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“КИЇВСЬКИЙ ПОЛІТЕХНІЧНИЙ ІНСТИТУТ”

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**A CONCISE DICTIONARY  
OF PHONETIC TERMS**

**СЛОВНИК ФОНЕТИЧНИХ ТЕРМІНІВ**

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Метою словника є формування у студентів знань, умінь і навичок, спрямованих на успішне оволодіння термінологією з фонетики англійської мови.

Як нормативно-довідниковий посібник словник розрахований не лише на студентів денної та заочної форм навчання, які вивчають англійську мову як фахову дисципліну у вищому навчальному закладі, а й на аспірантів, здобувачів, які працюють зі спеціальною англійською літературою з цього фаху, а також для тих, хто бажає поглибити свої знання з практичної й теоретичної фонетики англійської мови.

Друкується за рішенням методичної комісії факультету лінгвістики Національного технічного університету України “Київський політехнічний інститут” (Протокол № 2 від 16 вересня 2009 року).

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## PREFACE

*The Concise Dictionary of Phonetic Terms* presents the most frequent terminology in the field of phonetics. The purpose of the dictionary is to describe the meanings of the terms rather than prescribe their usage. Since this dictionary is intended for use in Universities and Teacher Training Institutes for Foreign Languages, it gives practical guidelines on how to grasp the terminology in phonetics and to overcome difficulties in understanding and use of different phonetic terms.

This dictionary is aimed mainly at students specialising in English as their future profession and who have not yet acquired technical terms current in phonetics as well as those with applications in mind studying or researching phonetics and phonology. The dictionary will also be useful and helpful for the general readers who need some information about the terms that occur in the sphere of phonetics and with which they are less familiar.

Much of the material included in this dictionary has been gestating for a long time and has been used as course material with students and post-graduate students at Kyiv National Linguistic University who contributed in countless ways to the development of the dictionary.

The dictionary contains more than 900 core entries, which define the most frequent terms in the area of phonetics and also some linguistic terms used by phoneticians, communicating their basic and essential meanings. The terms were selected on the basis of their importance within the field of phonetics. During the preparation of the dictionary, definitions were written in consultation with experts and the latest publications in the field of phonetics and linguistics.

The terms are listed in the alphabetical order. If a term has more than one meaning, then each meaning is given a separate numbered sense. Generally, only one pronunciation is given for each term; it is usually its most common pronunciation. In some cases the authors found it necessary to give two pronunciations for the same term to show that it has two common pronunciations in RP. The list of symbols representing the pronunciation of each term includes only the ones used in the English Phonetic Alphabet. At the end of each definition of the term, a list of recommended reading is added.

*The Dictionary* also contains information about the most prominent scholars who contributed to the field of phonetics and phonology.

The authors hope that *The Concise Dictionary of Phonetic Terms* will be useful to its users and would be grateful to them for suggestions on how to improve it.

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*Larisa I. Taranenko*

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Our gratitude is to the colleagues of the Department of Theory, Practice and Translation of English, National Technical University of Ukraine “KPI”, Kyiv as well as English Phonetics Department, National Linguistic University, Kyiv, whose teaching experience and competence in English Phonetics influenced our work and helped to shape *The Dictionary*.

Our particular thanks go to the students of Kyiv National Linguistic University who have inspired *The Dictionary* more than anyone else.

*Alla A. Kalita*  
*Larisa I. Taranenko*

## KEY TO PHONETIC SYMBOLS

### *Vowels and diphthongs*

i:	<i>as in</i>	see /si:/	ɜ:	<i>as in</i>	fur /fɜ:/
ɪ	<i>as in</i>	sit /sɪt/	ə	<i>as in</i>	ago /ə'gəʊ/
e	<i>as in</i>	ten /ten/	eɪ	<i>as in</i>	page /peɪdʒ/
æ	<i>as in</i>	hat /hæt/	əʊ	<i>as in</i>	home /həʊm/
ɑ:	<i>as in</i>	arm /ɑ:m/	aɪ	<i>as in</i>	five /faɪv /
ɒ	<i>as in</i>	got /gɒt/	aʊ	<i>as in</i>	now /naʊ/
ɔ:	<i>as in</i>	saw /sɔ:/	ɔɪ	<i>as in</i>	join /dʒɔɪn/
ʊ	<i>as in</i>	put /pʊt/	ɪə	<i>as in</i>	near /nɪə/
u:	<i>as in</i>	too /tu:/	ɛə	<i>as in</i>	hair /hɛə/
ʌ	<i>as in</i>	cup /kʌp/	ʊə	<i>as in</i>	pure /pjʊə/

