hi - hɪ]. Thus, for example, the English [i:] in the word *meliorate* [ˈmi:ljəreɪt] is longer than the same vowel in the word *melioration* [mi:ljəˈreɪʃn], the same can be said about the sound [ɑ:] in the words *party* [ˈpɑ:ti], *partial* [ˈpɑ:ʃəl], *partiality* [pɑ:ʃɪˈæli:ti].

Qualitative reduction is the obscuration of vowels towards [ə, ɪ, ʊ]. It affects both long and short vowels, e.g. *can* [kæ n - kən]. *You can easily do it* [ju kən - i:zɪli ˌdu: ɪt].

Reduction may be *partial* or *complete* (reduction to zero). In case of partial reduction sounds change their quality or quantity to some degree. In case of reduction to zero a sound in an unstressed position may fall out completely. For example, in the English words *pencil* [ˈpensl], *cotton* [ˈkɒtn], *open* [ˈɒpən], *written* [ˈrɪtn] and some other the vowels in unstressed syllables fall out completely. Sometimes the same words may have partial or complete reduction depending on the style of speech. The sounds of some words may be reduced only partially in full formal style while in colloquial style the same sounds may be reduced completely, e.g. *bacon* [ˈbeɪkən - ˈbeɪkn]. It takes place especially often in reduced forms of English form-words, e.g. *from* [frɒm - frəm - frm]; *can* [kæ n - kən - kn].

Weak Vowels

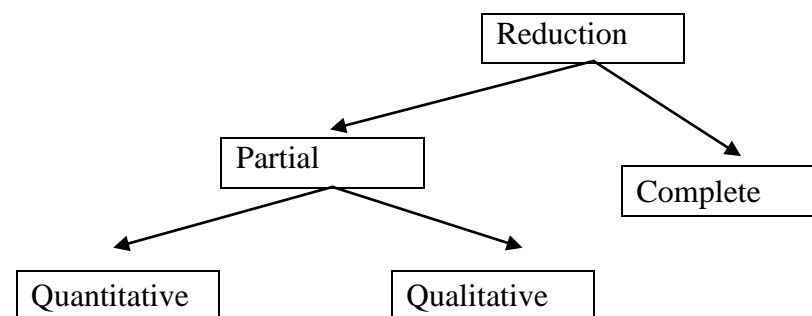
Stress or emphasis also plays an important role in the selection of the so called strong and weak forms of many “grammatical” words of English. They are thus called because it is not their lexical content that primarily matters, but the role they have in the sentence.

Auxiliary verbs like *do*, *have*, *be*, *will*, *shall*, modals like *can* and *must*, prepositions, pronouns, possessives and adverbs have parallel forms: a strong one, when the word is stressed or emphasis is placed on it, and a weak one, when the word is not under stress or any kind of emphasis. The latter form usually has its vowel reduced to schwa [ə] (only [ɪ] is not reduced to schwa). Here are some examples:

[ð e m] → [ð ə m]; I saw them, not you. vs. I don't like th(e)m.
 [kæ n] [kən] [kn] Yes, I can. Vs. I c(a)n tell you an interesting story.
 [hæ v] [hə v] [v] I have obeyed you, I swear. Have you met my wife?
 They've left.

[tʊ] [tə] Where are you going to? I'm going to London.
 [fɔ:] [fə] Who are you waiting for? I'm waiting for John.

Notice in the examples above that, if the preposition is stranded, it is always stressed and consequently the form that occurs is always the strong one.



Elision

The phenomenon of elision can be referred to as *the third type of reduction*. It is vividly seen in some consonant clusters. Thus, reduction as phonetic process affects not only vowels in unstressed positions but also consonants, which enables us to differentiate between vowel and consonantal reduction.

The term elision describes the disappearance of a sound. For example, in the utterance *He leaves next week* speakers would generally elide (leave out) the [t] in *next* saying [nɛks wi:k]. again here, the reason is an economy of effort, and in some instances the difficulty of putting certain consonant sounds together while maintaining a regular speech rhythm and speed.

The process of elision can take place *within a word* as well as at *word boundaries*.

Elision within a word.

The initial [k, g, w] may be dropped, e.g. w|rite, k|now, k|nife, g|nat.

The medial [t] or [d] are dropped in a cluster of three consonants, e.g. *listen* [ˈlɪsn], *soften* [ˈsɒfn], *Wednesday* [ˈwenzdi].

The final [b] is dropped in the cluster *mb*, e.g. *lamb* [læm], *dumb* [dʌm], *climb* [klaɪm].

In the following example the elided sound is still pronounced in careful, precise speech: *often* [ˈɒfn] or [ˈɒftən].

Elision at word boundaries.

The plosives [t] or [d] in final position when followed by a word with an initial consonant are often reduced in rapid speech, e.g. *last time* [ˈlɑ:sˈtaɪm], *next day* [ˈnɛksˈdeɪ], *old man* [ˈɔ:lˈmæn], *kept quiet* [ˈkɛpˈkwaɪət], *lagged behind* [ˈlægbˈhaɪnd], *mustn't do* [ˈmʌsnˈduː].

The sound [h] may be dropped in the following monosyllabic words when they are non-initial and unstressed: *have, has, had; he, his, him, her, who*.

e.g. *Tell him he is wanted* [→tel ɪm ɪz ˌwɒntɪd].

Here are some optional rules for elision:

1. The most common elisions in English are [t] and [d], when they appear within a consonant cluster.

We arrived the next day. ([t] elided between [ks] and [d])

When we reached Paris, we stopped for lunch. ([t] elided between [ʃ] and [p], and between [p] and [f])

We bought a lovely carved statuette. ([d] elided between [v] and [st])

2. Complex consonant clusters are simplified.

She acts like she owns the place! ([æ kts] can be simplified to [æ ks])

Teachers use authentic texts to teach from. ([teksts] can be simplified to [teks])

George the Sixth's throne ([sɪkθs θr] can be simplified to [sɪks θr])

3. [ə] can disappear in unstressed syllables. (some phoneticians call it a complete reduction)

I think we should call the police.

I'll love you forever, promise. Well, perhaps.

It's a question of collective responsibility.

Are you coming out tonight?

That's an interesting idea.

Have we got any vegetables?

4. [v] can disappear in *of*, before consonants.

My birthday's in the 11th of November.

It's a complete waste of time!

That's the least of my worries!

Modification of English consonants

ASSIMILATION

The term *assimilation* describes how sounds modify each other when they meet, usually across word boundaries, but within words too.

If we consider the words *that* and *book*, and look at the phonemes involved, we get [ðæt] and [bʊk]. If we then place the words into a sentence (for example, *Could you pass me that book, please?*), we notice the [t] phoneme at the end of *that* does not sound like it does in the word said on its own. The phoneme [t] is an alveolar sound, which is formed when the tongue blade forms a temporary closure against the alveolar ridge. If you try saying the sentence a few times over, you will notice that the tongue doesn't actually get there at the end of the word. Rather than having our tongue make the unnecessary long journey all the way to the alveolar ridge, we employ an economy of effort, and get our articulators (in this case the lips) ready for the next sound, [b]. The modified sound retains its original voice quality, and so we say that the [t] assimilates to a [p], both sounds being unvoiced. As a result, we get *Could you pass me* [ðæp bʊk]? This is not to say that we give the [p] its full plosive manner of articulation either, as we would if we were to say the non-word [ðæp] on its own, merely that our lips are in the position to make a [p]. The best description is that in readying our articulators for the next sound, certain sounds are either absorbed, or modified into others. There is another possibility: the [t] at the end of *that* could also become a glottal stop, where the glottis (the opening between the vocal cords inside the larynx) closes momentarily.

Other examples involving the same sounds as the above are:

Can you see that boy over there?
Where has the cat been all night?
Who's an cute baby, then?

So, **assimilation** is a phonetic process of alteration of speech sounds in the result of which one of the sounds becomes fully or partially similar to the adjoining sound.

The nature of assimilation is determined by objective physical and physiological conditions. Assimilation exists in every language, but its laws and forms in each language depend on the historically formed articulatory tendencies, typical of every language, and specific phonetic structures.

Assimilation can affect the place of obstruction and the active organs of speech: the work of the vocal chords; the position of the lips; the position of the tongue; the position of the soft palate.