### *Consonants*

p	<i>as in</i>	pen /pen/	s	<i>as in</i>	so /səʊ/
b	<i>as in</i>	bad /bæd/	z	<i>as in</i>	zoo /zu:/
t	<i>as in</i>	tea /ti:/	ʃ	<i>as in</i>	she /ʃi:/
d	<i>as in</i>	did /dɪd/	ʒ	<i>as in</i>	vision /vɪʒ <sup>ə</sup> n/
k	<i>as in</i>	cat /kæt/	h	<i>as in</i>	how /haʊ/
g	<i>as in</i>	get /get/	m	<i>as in</i>	man /mæn/
tʃ	<i>as in</i>	chin /tʃɪn/	n	<i>as in</i>	no /nəʊ/
dʒ	<i>as in</i>	June /dʒu:n/	ŋ	<i>as in</i>	sing /sɪŋ/
f	<i>as in</i>	fall /fɔ:l/	l	<i>as in</i>	leg /leg/
v	<i>as in</i>	voice /vɔɪs/	r	<i>as in</i>	red /red/
θ	<i>as in</i>	thin /θɪn/	j	<i>as in</i>	yes /jes/
ð	<i>as in</i>	then /ðen/	w	<i>as in</i>	wet /wet/

### *The Tonic Stress Marks*

	<b>Low</b>	<b>High</b>
1. Falling (F)	\m	\m
2. Rising (R)	/m	/m
3. Falling-Rising (Undivided) (F-R)	\m	\m
Falling-Rising (Divided) (F-R)	\m ( )m /m	\m ( )m /m
4. Rising-Falling (Undivided) (R-F)	^m	^m
Rising-Falling (Divided) (R-F)	/m ( )m \m	/m ( )m \m
5. Rising-Falling-Rising (Undivided) (R-F-R)	^m	^m
6. Level Tone (L)	>m	>m

# A

**Accent** /'æksənt/ The term used to refer to (1) the culminative auditory effect of those features of pronunciation which identify the locality a person comes from. The following types of accents are traditionally singled out: *regional accents* that relate to any local, including both rural and urban communities within a country as well as national groups speaking the same language; *social accents* based on the speaker's cultural and educational background;

(2) the emphasis which makes a particular word or syllable stand out in the speech flow (accented sound, syllable, word), or the *accent(ual) pattern* of an utterance. Accent is not only a matter of *loudness* but also of *pitch* and *duration*. *Word accent* is a greater degree of prominence given to one or more syllables in a word, e.g. the contrast in the word accent between 'import and im'port is achieved by the syllables that differ in loudness, length and pitch movement. *Utterance (sentence) accent* is a greater degree of prominence given to one or more words in an utterance being very important in intonation analysis, since it can affect the acceptability, the meaning, the speaker's emotional state, etc. The total system of accents in a language is known as its *accentual system*;

(3) a system of violations of the foreign language pronunciation norm in the non-native speakers pronunciation, which are the result of interference of the non-native speaker's pronunciation habits in his/her native language. (See **Accentology**, **Word stress**, **Utterance stress**).

*Further reading:* Jassem, Gibbon 1980; Gimson 1980; Bolinger, Dasher 1982; Jassem 1983; Bolinger 1961, 1985, 1989; Abercrombie 1991; Laver 1995; Simpson 2001; Clark et al 2007; Торсуев 1960; Николаева 1982, Касевич и др. 1990.

**Accentology** /,æksə'n'tɒlədʒɪ/ The term used to refer to the branch of phonetics, which studies the accentual system of the language, its historical regularities, functional properties of the language accentual system, the nature of stress, its types and placement, words accentual patterns, their dependence on phonological and morphological subsystems. They distinguish descriptive, diachronic (historical), and contrastive types of accentology. First fundamental studies of accentual systems of different languages were carried out in the 19<sup>th</sup> century by F. de Saussure, I. Baudouin de Courtenay, A.Maye, O.Potebnya. (See **Word stress**, **Utterance stress**)

*Further reading:* Jassem 1983; Торсуев 1960; Потебня 1993; Селіванова 2006.

**Accentual pattern** /ək'sentʃuəl 'pæt̪n/, or *stress pattern*. The term used to refer to the correlation of degrees of syllables prominence in a word. (See **Stress pattern, Word Stress, Word accent**)

**Accentual structure** /ək'sentʃuəl 'strʌktʃə/ (See **Accentual pattern, Word accent**)

**Accentual system** /ək'sentʃuəl 'sɪstəm/ The term refers to the total system of accents in a language.

**Accentuation** /ək'sentʃu'eɪʃ̩n/ The term used to refer to (1) the pronunciation with great force, which shows the relative weight of a syllable or a word, or (2) directs listener's attention to the importance of what is said.  
*Further reading:* Crystal 1997.

**Accidental rise** /æksɪ'dent̪l raɪz/ (See **Special rise**)

**Accommodation** /ə,kɒmə'deɪʃ̩n/, or *adaptation* /ædæp'teɪʃ̩n/. A term used for the modification in the articulation of a *consonant* or a *vowel* under the influence of an adjacent vowel or consonant, e.g. in the word *two* /tu:/ a non-labialised (or unrounded) variant of the consonant /t/ is replaced by its rounded variant under the influence of the following rounded vowel phoneme /u:/. The accommodated sound does not change its main phonemic features and is pronounced as a slightly modified variant of the same phoneme. There are three main types of accommodation: (a) an unrounded variant of a consonant phoneme is replaced by its rounded variant under the influence of a rounded vowel phoneme, e.g. *moon* /mu:n/; (b) a fully back variant of a back vowel is replaced by its slightly advanced variant under the influence of the preceding medio-lingual phoneme /j/, e.g. *duty* /'dju:tɪ/; (c) a vowel is represented by its slightly more open variant before the dark /ɹ/, e.g. *bell* /bɛɹ/ – *bed* /bed/ (See **Assimilation**)

*Further reading:* Vassilyev 1970; Паращук 2005; Селіванова 2006.

**Acoustic cues** /ə'ku:stɪk ˌkju:z/ The term used to refer to the relevant distinguishing features of the speech signal the listener focuses his/her auditory attention to recognize what is being said.

*Further reading:* Crystal 1997; Потапова, Потапов 2006.

**Acoustic feature** /əˌkuːstɪk ˈfi:tʃə/ A term refers to the characteristic of a speech sound when analyzed in physical terms (e.g. fundamental frequency, amplitude, harmonic structure). Such analyses are provided by *acoustic* (experimental, instrumental) *phonetics*, the branch of phonetics which studies the physical properties of speech sounds, as transmitted between mouth and ear and fully depends on the use of instrumental techniques of investigation, and some grounding in physics and mathematics is a prerequisite for advanced study of this subject. Acoustic analysis can provide an objective data for investigation of speech. Acoustic evidence is often referred to as a support for the analysis made in *articulatory phonetics* and *auditory phonetics*.

*Further reading:* Фант 1964; Ladefoged 1975; O'Connor 1984; Crystal 1997; Деркач и др. 1983.

**Acoustic phonetics** /əˌkuːstɪk fəˈnetɪks/ The term refers to the branch of phonetics which focuses on the physical properties of speech sounds, or the so-called acoustic aspect of a sound. The basics of acoustic phonetics were first laid by H.Helmholts in the 19<sup>th</sup> century and later in the 20<sup>th</sup> century fundamentally developed by H.Fant and J.Flanahan. Acoustic phonetics is very often called *phono-acoustics*, or *experimental*, or *instrumental*, or *laboratory phonetics*. It studies speech sounds with the help of experimental, or instrumental methods. This branch of phonetics is concerned with the *experimental* phonetic research, aimed at the development and scientific testing of hypotheses, and being *quantitative* it is based on numerical measurement. Various apparatus are applied for analyzing acoustic structure of segmental and suprasegmental phenomena (such as: spectrograph, oscilograph, intonograph, electro-acoustic synthesizer, etc.). This branch makes use of *controlled experiments*, i.e. the experimenter has to make sure that the results could only be caused by the factor being investigated. Experimental research is carried out in all fields of phonetics: in the *articulatory field*, to measure and study the way speech is produced, *in the acoustic field* to examine the relationship between articulation and the resulting acoustic signal, and look at physical properties of speech sounds (*frequency*, measured in *hertz* or *cycles per second* (c/s), *intensity*, measured in *decibels* (dB), *duration*, measured in *milliseconds* (ms.) and *spectrum*), while in the *auditory field* to find out how the listener's ear and brain interpret the information in the speech signal. The great majority of experimental research makes use of instrumental phonetic techniques (*spectrography*, in which a computer produces a "picture" of speech sounds; such computer systems can also carry out the analysis of