As to *the degree of adaptation* assimilation may be **complete** and **partial** (or incomplete).

When the articulation of a sound is completely changed under the influence of the neighbouring sound so as to coincide with it, assimilation is termed complete. Complete assimilation seldom occurs in English; only a few word-combinations can be provided as an example, e.g. *horseshoe* [ˈhɔːʃʃuː], *less shy* [ˈlɛʃˈʃaɪ].

When the articulation of a sound is only partially changed under the influence of the neighbouring sound, assimilation is termed partial. Cases of partial assimilation can be found in the English words as well as at word boundaries, e.g. *filth* [fɪlθ], where [l] is influenced by [θ] and becomes dental; *tenth* [tɛnθ] – [n] becomes dental before [θ].

G. P. Torsuyev mentions a third intermediate type of assimilation, in which the articulation of a sound is changed completely, but it does not coincide with the assimilating sound, e.g. *fivepence* [ˈfaɪfɛns], *looked* [lʊkt] where [v] and [d] are changed into [f] and [t] under the influence of [p] and [k].

According to *the principle of direction* assimilation may be **progressive**, **regressive** and **reciprocal** (or double).

When the articulation of a sound is changed under the influence of the preceding sound (→) assimilation is termed progressive, e.g. *bags* [bægz], *comes* [kʌmz] where [s] is influenced by the preceding [g] and [m] (voiced consonants) and, as a result, becomes [z] (also voiced).

When the articulation of a sound is changed under the influence of the following sound (←) assimilation is termed regressive, e.g. *horseshoe* [ˈhɔːʃuː], *does she* [ˌdʌʒiː], *tenth* [tɛnθ] – [n] becomes dental.

Besides these two cases there is one more, when the assimilating sounds both influence each other. Such assimilation is called reciprocal (or double). It means complex mutual influence of the adjacent sounds. For example, within the word *tree* [triː] the sonant [r] is partly devoiced under the influence of the voiceless [t] and the alveolar [t], in turn, becomes post-alveolar before the post-alveolar [r].

It may happen so, that the mutual influence of two sounds is so strong that they can fuse completely and give birth to a different sound; this type of assimilation is called *coalescent*, e.g. *Did you do it?* (here sounds [d] and [j] coalesce to form [dʒ]). A native speaker would normally pronounce the sentence in the following way: [dɪdʒ jə ˌduː ɪt].

According to *the distance* between sounds, assimilation may be **contact** or **distant**.

When a sound is influenced by an adjoining sound assimilation is termed contact. For example, in the English word *sixth* [sɪksθ], [s] becomes dental under the influence of the adjoining [θ].

Cases of distant assimilation are typical neither of English nor of Ukrainian.

Historical and Living Assimilation

Assimilation may be historical and living.

When the articulation of a sound was changed under the influence of the neighbouring sound in the course of the development of the language assimilation is called historical, e.g. *impossible* [ɪmˈpɒsɪbəl] – once the negative prefix in- became im- under the influence of [p]; other examples: *illegible* where in- became il- under the influence of [l], *irregular* – in- → ir-.

These changes are reflected in the present spelling.

When the articulation of a sound was changed under the influence of the neighbouring sound in the living spoken language at a certain period of its development, assimilation is called living. All the examples of assimilation provided above, except those illustrating historical assimilation, refer to living assimilation.

Here are some optional rules for assimilation:

1. The phonemes [t], [d] and [n] often become bilabial before bilabial consonants [p], [b] and [m]:

He's a rather fat boy. ([t] assimilates to [p])

She's got an apartment in Manhattan. ([t] assimilates to [p])

He's a very good boy. ([d] assimilates to [b])

There are ten men in the class, and two women. ([n] assimilates to [m])

2. [t] assimilates to [k] before [k] or [g]. [d] assimilates to [g] before [k] or [g]:

Where has that cat been all night? ([t] assimilates to [k])

Can you see that girl over there? ([t] assimilates to [k])

It was a very good concert. ([d] assimilates to [g])

She's a very good girl. ([d] assimilates to [g])

3. [n] can assimilate to [ŋ] before [k] or [g]:

I've been going out to much lately.

He's bringing his own car.

4. [s] can assimilate to [ʃ] before [ʃ]:

I really love this shiny one over there.

5. [z] can assimilate to [ʒ] before [ʃ]:

We found this lovely little cheese shop in Paris.

Here are some cases of coalescent assimilation:

6. [t] and [j] coalesce to form [tʃ]:

You went to France last year, didn't you?

7. [d] and [j] coalesce to form [dʒ]:

Would you like a cup of tea?

Loss of Plosion. Nasal and Lateral Plosion

Loss of Plosion

In the clusters of two plosives [pp, pb, bp, tt, td, dd, dt, tʃ, tʒ, kk, kg, gg, gk] where the position of the organs of speech is the same for both consonants, there is no separation of the organs of speech between two plosives. The hold (retention) stage is prolonged from the beginning of the first consonant until the release of the second. The effect is that of a single plosive pronounced with a longer hold.

*e.g. accommodation; attraction; bookcase
lamp post; what time; went down
that child; that joke; big cat; big garden*

As we see in the example above there is only one 'explosion' for the two plosives as the first sound is incomplete.

Nasal Plosion.

When a plosive is followed by the syllabic [ŋ] or [m] it has no release of its own, thus, the so-called 'nasal' plosion is produced. In such sequences the closure for the plosive is made normally, but the release is produced by the lowering of the soft palate while the closure is retained. That allows the compressed air to escape through the nasal cavity to form the nasal consonant.

*e.g. happen; submarine; button
stop moaning; sob noisily*

Lateral Plosion.

If a plosive is immediately followed by [l] the closure produced for the plosive is not released till after [l]. Before [l] the release is made by a sudden lowering of the sides of the tongue, and the air escapes along the sides of the tongue with lateral plosion.

Linking and Intrusion

When two vowel sounds meet, speakers often link them in various ways. It often happens for economy of effort in conversation.

Linking [r]

Some accents of English are described as rhotic [ˈrʒʊtɪk], which means that when the letter *r* appears in the written word after a vowel (as in *car* or *carve*), the [r] phoneme is used in the pronunciation of the word (as in [kɑːr] and [kɑːrv]). Examples are most dialects of American English, Irish English and certain British regional dialects. Other accents are non-rhotic, and do not pronounce the [r], so we get [kɑː] and [kɑːv]. RP (Received Pronunciation) is non-rhotic. When, however, there is a written *r* at the end of a word and it occurs between two vowel sounds, speakers with non-rhotic accents often use the phoneme [r] to link the preceding vowel to a following one:

Her English is excellent. ([r] is pronounced)

Her German is absolutely awful, though! ([r] is not pronounced)

My brother lives in London. ([r] is not pronounced)

My brother always phones at the wrong time. ([r] is pronounced)

Intrusive [r]

Where two vowel sounds meet and there is no written letter *r*, speakers with non-rhotic accents will still often introduce the [r] phoneme in order to ease the transition. This happens when the first word ends in [ə], [ɑː] or [ɔː]. speakers with rhotic accents tend not to do this:

Princess Diana was a victim of media exploitation. [əre]

The media are to blame. [əɾɑː]

It's a question of law and order. [ɔːrən]

I saw it happen. [ɔːrɪ]

Some speakers also let a [r] intrude within words *drawing* (pronouncing it as [ˈdrɔːrɪŋ]) and *gnawing*.

Linking [j]

When a word ends in [i:], or a diphthong which finishes with [ɪ], speakers often introduce a [j] to ease the transition to a following vowel sound:

I agree, wholeheartedly. [aɪjə]

I think, therefore I am. (Descartes) [aɪjæm]

I am, therefore I ought to be. (G. Kelly) [aɪjæm] [aɪjɔːt]

They are, aren't they? (linking [j], and linking [r]) [ðeɪjɑː rɑːnt]

This happens because in order to form [i:] and [ɪ], the mouth is in more or less the same position as it is for the start of the semi-vowel [j].

Linking [w]

When a word ends in [u:], or a diphthong which finishes with [ʊ], speakers often introduce a [w] to ease the transition to a following sound:

Go on! Go in! [gəʊwɒn] [gəʊwɪn]

Are you inside, or are you outside? [juːwɪn] [juːwaʊt]

Who is? [huːwɪz]

You are. [juːwɑː]

This happens because in order to form [U] and [u], the mouth is in more or less the same position as it is for the start of the semi-vowel [w].

JUNCTURE

Try saying the sentence *I scream, you scream, we all scream for ice-cream*. Although the phonemes involved in the underlined words are the same, subtle differences help us tell the deed from the dessert. The same subtle differences in the use of phonemes are also found in the underlined words in the following two sentences:

The clock keeps ticking. [ki:ps tɪkɪŋ]

The kids keep sticking things on the wall. [ki:p stɪkɪŋ]

The difference in the pronunciation of the underlined words, despite the fact that the phonemes are the same, are differences of juncture. A deeper analysis of such examples would show differences in the length of vowel sounds, variations in degrees of syllable stress, differently timed articulation of the consonant sounds and allophonic variations too. So, while the phonemes may be the same, listeners have no difficulty (most of the time) in telling where the join is, and context clearly plays a role there. Other examples showing the same phenomenon are:

That's my train.

It might rain.

The great apes

The grey tapes

In the pair

Can I have some more ice?

Can I have some more rice?

the linking [r] could lead to confusion over juncture, but again context and subtle differences in articulation help us to distinguish which one we have heard. Thus, summarizing what has been said above, we can conclude that it is mainly context that plays an important role in telling the differences of juncture and, thus, helping us to perceive the right meaning.

INTONATION-GROUP

Every sentence consists of one or more intonation-groups.

An intonation-group is a word or a group of words more or less semantically complete and characterized by a certain intonation pattern.

Sometimes an intonation-group may coincide with the whole sentence.

e.g. He is a teacher.

Longer sentences may have more intonation-groups.

e.g. As far as I know, | he is a teacher.||

The vertical bar (|) represents a pause at the end of the intonation-group within a sentence. The end of the sentence is characterized by a relatively long pause (||).

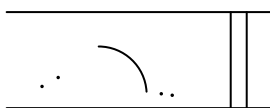
Intonation-group division depends on the meaning of the sentence, the grammatical structure of the utterance and the style of speech.

Pitch of voice (or melody) and stress are the two most important components of the intonation structure. Pitch levels are inseparably connected with stress. Each intonation-group ends either with a *falling* or *rising* tone of the last (or the only) stressed syllable. This tone is called *nuclear*, and the last stressed syllable of an intonation-group is called the *nucleus*.

The Low Fall (низький низхідний тон) most often expresses a complete thought. Emotionally neutral affirmative sentences, special questions, orders, exclamations are pronounced with the Low Fall.

e.g. It is \ difficult.

Graphical representation of the sentence on the staves:

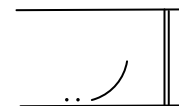


The Low Rise (низький висхідний тон) characterizes non-categorical statements, some intonation-groups closely connected with the following part of the sentence.

General questions and requests are often pronounced with the rising tone. The intonation of the Low Rise starts at the low level and then goes up.

e.g. Is it ↗ six?

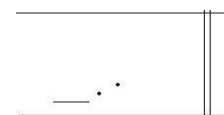
Graphical representation of the sentence on the staves:



If the last stressed syllable with the rising tone is followed by unstressed syllables, the rising occurs on the unstressed syllables.

e.g. ↗ isn't it?

Graphical representation of the sentence on the staves:



The nucleus is the most important part of the intonation pattern as it defines the communicative type of the sentence, determines the semantic value of the intonation-group indicates the communicative centre of the intonation-group or of the whole sentence.

The communicative centre is associated with the most important word or words of the intonation-group or of the sentence.

The nuclear tone of the final intonation-group is determined by the communicative type of the whole sentence. The communicative types of sentences are differentiated in speech according to the aim of the utterance from the point of view of communication, that is in order to show if the sentence expresses a statement of fact, a question, a command or an exclamation.

There are four communicative types of sentences:
Statements, *e.g. I like music.*

Questions, *e.g. Can you prove it?*

Imperatives, *e.g. Try it again.*

Exclamations, *e.g. Right you are!*

The intonation pattern of the non-final intonation-group is determined by the semantic value of the intonation-group and by its connection with the following one. The intonation pattern is also modified by the speaker's attitude towards his utterance.

e.g. ↘ *Why?* – detached, unsympathetic.

↗ *Why?* – wondering.

In English notional words (nouns, adjectives, verbs, etc.) are generally stressed. Form-words and most pronouns (mainly personal and possessive) are generally unstressed. But any part of speech may be stressed if it is semantically important.

e.g. ↘ *What is he* ¹ *going to* ↘ *do?* – do is the communicative center.

→ *What is* ↘ *he* *going to do?* – he is the communicative center.

INTONATION

The information conveyed by a sentence is expressed not only by proper words and grammatical structure but also by intonation. Our perception of information depends to a large extent on the variations of pitch produced by significant moves of the voice up and down, the force of utterance and tempo which is determined by the rate of speech and the length of pauses. The force of utterance is measured by the degree of loudness of syllables that determines the prominence of words.

The term intonation refers to the way the voice goes up and down in pitch when we are speaking. It is a fundamental part of the way we express our own thoughts and it enables us to understand those of others. It is an aspect of language that we are very sensitive to, but mostly at an unconscious level. We perceive intonation, understand it and use it without having to examine the intricacies of everything we say or hear.

As well as helping to determine meaning, intonation gives us clues about the attitude of the speaker, or how he feels about what he is saying. When listening to people speaking, we get clear messages about their attitude from the ways things are said. We can get a good idea, for example, as to whether someone is interested, bored, being kind, being honest or lying, and so on.

Thus, **intonation** is inferred to be a complex unity of variations in pitch, stress, tempo and timbre.

The pitch component of intonation, or melody, is the changes in the pitch of the voice in connected speech.

Sentence stress, or accent, is the greater prominence of one or more words among other words in the same sentence.

Tempo is the relative speed with which sentences and intonation-groups are pronounced in connected speech.

Timbre is a special colouring of the voice, which shows the speaker's emotions.

The four components of intonation listed above help us to perceive the 'real' or rather complete meaning of the discourse. As if reading between the lines, intonation gives us the full understanding of information conveyed.

Linguistic Functions of Intonation

The best way to start on this topic is to ask ourselves what would be lost if we were to speak without intonation: you should try to imagine speech in which every syllable was said on the same level pitch, with no pauses and no changes in speed or loudness. This is the sort of speech that would be produced by a "mechanical speech" device. To put it in the broadest possible terms, we can see that intonation makes it easier for a listener to understand what a speaker is trying to convey. The ways in which intonation does this are very complex, and many suggestions have been made for ways of isolating different functions. Among the most often proposed are the following:

Intonation enables us to express emotions and attitudes as we speak, and this adds a special kind of 'meaning' to spoken language. This is often called the **attitudinal function** of intonation.

Intonation helps to produce the effect of prominence on syllables that need to be perceived as stressed, and in particular the placing of tonic stress on a particular syllable marks out the word to which it belongs as the most important in the tone-unit (intonation-group). This has been called the **accentual function** of intonation.

The listener is better able to recognize the grammar and syntactic structure of what is being said by using the information contained in the intonation: for example, such things as the placement of boundaries between phrases, clauses or sentences, the difference between questions and statements and the use of grammatical subordination may be indicated. This has been called the **grammatical function** of intonation.

Looking at the act of speaking in a broader way, we can see that intonation can signal to the listener what is to be taken as "new" information and what is already "given", can suggest when the speaker is indicating some sort of contrast or link with material in another tone-unit and, in conversation, can convey to the listener what kind of response is expected. Such functions are examples of intonation's **discourse function**.

The **constitutive function** is realized in the formation of sentences, which may consist of one or several intonation-groups. Intonation performs this function not only in oral speech, but also in written language.

Intonation is implicitly present in any written sentence. It is the writer, who puts it there in the process of expressing in written form his thoughts, will, emotions, feelings and attitudes. When writing, he intends his intonations to be reproduced by subsequent readers (both in silent and loud reading) as closely to the original as possible.

The proof of intonation being implicitly present in a written sentence is provided by the use of punctuation marks. Of course, they cannot represent the whole gamut of the extremely rich and varied intonations of living speech. But punctuation marks provide enough cues for the reader to intone written sentences mentally or aloud in such a way as to understand or cause others to understand not only all the thoughts, but also many of the emotions and attitudes expressed in them.