*fundamental frequency* for producing “pitch displays” (there exist many different programmes for the acoustic analysis of speech signals, e.g. *WaveLab*, *SpectraLAB*, *Cool Edit Pro*, *SFS/WASP*, *Praat*, etc.); *radiography* (X-rays) for examining activity inside the vocal tract, *laryngoscopy* for inspecting the inside of the larynx, *palatography* for recording patterns of contact between tongue and palate, *glottography* for studying the vibration of the vocal folds and many others. Measurement of the airflow from the vocal tract and of air pressure within it also give us a valuable indirect picture of other aspects of articulation. Acoustic phonetics is connected with physics, mathematics, and cybernetics. (See **Fundamental frequency**, **Harmonic**, **Formant**, **Spectrography**, **Spectrum**)

*Further reading:* Fry 1955, 1958, 1976; ФАНТ 1964; Ladefoged 1975; Jassem 1983; O'Connor 1984; Laver 1995; Crystal 1997; Stevens 2000; Johnson 2003; Yule 2009; Кибрик 1962; Цеплитис 1974; Башкина, Бухтилов 1977; Блохина, Потапова 1977; Деркач и др. 1983; Бровченко, Волошин 1986; Кодзасов, Кривнова 2001.

**Acoustic spectrum** /əˌkuːstɪk 'spektrəm/ A term is used in phonetics to refer to the complex range of frequencies of varying intensity which constitute the quality of a sound. (See **Acoustic phonetics**, **Fundamental frequency**, **Harmonic**, **Formant**, **Spectrography**)

*Further reading:* Ladefoged 1975, O'Connor 1984; Crystal 1997; Артемов 1956; ФАНТ 1964; Деркач и др. 1983.

**Acoustic theory of speech production** /ə'kuːstɪk 'θiəri əv 'spiːtʃ prə'dʌkʃən/

The term is used in acoustic phonetics to refer to the problems of (1) explaining the processes of deriving speech wave data from area function specifications and (2) predicting the area function from the speech wave. These two problems are regarded as fundamental ones, which constitute the acoustic theory of speech production. A variety of studies in this field have contributed to the insight in special aspects of the production process such as the influence of cavity wall impedance, glottal and subglottal impedance, nasal cavity system, source filter interaction, and formant damping. (See **Speech production**)

*Further reading:* Fant 2004; Tatham, Morton 1968; Hardcastle 1976; Borden, Harris 1980; Crystal 1997.

**Acrolect** /'ækrəʊlekt/ The term refers to the accent associated with the speaker's high level of education as well as with his/her social and economic status. (See **Basilect**, **Sociolect**, **Hyperlect**, **Mesolect**, **Sexolect**)

*Further reading:* Honye 1991; Yule 2005; Pennington 1996; Gimson 2001; Crystal 1997; Селіванова 2006.

**Actual division of the sentence** /'æktʃuəl dɪ'vɪʒən əv ðə 'sentəns/ The term is used in phonetics to refer to the process of revealing the correlative significance of the sentence parts in terms of their actual informative role in an utterance. The main components of the actual division are the “*theme*” (*given, topic*), expressing the starting point of communication, and the “*rheme*” (*new, comment*), being the basic informative parts of communication. Actual division is also the reflection of the speaker’s attitude towards what is said; consequently, it is the result of the influence of context and situation. Actual division is regarded as an active tool of expressing functional meaning of a sentence/utterance. Intonation is a very important means of a sentence/utterance actual division. (See **Sentence perspective theory**)

*Further reading:* Mathesius 1975; Esser 1983; Firbas 1992; Фаулер 2002; Мартине 2004.

**Actualization** /,æktʃuəlaɪ'zeɪʃən/ A term used to refer to the physical expression of a linguistic unit. *Realization* is a more widely used term.

*Further reading:* Lyons 1968; Crystal 1992, 1997.

**Acute** /ə'kju:t/ feature The term is used in phonetics to refer to both high front vowels and palatal consonants that show greater high-frequency predominance. They are termed “acute” in opposition to back vowels and velar consonants, which are relatively “grave”. These terms were suggested by Grammont to represent opposite ends of a scale that measures the predominance of upper or lower components of the acoustic spectrum. (See **Grave, Grave feature, Opposition**)

*Further reading:* : Jacobson, Halle 1956; Ladefoged 1975; O’Connor 1984; Clark et al 2007.