Inseparable from its constitutive function is the **distinctive function** of the pitch component of intonation. It is realized in the discrimination between the communicative types of sentences as well as between the actual meaning of a sentence and the speaker's emotions and attitude to its contents or to the topic of conversation.

e.g. *You →have the ↘book.* (a statement)

You →have the ↗book? (a question)

One and the same word sequence may express a different meaning when pronounced with a different intonation pattern.

Intonation is also a powerful means of differentiating functional styles.

The Anatomy of Intonation Patterns

Voice pitch or melody and sentence stress are the two main components of intonation. Though, they are very closely connected, variations in voice pitch are still most important in an intonation pattern. Pitch-and-stress sections of an intonation pattern, containing several stressed syllables, are *the pre-head, the head, the nucleus and the tail*.

e.g. *I ↘didn't 'know you've 'been to ↘London.*

Each intonation-group has its own pattern. Variations in voice pitch occur within a normal range of the speaking voice that is within the interval between the lower and upper limits.

There are three pitch levels in English:

high

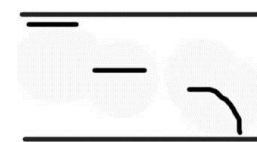
medium

low

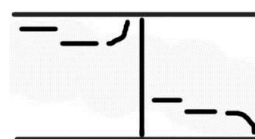
Pitch range is the interval between two pitch levels or two differently pitched syllables. The pitch range of a whole intonation pattern is the interval between the highest-pitched and the lowest-pitched syllables. Pitch ranges may be normal, wide and narrow.



Normal pitch range



Wide pitch range



Narrow pitch range (in high and low levels)

THE HEAD

The head in English is a very flexible segment. It stretches from the first stressed syllable up to (but not including) the nuclear tone.

Head patterns are classified into three major groups: descending, ascending and level.

Descending Heads.

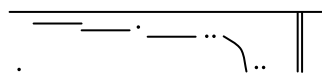
In descending heads the voice usually moves down from a medium or high pitch level to the low one. The stressed and unstressed syllables carry the pitch lower.

The descending heads are subdivided into four groups:

1. *the Stepping Head*
2. *the Falling Head*
3. *the Scandent Head*
4. *the Sliding Head*

In the *Stepping Head* unstressed or partially stressed syllables are pronounced on the same note (level) as the preceding stressed one. Thus, on the staves it is vividly seen that the syllables move down by steps.

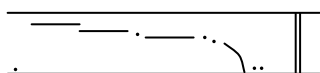
e.g. *I \don't ¹want to ¹go to the \cinema.*



The tone-mark [\] on the first stressed syllable of any type of descending heads shows the general direction of the voice movement, its descending character. Other stressed syllables are marked by [¹].

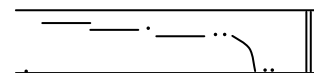
The Head is called *Falling* when unstressed or partially stressed syllables unlike in the stepping head fall down continuing the descending direction.

e.g. *I \don't ¹want to ¹go to the \cinema.*



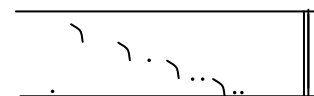
There are cases when unstressed or partially stressed syllables move up. They are pronounced higher than the stressed syllables. This type of descending Head is called *Scandent*.

e.g. *I \don't ¹want to ¹go to the \cinema.*



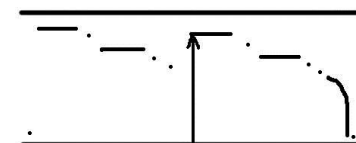
If the voice moves down by slides within stressed syllables, the Head is called *Sliding*. Unstressed or partially stressed syllables between the slides usually continue the fall.

e.g. *I \don't ¹want to ¹go to the \cinema.*



Within long intonation-groups gradually descending heads (usually stepping or falling) may be broken by the so-called '**accidental rise**'. This happens when one of the syllables is pronounced on a higher pitch level than the preceding one. This type of the head is called the *Broken Descending Head*. It is very common when one word in a phrase should be singled out.

e.g. *You'd \get to ¹know quite a \lot of ¹interesting \people.*

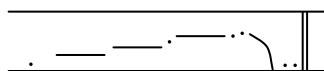


Ascending Heads

Ascending heads are the opposite of descending ones. Their first stressed syllable is low in the pitch, each following stressed syllable being higher than the preceding one.

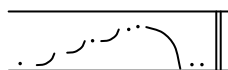
If the voice moves up by steps and unstressed or partially stressed syllables continue to rise, the Head is called *Rising*.

e.g. I ↗ don't ¹want to ¹go to the \ cinema.



The tone-mark [↗] on the first stressed syllable of both types of ascending heads shows the general rising direction of the voice movement. If the voice moves up by slides, the Head is called *Climbing*; unstressed or partially stressed syllables glide up too.

e.g. I ↗ don't ↗ want to ↗ go to the \ cinema.



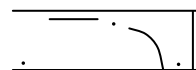
Level Heads

In level heads all the syllables are pronounced on the same note of a pitch level.

If they happen to be on a high level, the head is called the *High Level Head*.

The most frequently used type of the High Level Head is the head with one strongly stressed syllable; unstressed or partially stressed syllables are pronounced on the same high level.

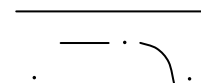
e.g. I → didn't \ know it.



The tone-mark [→] points to the high level of the voice pitch.

If the pre-nuclear stressed or partially stressed syllables are pronounced on the medium pitch level, the head is called the *Medium Level Head*.

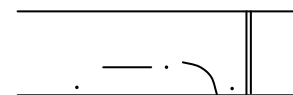
e.g. I → didn't \ know it.



The tone-mark for this type of head is [→] before the first stressed syllable.

If the pre-nuclear stressed or unstressed syllables are pronounced on the low level, the head is called the *Low Level Head*.

e.g. I → didn't \ know it.



Sentences with the Low Level Head sound like a grumble.

THE NUCLEUS

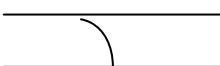
The last stressed syllable of the intonation pattern is called *the nucleus*. It is of the highest importance because the whole pitch pattern centres on it.

There are eight nuclear tones in Modern English:

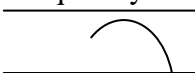
The **Low (Medium) Fall**. The voice falls from the Low (Medium) pitch level to the bottom of the pitch.

↘ *No* 

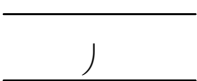
The **High Fall**. The voice falls all the way down from a high to the lowest note possible.

↘ *No* 

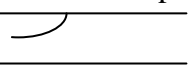
The **Rise-Fall**. The voice usually rises from the medium to the high pitch level and then quickly falls to the low pitch level.

^ *No* 

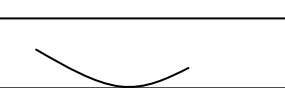
The **Low Rise**. The voice usually rises from a very low to the medium pitch level or a little higher.

↗ *No* 

The **High (Medium) Rise**. The voice rises from the medium or high pitch level and moves up to the top of the voice.

^ *No* 

The **Fall-Rise**. The voice first falls from the medium or high to a rather low pitch level and then rises to the medium pitch.

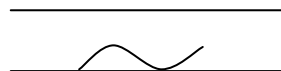
↘ *No* 

The Fall-Rise can be pronounced within one syllable or spread over two or more syllables.

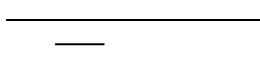
e.g. ↘ *No*  (one syllable)

↘ *Generally I* ↗ *do.*  (many syllables)

The **Rise-Fall-Rise**. The voice rises from a very low pitch level, moves up to the medium (or high) one, falls deep down and then rises again.

~ *No* 

The **Mid-Level**. It maintains the level pitch between high and low. The voice neither rises nor falls.

> *No* 

THE PRE-HEAD

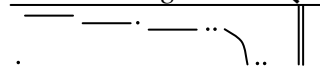
Unstressed or partially stressed syllables, which precede the head are called *the pre-head*.

In short intonation-groups, where there is no head, and these syllables precede the nucleus, they are called *the pre-nucleus*.

There are two types of pre-head or pre-nucleus: *low* and *high*.