**Acute** /ə'kju:t/ sound. The term refers to the sounds that are characterized by the predominance of the higher part of the spectrum as in [t], forming the opposition with the grave sounds as [p] and [k]. (See **Grave feature, Opposition**)

*Further reading:* Ladefoged 1975; O’Connor 1984.

**Adam’s apple** /'ædəmz 'æpəl/ The term used in articulatory phonetics to refer to the projection in the front of the neck (just below the speaker’s chin) formed by the largest cartilage of the larynx.

**Adaptation** /,ædæp'teɪʃən/ (See **Accommodation**)

**Addressee** /,ædre'si:/ (also *hearer, receiver, audience*). The term is used to indicate a person (superior, inferior, or equal) to whom the speech is addressed, i.e. the receiver of information since the intonation of the addresser's speech largely depends on the addressee's social position.

*Further reading:* Воробьева 1993; Селіванова 2006.

**Addresser** /ə'dresə/ (also *addressant, speaker, producent*). The term is used to indicate one of the speakers who sends a spoken message, i.e. the sender of information, or the author of the text. (See **Addressee**)

*Further reading:* Тупаева 1986, 1994; Воробьева 1993; Селіванова 2006.

**Adolescent speech** /,ædə'lesənt 'spɪ:tʃ/ A term refers to the type of speech used by those inside a group who share ideas and attitudes as a way of distinguishing themselves from others; generally it is a marker of group identity during a limited stage of life such as early adolescence.

*Further reading:* Yule 2009;

**Aerodynamic myoelastic theory of phonation** /,eərəʊdaɪ'næmɪk ,maɪəʊɪ'læstɪk 'θɪəri əv fəʊ'neɪʃən/ The term refers to the theory that takes into account not only the effects of aerodynamic forces, muscle activity and tissue elasticity, but also the mechanically complex nature of the vocal fold tissue structure.

*Further reading:* Broad 1979; Clark et al 2007.

The term refers to the explanation of phonation that is now generally accepted as aerodynamic myoelastic theory. This theory takes into account not only the effects of aerodynamic forces, muscle activity and tissue elasticity, but also the mechanically complex nature of the vocal fold tissue structure.

*Further reading:* Broad 1979; Clark et al 2007.

**Affect** /ə'fekt/ The term used in *phonetics* to refer to the prosodic expression of attitude (or affect) conveying not only the basic meaning of an utterance or a word but also the speaker's attitude and his/her emotional state in the moment of speaking. Any marked change in the speaker's emotional state can lead to modifications of the utterance prosodic pattern that results in the listener's interpretation of the utterance meaning in an absolutely different sense.

*Further reading:* Crystal 1997.

**Affricate** /'æfrɪkət/ A term refers to a sound made when the air-pressure behind a complete *closure* in the *vocal tract* is gradually released; the initial *release* produces a *plosive*, but the separation which follows is sufficiently slow to produce audible friction, and there is thus a *fricative element* in the sound. Affricates are rather complex consonants, e.g. English [tʃ], [dʒ].

*Further reading:* Christophersen 1970; Gimson 1980; Roach 1990; Ladefoged 2003.

**Airflow** /'ɛəfləʊ/ A term used to refer to the movement of air in the process of sound production. Its source and direction helps identify the class to which the sound belongs. To describe the differences between the sounds the phonetician has to analyze the work of speech organs (such as vocal cords, soft palate, place and manner of articulation, lungs, lips, tongue, etc.) involved in their production. Different sounds are produced by different actions of movable speech organs. The movable organs of speech responsible for shaping the upper resonators of the mouth, pharyngeal and nasal cavities are the soft palate, lips, and tongue. For instance, in the production of *vowels* it is important to remember the following: (1) the raised position of the soft palate; (2) the tongue height towards the hard palate; (3) the degrees of lip spreading or rounding; (4) the part of tongue (front, central, or back) which is raised and the degree of its raising. *Consonant* phonemes are generally described according to the following criteria: (1) the place of articulation; (2) the manner of articulation; (3) the work of the vocal cords (voiced or voiceless); (4) the position of the soft palate (oral or nasal); (5) the source of the airstream (pulmonic or non-pulmonic); (6) the airstream direction (egressive or ingressive). The most common way of moving air is by compression of the lungs so that the air is expelled through the *vocal tract*. This is called an *egressive pulmonic* airstream. The airstream produced by the larynx, with closed vocal cords and moved up and down is called *glottalic*. The *velaric* airstream occurs when the back of the tongue is pressed against the soft palate, or velum, making an air-tight seal, and then drawn backwards or forwards to produce an airstream. The source and direction of airflow identifies the basic class of sounds. The greater majority of speech sounds are produced using pulmonic egressive air. Non-pulmonic sounds include the clicks, implosives, and ejectives. (See **Airstream, Airstream mechanism**)

*Further reading:* Jones 1969; Gimson 1980; O'Connor 1984; Crystal 1997; Roach 1990.

**Airflow rate** /'ɛəfləʊ 'reɪt/

*Further reading: Clark et al 2007.*

**Airflow** /'ɛəfləʊ/ types

*Further reading: Clark et al 2007.*

**Airstream** /'ɛəstri:m/ A term used to refer to the air movement during speech sound production. (See **Airflow**)

*Further reading: Jones 1969; Gimson 1980; Laver 1995; Crystal 1997; Roach 1990.*

**Airstream mechanism** /'ɛəstri:m 'mekə,nɪz<sup>ə</sup>m/ The term refers to a physiological process which provides a source of energy capable of being used in speech sound production. They distinguish a *pulmonic (or lung) airstream mechanism* characterized by the process when the air comes out of the lungs and is the source of power in producing nearly all speech sounds/ The *initiators* of the pulmonic airstream are a downward movement of rib cage and /or an upward movement of the diaphragm. The pulmonic airstream mechanism is the source of power in the production of most sounds. Though in the articulation of English plosives /p, b, t, d, k, g/ other airstream mechanisms are involved, namely an egressive, or outgoing, pulmonic airstream makes these phonemes plosives. Another *airstream mechanism* is termed *glottalic*. The *glottalic airstream mechanism* is characterized by the movement of different bodies of air: the lungs (the lungs push out the air under the control of the respiratory muscles), the vocal track. An *egressive glottalic airstream mechanism* (the air in the pharynx is compressed by the upward movement of the closed glottis) is typical of many languages. Stops, or plosives made with a glottalic airstream mechanism are called *ejectives*. An ejective is mark by an apostrophe placed after a symbol ['], e.g. [t']. Stops produced with an *ingressive glottalic airstream mechanism* (downward movement of implosive the vibrating glottis; pulmonic egressive airstream may also be involved) are called *implosives* in the articulation of which the downward moving larynx is not usually completely closed. The *velaric (or oral) ingressive airstream mechanism* is characterized by the movement of the body of air in the mouth (mouth air rarefied by the backward and downward movement of the tongue).

*Further reading: Pike 1943; Ladefoged 1975; Catford 1977; Roach 1990; Laver 1995; Crystal 1997; Clark et al 2007..*

**Allegro** /ə'legrəʊ/ The term refers to the accelerated tempo, meaning faster

than moderate.

**Alliteration** /əˌlɪtəˈreɪʃən/ A term used to refer to a stylistic device, or literary technique, in which successive words (more strictly, stressed syllables) begin with the same consonant sound or letter. Alliteration is a frequent tool in poetry, where it contributes to euphony of the passage, lending it a musical air and to express certain emotions, but it is also common in prose, particularly to highlight short phrases. It may act to produce a usually rhythmic, sometimes humorous or comic effect. E.g.: *Oh dear daddy of death dance*. Related to alliteration are *assonance*, the repetition of vowel sounds, and *consonance*, the repetition of consonant sounds. Alliteration is also analyzed in linguistic papers dealing with sound symbolism.  
*Further reading:* Crystal 1997; Селіванова 2006.

**Allophone** /ˈæləfəʊn/, or conditioned variants of a phoneme (generated by phonological conditioning). A term used for speech sounds which are realizations of one and the same phoneme and which cannot distinguish words or change their meanings, and occur in phonetic contexts different from one another. Their articulatory and acoustic distinctions are conditioned by their position and phonetic environment known as allophonic variation. A phoneme can have an infinite number of allophones, but in practice for descriptive purposes we tend to concentrate on the ones that occur most regularly. It is important to distinguish between the principal (or typical) variant of a phoneme and its subsidiary variants. *The principal* variant, or allophone is the least influenced by the phonetic surrounding, e.g. the phoneme /t/ in the word *tip* /tɪp/ may be defined as occlusive, noise, forelingual, apico-alveolar, plosive, aspirated, voiceless and fortis. *Subsidiary* allophones of a phoneme are those, which lack one or more of the articulatory features of the phoneme or its principal variant. The subsidiary allophones of a phoneme are subdivided into two groups: (1) *combinatory* which are the result of assimilation and adaptation, or accommodation and (2) *positional* which occur in definite positions traditionally rather than because of the influence of a neighboring sounds, e.g., clear and dark /l/. Allophonic differences in the vowel system are mostly in quantity or length (the longest when word final (/si:/), half long when followed by a voiced consonant (/si:d/) and short when followed by a voiceless consonant (/si:t/). In an unstressed position vowels may change not only the quantity but their quality as well. When allophones of a phoneme occur in the same environment, but without distinctive force, they are said to be in *free variation*. (See **Reduction**)  
*Further reading:* Vassilyev 1970; O'Connor 1984; Gimson 1980; Roach