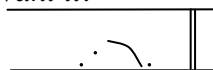
If unstressed or partially stressed syllables are pronounced lower than the first stressed syllable of the head, the pre-head is *low*. In low pre-nucleus these syllables are lower than the start of the nuclear tone.

e.g. I \don't ¹want to ¹go to the \cinema.



The Low Pre-Head

I don't \want it.

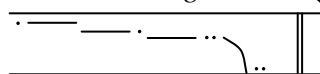


The Low Pre-Nucleus

The Low Pre-Head may occur before any head and Low Pre-Nucleus is heard before any nuclear tone.

If unstressed or partially stressed syllables are pronounced higher or on the same level as the first stressed syllable of the head, the pre-head is called *high*. In High Pre-Nucleus these syllables are higher than the start of the nuclear tone, or they may occur on the same level.

e.g. I \don't ¹want to ¹go to the \cinema.



The High Pre-Head

I don't \want it.



The High Pre-Nucleus

The High Pre-Head usually occurs before descending and high or medium level heads. The High Pre-Nucleus can be heard before almost any nuclear tone.

THE TAIL

Post-nuclear unstressed or partially stressed syllables are called *the tail*.

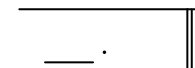
After a falling nucleus the tail remains low or is said even lower.

e.g. \No, sir

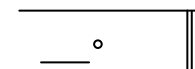


In case the tail occurs after the rising nucleus, the stressed syllable itself does not rise in pitch, and each of the following unstressed syllables is a step higher than the previous one.

e.g. /No, sir

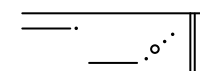


/No, ¹Tom



Partially stressed syllables are marked [°].

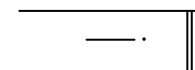
e.g. →Did you /see him ¹yesterday?



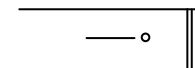
After the Mid-Level the tail stays on the same level.

e.g.

> No, sir



>No, ¹Tom



INTONATION OF STATEMENTS

Statements are most widely used with the Low (Medium) Fall preceded by the Falling Head or the High (Medium) Level Head. In all these cases they sound final, complete and definite.

e.g. It's ↘difficult.

It was →not so ↘easy.

If the statement is intended to be soothing or encouraging the last stressed syllable is pronounced either with the Low Rise or the Mid-Level nuclear tones usually preceded by the Falling or High (Medium) Level Heads.

e.g. It's →all > right.

Statements are also used with the low rising tone when they are intended as questions.

e.g. You ↗like it?

If the statement is a grumble, it is pronounced with Low Head + Low Fall.

e.g. I →didn't ex↘pect to see you here.

If the statement is a correction of what someone else has said, or contradiction to something previously uttered, it is used with the Fall-Rise usually preceded by the Falling Head or the High (Medium) Level Head.

e.g. – He is ↘thirty.

– He is →thirty-↘five.

INTONATION OF SPECIAL QUESTIONS

Special questions are most commonly used with the low falling tone on the last stressed syllable preceded by the Falling Head or the High (Medium) Level Head. In these cases they sound serious, searching and business-like.

e.g. ↘Why did you de¹cide to ¹do ↘that?

→What's the ↘matter?

If one wants to sound friendly or to show much interest in the subject or the other person, special questions will be said with the low rising tone.

e.g. ↘Where do you ¹live ↗now?

→What's your ↗name?

It's also possible to use the low rising tone on the question word. In such cases, special questions sound echoing, as if repeatedly requesting for information.

e.g. – I →went with ↘Jack.

– ↗Who did you go with?

INTONATION OF GENERAL QUESTIONS

General questions are usually pronounced with the Low-Rise preceded by the Falling Head or the High (Medium) Level Head. With this pattern they sound genuinely interested.

e.g. ↘Do you 'know ¹that ↗Lady?
→Can you ↗hear?

When general questions are said with the low falling nuclear tone, they are put forward as a serious suggestion, invitation or a subject for urgent discussion.

e.g. ↘Will you ¹come to ¹my ↘place?
→Shall we post ↘pone it?

In short questions used as responses like 'Do you?', 'Did you?', 'Has she?' The Low Fall is used.

e.g. – I went to the cinema last night.
– ↘Did you?

INTONATION OF IMPERATIVES

Imperative sentences are semantically divided into: *commands* and *requests*.

Commands with the Low Fall are very powerful, intense, serious and strong. The speaker appears to take it for granted that he will be obeyed.

e.g. →Try the ↘other key.

↘Come and have ¹dinner with ↘Tom.

Commands with the High Fall seem to suggest a course of action rather than to give an order; the speaker does not seem to be worrying whether he will be obeyed or not.

e.g. →Put some more ↘milk in it.

Requests with the Low Rise preceded by the Falling or the High (Medium) Level Heads sound soothing and encouraging.

e.g. Don't ↗move.

↘Come and ¹stay with us a ↗gain soon.

Requests with the Fall-Rise sound pleading.

e.g. ↘Don't for¹get to re[∨]mind me.

Question tags, mostly 'will you' or 'won't you?' are frequently combined with imperatives.

An often heard pattern of an imperative sentences consisting of two intonation-groups has the Low Fall in the imperative, itself and the Low Rise in the question tag.

e.g. →Sit ↘down, | ↗won't you?

Another possible way to pronounce such an imperative is to use low falling tones in both intonation-groups.

e.g. →Stand ↘still, | ↘will you?

Such usage of two falling tones is heard in circumstances of considerable exasperation to the speaker.

INTONATION OF EXCLAMATIONS

Exclamations are very common with the High Fall.

e.g. *What an extraordinary piece of \luck!*

The Low falling tone is used in exclamations, which sound unexpected or not very exciting.

e.g. *→That's \nice.*

\Wonderful.

Exclamations are also used with the Low Fall or the High Fall preceded by the High Pre-Nucleus. In this case they sound emotional and expressive.

e.g. *What \nonsense!*



INTONATION OF ADVERBIAL PHRASES

Adverbial phrases at the beginning of a simple sentence normally form a separate intonation-group pronounced with the Low Rise or the Mid-level.

e.g. *>Yesterday | I \stayed ¹in all \day.*

Near the \window | there was a →big \sofa.

In sentence final position adverbial phrases do not form an intonation-group.

e.g. *I \stayed ¹in all \day yesterday.*

However, if the adverbial phrase in the sentence final position qualifies the meaning of the sentence, rather in a manner of an afterthought, added comments, it is pronounced as a separate intonation-group.

e.g. *→Send it a \way | at \once.*

INTONATION OF ENUMERATION

Enumeration is represented by a number of homogeneous parts. Each of them is pronounced as a separate intonation-group.

The terminal tone of the final intonation-group depends on the communicative type of the sentence. The terminal tone of the non-final intonation-group may be different.

The Low Rise or the Mid-Level is used for continuative purposes to show that there is more to be said. Frequently each following intonation-group is pronounced a bit lower than the preceding one.

e.g. I →bought some ↗socks, | ↗shirts, | and ↘ties.

All he →does is >sleep, | >eat, | and ↘play.

If the enumeration is not completed, the final intonation-group is pronounced with the Low Rise or the Mid-Level.

e.g. You can have po ↗tatoes, | ↗carrots, | ↗cabbages...

In case the speaker wishes the enumeration to be regarded as separate items of interest, the Low Fall is used. Such sentences are pronounced in a slow deliberate way and with longer pauses.

e.g. She ↘loved him, | ↘trusted him, | be ↘lieved in him.

SEQUENCE OF TONES IN DISJUNCTIVE QUESTIONS

Disjunctive questions consist of at least two sense-groups represented by a statement (affirmative or negative) and a question tag (negative or affirmative). The choice of tones in disjunctive questions depends on the speaker's certainty of the facts expressed in the first sense-group.

The most common pattern for a disjunctive question is the Low Fall in the first intonation-group followed by the Low Rise in the question tag.

e.g. It is →quite ↘simple, | ↗isn't it?

This pattern implies a mixture of positiveness and doubt. The speaker would not be very surprised if he were contradicted.

It's also possible to pronounce a disjunctive question with two low falling tones. In this case the Low Fall in the second intonation-group shows that the speaker demands agreement from the listener.

e.g. He is a ↘clever man, | ↘isn't he?