1990; Laver 1995; Crystal 1997; Clark et al 2007; Yule 2009; Борисова, Метлюк 1980; Бровченко, Корольова 2006.

**Allophonic** /ˌæləˈfɒnɪk/ A term used to refer to the variation of phonemes in connected speech conditioned by their phonetic position and phonetic environment. In speech continuum there appear a variety of realizations of one and the same phoneme, called allophones. It means that there are as many allophones of a certain phoneme as there are phonetic positions and environments in which it occurs. (See **Allophone**, **Assimilation**, **Reduction**)

*Further reading:* Vassilyev 1970; O'Connor 1984; Gimson 1980; Roach 1990; Crystal 1997.

**Allophonic transcription** /ˌæləˈfɒnɪk (ə)trænˈskɪpʃən/, or *phonetic*, or *narrow transcription*. (See **Transcription**, **Narrow Transcription**, **Broad Transcription**)

**Allotone** /ˈælətəʊn/ The term used in phonetics to refer to the variants of a definite nuclear tone, which are its material representations in speech and which are capable of distinguishing communicative types of utterances or changing their meanings. In speech any tone can have a variety of allotones, but in practice for descriptive purposes we tend to concentrate on the ones that occur most regularly. For instance, it is important to distinguish between the *high rising tone* (known as a question tone used to ask for repetition or additional information, to gain the time, to express astonishment or a shocked reaction) and the *low rising tone* (used in different communicative types of sentences making them sound non-categoric, non-final, leading to something else, perfunctory, detached). Thus allotones have their own sphere of use and they convey different shades in utterance meanings.

*Further reading:* Laver 1995.

**Alphabet** /ˈælfəbɪt/ The term refers to a set of letters used in writing any language, especially when arranged in order. The English alphabet uses Roman script and consists of 26 letters. The 26 letters in English are represented in aural speech by 44 phonemes. The Ukrainian alphabet uses Cyrillic script and consists of 33 letters (47 consonant phonemes; 6 vowel phonemes).

*Further reading:* Сунцова 1952; Сучасна українська літературна мова 1969; Тоцька 1981.

**Alternation** /ˌɔːltəˈneɪʃən/ The term used to refer to the variations in words that can be described in terms of phonological rules that account for variations in the placement in stress or alternations in vowel quality, for example the letter “o” pronounced in the set of words *melody*, *melodic*, *melodious*. In the first word the letter “o” is pronounced as [ə], in the second word as [ɒ], and in the third as [əʊ]. The same variations occur in some other words, for instance *harmony*, *harmonic*, *harmonious*. The phonological rules predicting such variations are very general and cover many similar cases.

**Alveolar** /ˌælvɪˈəʊlə/ The term used to refer to the sounds made with the tongue tip or blade at the alveolar ridge: /t, d, s, z, n, l/.

**Alveolar ridge** /ˌælvɪˈəʊlə ˌrɪdʒ/ A term used for a small protuberance just (immediately) behind the upper front teeth. The tip of the tongue comes into contact with this in some of the English consonants such as [t], [d], [s], [z], [n], [l] which have the alveolar place of articulation.