In conversational English these tags have lost their questioning function and are often used formally. In these cases they are pronounced with a very short pause and require no answer.

e.g. →Lovely ↘day, | ↘isn't it?

In some cases the first intonation-group can be pronounced with the Low Rise or the Fall-Rise. When the first intonation-group ends with the Low Rise, the Low Fall in the second intonation-group appeals for confirmation or support.

The second Low Rise may exactly echo the first in the statement. The first intonation-group with the Low Rise sounds protesting, calling the listener to revise his opinion, while the rise in the tag question manifests uncertainty.

e.g. They will ↗come, | ↗won't they?

SEQUENCE OF TONES IN ALTERNATIVE QUESTIONS

An alternative question is usually represented by two intonation-groups. The first intonation-group is most commonly pronounced with the low rising nuclear tone, and the second one is pronounced with the Low Fall.

e.g. Have you a ↗son | or a ↘daughter?

There may be, of course, a choice of three or more alternatives. In this case the intonation-groups preceding the final one are pronounced with the Low Rise as they may be treated as items of enumeration. The final intonation-group has the Low Fall.

e.g. Would you ↗like ↗milk, | ↗tea, | or ↘coffee?

Alternative questions should not be mixed up with general questions, which are pronounced with the rising tone at the end.

e.g. Have you a ↗son | or a ↘daughter?

Have you a ↗son or a ↗daughter? (meaning: Have you any children?)
In colloquial speech alternative questions can be reduced to one intonation-group.

INTONATION OF DIRECT ADDRESS

Direct address can stand in the sentence initial, medial and final positions. At the beginning of the sentence it usually forms a separate intonation-group pronounced with the Low Fall in formal, serious speech and with the Fall-Rise in a friendly conversation or to attract the listener's attention.

*e.g. ↘Students, | ↘switch ¹on the ¹tape-recorders and ¹listen to the ↘text.
↘Mother, | could I ↘go and ¹play ¹football ↗now?*

In sentence medial and final positions direct address frequently sounds as an unstressed or partially stressed tail of the preceding intonation-group.

e.g. Good ↘morning, Mrs. Wood (one intonation-group).

However, sometimes direct address may form a separate intonation-group in the middle or at the end of the sentence. In such a case it is pronounced with the Fall-Rise.

e.g. ↘Shut the ¹door be ↘hind you, | ↘Peter.

INTONATION OF PARENTHESES

Parentheses, consisting of a word, word combination or a clause, show the speaker's attitude towards the idea expressed in the sentence, connect the sentence with another one or summarize what is said in the sentence.

At the beginning of the sentence parentheses may or may not form an intonation-group. If the speaker considers the parentheses to be important, it is arranged as a separate intonation-group most frequently pronounced with the Low Rise or the Mid-Level.

e.g. >Well, | \what's the \matter with you, \Mr. \Walker?

To attach more importance the parentheses, it can be pronounced with the Low Fall or the Fall-Rise.

e.g. As I \say, | it's been \to one of those \days | when \everything \seems to go \wrong.

For my \own \part, | I should \love it.

Parentheses of no semantic importance for the sentence do not form intonation-groups and remain usually unstressed.

e.g. Well I \to don't \know.

In the middle or at the end of the sentence parenthetical words and phrases are generally pronounced as the unstressed or partially stressed tail of the preceding intonation-group

e.g. You \know, of course | he's my \brother.

A \walking \holiday de\pends upon the \weather, of course.

INTONATION OF AUTHOR'S WORDS

The author's words may either introduce direct speech or conclude it. Sometimes they interrupt direct speech breaking the phrase into at least two intonation-groups.

The author's words preceding direct speech should be treated as a separate intonation-group. So they are pronounced with almost any terminal tone.

e.g. And \to then he \said, | "\to Praps you are > right".

And \to then he \said, | "\to Praps you are > right".

And \to then he \said, | "\to Praps you are > right".

If author's words follow direct speech, they continue as an unstressed or partially stressed tail of the preceding intonation-group.

e.g. "What's \that?" he asked.

"Is \to this for \me?" he asked with sur\prise.

In case author's words form a fairly long sequence they may be arranged into a separate intonation-group pronounced with the same terminal tone as the preceding one but on a lower pitch.

e.g. "Come \here," | he \to ordered in a \sharp \voice.

When the author's words consist potentially of two or more intonation-groups, the first of them is pronounced in the way mentioned above. The second and the third are pronounced each on a lower pitch level than the first one.

e.g. "It's \to rather ex\pensive," she re\marked | \to looking in the \shop window.

The non-final intonation-groups may be pronounced either with the low rising or the low falling tone in accordance with the semantic importance and completeness of the thought.

e.g. "I've \to nearly \finished it", | he ex\claimed >smiling | with a \note of \pride in his \voice.

SEQUENCE OF TONES IN COMPOUND SENTENCES

The sequence of tones in compound sentences consisting of two or more coordinating clauses depends on the degree of their semantic unity. If the non-final intonation-group (a clause) is semantically independent and does not imply continuation, the low falling terminal tone is used.

e.g. It was →only ↘Sunday, | and I ↘couldn't go ¹home till ↘Wednesday | or →Tuesday the ↘soonest.

If the idea of the non-final clause is not complete and continuation is implied, the Low Rise or the Fall-Rise is used.

e.g. I went to →my ↘room | and →he went to ↘his.

The terminal tone of the final clause is determined by the communicative type of the sentence and the attitudes conveyed by the speaker.

e.g. He →walked ↘out | and the →doctor ↘followed him. (statement)

Shall we →go there at ↘once | or do you pre→fer to ↘wait a little? (alternative question)

Shall we →go there at ↘once | or do you pre→fer to ↘wait a little? (the speaker's genuine interest is expressed).

SEQUENCE OF TONES IN COMPLEX SENTENCES

Complex sentences contain the principal clause and one or more subordinate clauses. The latter may follow the principal clause, precede it or break the main clause into two parts.

If the principal clause and the subordinate one following it present a single semantic whole, they do not form separate intonation-groups.

e.g. You can ↘stay here as ¹long as you ↘want.

However, if the principal clause implies continuation, or each of the clauses is semantically independent, they arrange separate intonation-groups. The principal clause in this case may be pronounced with the falling, rising or falling-rising tones.

e.g. →You can ↘drive | if you ↘like.

→Doesn't it ↘matter to you | what →people ↘do to me?

Long subordinate clauses may fall into a number of intonation-groups. In this case the principle clause does not necessarily form a separate intonation-group.

e.g. I'm →wandering how much ↘longer | I can ↘go ¹on ¹watching you ↘two, | ↘tearing the ¹insides ¹out of each ↘other.

In case the subordinate clause precedes the principal one, it forms a separate intonation-group, as a rule. The terminal tone of the first intonation-group is determined by its semantic value.

e.g. If you →want to have a ↘rest, | →go to the ↘country.

What →they had ↘done, | ↘he could do.

If > that's how you ¹want it, | →don't ask ↘me to ¹help a ¹gain.

SENTENCE STRESS

In a sentence or an intonation-group some words are of greater importance than the others. They are brought out in speech by means of sentence stress.

Stress is the name given to the relative intensity or loudness with which a syllable or a word is spoken. Stressed syllables and words are usually longer and louder giving English the rhythm which we say is characteristic of English.

Grammarians sometimes divide all words into two classes: *content words*, which have meaning in themselves, like 'mother', 'forget', 'tomorrow'; and *function words*, which have little or no meaning other than the grammatical idea they express, such as 'of', 'the' and 'will'. In general *content words are stressed*, but *function words are left unstressed*, unless the speaker wishes to call special attention to them.

Content words, usually stressed, include:

Nouns

Verbs (with the exception of auxiliaries and modals)

Adjectives

Adverbs

Demonstratives: this, that, these, those

Interrogatives: who, when, why, etc.

Function words (form-words), usually unstressed, (as they express relations between words) include:

Articles: a, an, the

Prepositions: to, of, in, etc.

Personal pronouns: I, me, he, him, it, etc.

Possessive adjectives (pronouns): my, his, your, etc.

Relative pronouns: who, that, which, etc.

Common conjunctions: and, but, as, if, etc.

'One' used as a noun-substitute, as in "red dress and the blue one".

In English there is a natural tendency to subordinate form-words to content (notional) words.

e.g. I be _∨lieve you.

Per _∨haps I am ¹making a mis _∨take | but I be _∨lieve you.

However, D. Jones mentions exceptions to the general rule when nouns, adjectives demonstrative and interrogative pronouns, principle verbs and adverbs lose their stress in a sentence under certain circumstances:

1. The word becomes unstressed if it has been used just before and is repeated again,

e.g. –Ex→cuse me for the incon _∨venience.

– It is →no inconvenience at _∨all.

– ∨What ¹paper have you _∨read?

– An _∨English paper.

2. When one word in a group of words is contrasted with some other word, that word alone receives the stress.

e.g. ¹morning paper, ¹private office, ¹village school

3. Author's words following the direct speech are usually unstressed.

e.g. "Are you _∨making ¹notes of the _∨case?" I asked.

"_∨No", said the sergeant.

4. The stress of notional words constituting adverbial modifiers of place may be diminished if greater importance is attached to the logical subject of the sentence. This very often occurs in sentences with the construction *there is*.

e.g. There is a →monument to _∨Nelson in London.

5. Notional words can lose their stress under the influence of rhythm.

Sentence stress is a greater prominence of one or more words among the other words in an intonation-group. This prominence is given to a word according to its importance in a sentence, and it is realized by variations of pitch, force, length and quality. Stressed words are pronounced more distinctly.

The most prominent part of a sentence is the last stressed word with the nuclear tone. The first stressed word is also rather important: it often has the highest pitch and is fairly loud.

e.g. The _∨doctor ¹says it's ¹not _∨serious.

The distribution of stress in a sentence depends on the semantic value of words. It is also closely connected with the lexical and grammatical structures of the sentence.

There are three types of sentence stress:

Normal (syntactical)

Logical

Emphatic

In case of **normal stress** content words, which convey the necessary information to the listener are stressed.

e.g. *We have →plenty of ↘time.*

Normal sentence stress expresses the general idea of the sentence. It also indicates its communicative center.

Sentence stress is related to rhythm. To make the intervals between the stressed words regular content words often lose their normal stresses while form-words may receive stresses. This realization of normal stress is called *rhythmic stress*.

e.g. *If →father is ↘in | we'll ↘speak to him.*

→*If he is ↘in | we'll ↘speak to him.*

The unstressed words preceding the stressed one are termed *proclitics*, and the unstressed words following the stressed one are called *enclitics*.

Each sense-group, as a rule, has one main stress, which emphasizes the word that is most important semantically. The stress that gives a greater prominence to the most semantically important word in the sense-group is called **logical stress**. It is a type of sentence stress, which singles out a new element in a sentence. The logically stressed word is the most important and is also a semantic center of the sense-group. Logical stress introduces something new to the listener, while the other words of the sentence convey what is already known. That's why the words following the logical stress remain unstressed.

Any word in a sentence (including form words, personal and possessive pronouns, auxiliary and modal verbs) may be logically stressed. Each shifting of the stress modifies the meaning of the sentence:

e.g. ↘*I¹ spoke to him ↘yesterday.*

↘*I¹ spoke to ↘him yesterday.*

→*I ↘spoke to him yesterday.*

↘*I spoke to him yesterday.*

Emphatic stress.

Most utterances express not only the speaker's thought but also his feelings and attitude to reality and the content of the sentence. Normal and logical stresses can be unemphatic and emphatic.

Emphatic stress is the highest degree of the logical and emotional prominence of words in a phrase. It is mainly realized through the High Fall or the Rise-Fall.

e.g. *They were de→lighted to ↘see you.*

In case of emphatic stress form-words, which are usually not stressed in English, may acquire strong stress.

e.g. *Who¹¹ is she ?*

In this sentence the verb "is" is stressed for the sake of emphasis. The preceding interrogative pronoun "who" and the personal pronoun "she" lose their stresses to strengthen the meaning of the verb "is".

e.g. *Well, ↘I know her.*

In this sentence personal pronoun "I" becomes stressed, and the notional word "know" is unstressed; consequently, greater importance is attached to the word "I", and it is pronounced with the high-falling nuclear tone.

Sentence Stress and Tonic Syllables

The use of stress in speech helps us both deliver and understand meaning in longer utterances and it is closely linked with intonation. Consider the following sentence:

he LIVES in the HOUSE on the CORner.

(Capitals have not been used where they would usually occur (i.e. on *he*) in order to preserve the distinction between stressed and unstressed syllables.) The above example sentence conveys three different ideas: he resides in a particular dwelling; that dwelling is what the people involved in the conversation would consider to be a house, as opposed to a flat or a bungalow; the precise location of the house is at the junction of two or more streets, this junction being either familiar or obvious to the hearer. This gives us three content words (*lives*, *house* and *corner*), which convey the most important ideas in the sentence. The rest of the utterance consists of function words, which we need in order to make our language hold together.

The example is rather stylised, however, and glosses over what actually happens when the sentence is said in context. In order to arrive at an understanding of this, we need initially to go back to word stress. The word *corner* has two syllables, the first one being stressed, and the second one unstressed, as follows: *CORner*.

If I ask you *Where is John's house?*, and it happens to be at a junction of two or more streets, that junction being either known to us both or obvious to us both, you might answer like this: *It's on the CORner*.

The first syllable of *corner* in this sentence is the tonic syllable. It is indicated by underlining. *Corner* is the most important word in the sentence as it effectively answers the question *Where?* The tonic syllable is the most stressed syllable in an utterance – it is generally longer, louder, and carries the main pitch movement in an utterance (in this example, the pitch of the voice falls on it).

If, on the other hand, one friend asks another to confirm where John's house is, the question might be *Where did you say John lives?*

In this case, a possible answer is as follows:
he LIVES in the house on the CORner.

Here, *lives* is given some stress, and so it is written in capitals. *Lives* in this sentence is the onset syllable, in that it establishes a pitch that stays more or less level right through to *cor-* (which is still our tonic syllable), on which it drops. That the word *house* is not stressed here tells us that this is shared knowledge between the speakers, and it is not necessary to point this out. It is possible to detect a small degree of stress on *house*, but relative to *lives* and *cor-*, it is noticeably less prominent.

The new information that is being shared between speakers determines what is the tonic syllable. Look at this example:

John lives in the block of flats on the corner, doesn't he? NO. he LIVES in the HOUSE on the corner.

Here, *lives* is again an onset syllable, but the tonic syllable is now *house*, reflecting the importance of this word within the utterance. *No* is also a tonic syllable, and is followed by a pause. While the first syllable of *corner* is stressed when the word is said on its own, here it is not given any stress, as it is knowledge already shared between the speakers. The following example shows a similar effect:

John's buying the house on the corner, isn't he? he ALready LIVES in the house on the corner.

Within utterances, therefore, we emphasise tonic syllables in order to highlight the most significant new information. We use onset syllables to initiate a pitch which continues up to the tonic syllable.

With regard to sentence stress we can outline a three-stage process which enables us to say the same thing in different ways:

When we say words of more than one syllable in isolation we will stress one of the syllables.

When words are arranged together in a sentence or utterance, certain syllables will be stressed in order to convey the most important new information. This may cancel out normal word stress.

Intonation is used to give further subtleties of meaning to the syllables we have chosen to stress.

Speakers make certain assumptions with regard to what is old and new information, and express these by means of stress (and intonation) patterns. Hearers confirm or deny these assumptions through their reactions.

Remember also that our spoken language is not tied to sentences. When conversing, we often use incomplete sentences, phrases which would be considered ungrammatical if written down, interrupt each other, backtrack and so on. However, a study of stress within complete sentences provides a 'user-friendly' way of drawing attention to the main aspects of how we use stress in speech.

RHYTHM

The notion of *rhythm* involves some noticeable event happening at regular intervals of time; one can detect a rhythm of a heart-beat, of a flashing light or of a piece of music. It has often been claimed that English speech is rhythmical, and that the rhythm is detectable in the regular occurrence of stressed syllables; of course, it is not suggested that the timing is regular as the clock – the regularity of occurrence is only relative.

Thus, **rhythm** in speech may be defined as correlation in time of stressed and unstressed syllables.

Every language has its rhythm. The most typical feature of English rhythm is a tendency to make stressed syllables follow each other at more or less equal intervals of time.

e.g. A ↘boy of 'ten 'opened a 'window to 'let 'in a 'little 'air and ↘sunshine.

It has been claimed that certain languages (for example English, Arabic and Ukrainian) are stress-timed, or isochronous [aɪ'sɒkrənəs]. In such languages stresses occur at regular intervals within connected speech, it is claimed, and the duration of an utterance is more dependent upon the number of stresses than the number of syllables. To achieve the regular stress intervals, unstressed syllables are made shorter, and the vowels often lose their 'pure' quality, with many tending towards [ə], and others towards [ɪ] and [ʊ]. If there are few or no adjoining unstressed syllables vowels become longer. But if there are many adjoining unstressed syllables vowels become shorter in a rhythmic group.

The term '*rhythmic group*' was introduced by M. Grammont. A stressed syllable with the preceding or following unstressed syllables form a *rhythmic group*.

e.g. He went into a | spacious | well furnished | room.

Other languages (such as Japanese, French and Spanish) are said to be syllable-timed. In these languages there is no strong pattern of stress; syllables maintain their length, and vowels maintain their quality. Certain syllables are still stressed, of course, but not according to a regular pattern. Each rhythmic group within an intonation-group is given the same time.

Isochronicity might be shown as in the following example. We start with a simple sentence; we add syllables to it on each line, but the time it takes to say the utterance remains the same.

they LIVE	in an	OLD	HOUSE
they LIVE	in a NICE	OLD	HOUSE
they LIVE	in a LOVELy	OLD	HOUSE
they've been LIVing	in a deLIGHTful	OLD	HOUSE
they've been LIVing	in a deLIGHTful	OLD	COTTage
they've been LIVing	in a deLIGHTful	vicTORian	COTTage

e.g. →She is the ↘best girl.

→She is the ↘nicest girl

→She is the ↘happiest girl.

The occurrence of stresses remains regular, and unstressed syllables are squashed in between the stressed ones, being shorter and losing some purity of the vowel sound. If you simply tap out the rhythm it is easy to be persuaded of the validity of this idea. One can indeed say this sequence of sentences with a regular rhythm, which seems to be preserved as one adds more syllables. There is also a strong contrast between stressed and unstressed syllables.

However, consider also the speed at which you are talking by the time you get to the last utterance in the group. From slowly and deliberately in the first sentence, one moves by stages to far more rapid speech in the last line. The persuasiveness of the idea makes the evidence fit the theory, rather than the theory being supported by the evidence.

It makes more sense to imagine English described in terms of a continuum which has tendencies towards stress-timing at one end and syllable-timing at the other. A language like English has more of a tendency than some other languages to reduce vowel length and quality in

unstressed syllables, and so tends towards the stress-timing end of the continuum.

So-called syllable-timed languages also reduce the length of the vowel in an unstressed syllable, though to a lesser extent, but they tend to preserve the quality of the vowel sound.

Stress timing and regular rhythms are most noticeable in highly stylised and patterned language, such as poetry or nursery rhymes. How far the phenomenon is observable in everyday speech is a matter for debate. Regularity of speech rhythm varies widely according to context, as it may bring in factors such as the relationship between the speakers, their confidence, nervousness, etc. and whether their speech is rehearsed or spontaneous, not to mention personal habits of accent, dialect and so on. Rhythmic tendency in English is rather strong, and rhythm, in its turn, can influence word-stress and sentence stress.

e.g. It is a ↘fundamental ¹piece of ↘art.

The stress is on the first syllable of the word ‘*fundamental*’ as it is followed by a stressed syllable.

Compare: This ↘work is ¹not funda↘mental.

And in this sentence the stress is on the third syllable of the word ‘*fundamental*’ as it is preceded by a stressed syllable.

Under the influence of rhythm words, which are generally stressed may become unstressed.

e.g. The adverb ‘very’, which is generally stressed, loses its stress in the following sentence: →Not very ↘hot.

The demonstrative pronoun ‘*this*’ which is generally stressed becomes unstressed when it is preceded and followed by stressed syllables:

You should ↘keep this ¹proverb in ↘mind.

TEMPO OF SPEECH

Speech tempo is one of the components of intonation. It may be defined as *the relative speed of utterance with which sentences and intonation-groups are pronounced in connected speech.*

Tempo is of great importance for understanding phonetic phenomena of intonation, length of vowels and consonants, reduction, assimilation, etc. It is measured by the rate of speaking, the number and the duration of pauses in a sentence. We distinguish slow speech (2-4 syllables per second), normal speech (3-6), fast speech (5-9). The rate of speaking varies constantly. The speed of utterance becomes slower or faster according to the number of unstressed syllables between the stressed ones. When two stressed syllables are close together, the rate of speaking is slower. But when they are separated by unstressed syllables the rate is faster. Besides, more important parts of a sentence are said slower, and less important – faster.

*e.g. I want you to understand that it is **very important.***

Tempo differs according to the style of speech, the feelings or aim of the speaker, individual features of his speech, etc. Thus, conversational style is characterized by a quicker tempo, than full style. The lecturer's speech in delivering a lecture being clear and distinct, is rather slow; while in a friendly conversation tempo is much quicker. Especially often speech tempo serves as one of the means of emphatic speech. By means of tempo, together with the changes in pitch and the distribution of stress, the speaker may express different emotions.

Speech tempo is one of the factors that may cause change in the length of vowels and consonants. It is connected with the processes of reduction and assimilation since the faster the tempo, the more cases of reduction and assimilation appear in speech.

EMPHATIC INTONATION

The division of intonation into emphatic and unemphatic is only conventional. Unemphatic speech is rare. In almost every utterance we emphasize one idea or another, show our emotional attitude to the thought expressed.

By *emphasis* in phonetics we mean the increase of emotional colouring of speech with the help of different components of intonation. Emphatic sentences are those containing one or several words, which are given a certain prominence by the speaker; or in which intensified feelings of anger, joy, indignation, and other emotions are implied. Accordingly, one or several words in a sentence or the whole sentence may be made emphatic.

The whole sentence or a sense-group may be more prominent in English by means of:

- Changes in the tempo of the sentence.
- Changes in the pitch of the voice
- The substitution of the rising tone for the falling one and vice versa.
- The use of a special rise or fall (*The Broken Head*)
- The use of the *High pre-head (pre-nucleus)* and *High Fall*.
- The use of logical and emphatic stress.

For the sake of emphasis the falling tone may be used instead of the rising tone and vice versa. Enumerations, for example, may be pronounced with the falling tone instead of the rising tone to emphasize the meaning of all the enumerated parts,

e.g. She \searrow loved him, \searrow trusted him, be \searrow lieved in him.

The falling tone may be used in general questions to embody the idea of a suggestion or invitation.

e.g. \searrow Shall we \uparrow get some \searrow apples?

The idea of the sentence is "it would be good to get some apples".

\searrow Will you \uparrow come and \searrow dine with us.

The idea of the sentence is "I invite you to come and dine with us"

The Fall-Rise may be used in short statements to contradict what the previous speaker has said.

e.g. -You \searrow don't \uparrow like \searrow that. - \rightarrow Yes, I \searrow do.

- It's \rightarrow most pa \searrow thetic!

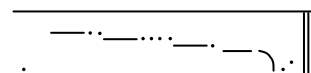
- It is \searrow not.

The Fall-Rise may also be used for the sake of emphasis to imply the contrary of what is said.

e.g. She \searrow doesn't \uparrow look \searrow dull.

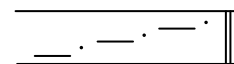
If the last stressed syllable pronounced with the Fall-Rise is not final, but is followed by unstressed syllables, the pitch of the voice falls within the last stressed syllable and rises within the following unstressed ones.

e.g. I \searrow haven't in \uparrow sisted upon a \uparrow dopting \uparrow this \searrow paragraph.



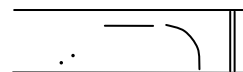
The gradual descending scale typical of English may lose its regularity or be substituted by the ascending scale.

e.g. \nearrow Have you \uparrow never \nearrow seen it?



The use of the high-fall gives prominence to an intonation-group, thus usually making a sentence exclamatory.

e.g. What a \rightarrow nice \searrow day!



A sentence can be also made emphatic with the help of the high pre-nucleus followed by the high fall.

e. g. \uparrow Yes I \searrow do.



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