**Alveoli** // The term is used to refer to the tiny air sacs, which make up the bulk of elastic or spongy tissue in the lungs structure.  
*Further reading: Clark et al 2007.*

**Amphibrach** /ˌæmfɪbræk/ The term is used in metrical phonology to refer to the measure of poetry consisting of one weak (or short) beat followed by one strong (or long) beat followed by one weak (or short) beat (— / —). Amphibrach is rarely singled out into a separate meter. (See **Foot**, **Rhythm**, **Metrical phonology**)  
*Further reading: Abercrombie 1967; Dvorzhetskaya, Logvin 1985; Crystal 1992, 1997; Kiparsky 1977; Зубрицкая 2002.*

**Amplitude** /ˈæmplɪtjuːd/ The term refers to the extent to which an air particle moves to and fro around its rest point. One complete cycle of operation i.e. the movement from the place of rest to the maximum amplitude in one direction, then back to the maximum amplitude in the other direction and finally back to the place of rest, is known as one *cycle*; irrespective of amplitude a cycle may be completed in a longer or shorter period of time and the length of time is known as the cycle’s *period*. The number of cycles per second (cps) is called the *frequency* of vibration. The greater the amplitude of vibration, the greater the intensity of the sound, and along with such parameters as frequency and duration, the greater our sensation of loudness. To measure the loudness of a sound, the contribution of both, amplitude and frequency should be taken into account, since they both

relate to the energy with which the sound is produced. (See **Intensity**)

*Further reading:* Ladefoged 1975; Jassem 1983; O'Connor 1984; Crystal 1997; ФАНТ 1964; Цеплитис 1974; Блохина, Потапова 1977; Светозарова 1982; Бровченко, Волошин 1986; Златоустова и др. 1986; Кодзасов, Кривнова 2001.

**Amplitude** /'æmplɪtju:d/ of vibration. The term refers to the measure of the size of vibration or the extent of movement in the vibration. Amplitude relates to what is normally called loudness, and as the amplitude of a vibration diminishes, it becomes less audible.

*Further reading:* Clark et al 2007.

**Amplitude section** /'æmplɪtju:d ,seksʰn/ The term refers to the accurate specification of the sound's spectrum at a particular moment of time.

*Further reading:* O'Connor 1984.

**Analysis** /ə'nælɪsɪz/ The term used in phonetics to refer to the scientific method aimed at studying different phonetic phenomena and regularities of a certain phonetic object by means of separating it into its component parts as well as examining its elements and their relations.

*Further reading:* Ladefoged 2003; Клименюк 2005, 2006.

**Analysis by synthesis** /ə'nælɪsɪz baɪ 'sɪnθəsis/ The term refers to one of the speech perception theories lying in the speaker's analysis of an incoming acoustic signal into an abstract set of features, their task being to compare the incoming signal with the ones generated by their own perceptual system. (See **Speech perception**)

*Further reading:* Fant 1959, 1968, 2004; Gimson 1980; Crystal 1997; Monaghan 1990.

**Anapaest** /'ænəpi:st/ The term is used in metrical phonology and refers to the measure of poetry consisting of two weak (or short) beats followed by one strong (or long) beat (— — /). Iambic and anapaestic meters sometimes are called rising because their movement supposedly rises from unstressed syllable or syllables to the stressed ones. (See **Foot, Rhythm, Metrical phonology**)

*Further reading:* Abercrombie 1967; Dvorzhetskaya, Logvin 1985; Crystal 1992, 1997; Kiparsky 1977; Зубрицкая 2002.

**Annolect** /'ænəulekt/ The term used to refer to the pronunciation attributed to

the speaker on the basis of his/her age.

*Further reading:* Yule 2005; Pennington 1996; Gimson 2001.

**ANOVA** /'eɪ 'en 'əʊ 'vi: 'eɪ/ table. The abbreviation stands for *analysis of variance table* (See **Cluster analysis, Clustering**)

**Antepenultimate syllable** /,ænti:pə'nɪltɪmɪt 'sɪləb<sup>ə</sup>l/ The term used in phonetics to refer to the third syllable from the end, e.g. the antepenultimate syllable in the word *historical* /hɪ 'stɔ: rɪ k ə l/ is /'stɔ: r/.

**Anthropocentrism** /,ænrəʊpəʊ'sentrɪzəm/ The term used in phonetics to refer to the methodological principle of research that focuses on investigating different phonetic phenomena, where a man is viewed as the most significant entity of communication, and where oral speech is interpreted or regarded in terms of human values or experiences. This principle is used in studying language (speech) as the product of human activity, as a means of communication, preservation of man's experience, knowledge and culture.

*Further reading:* Полюжин 1999; Гумбольдт 2000; Селіванова 2006.

**Anthropophonics** /,ænrəʊpəʊ'fəʊnɪks/ A term used to refer to articulatory and auditory (or perceptual) phonetics which are generally termed *physiological phonetics*. The term was suggested by Prof. I.O.Baudouin de Courtenay.

*Further reading:* Laver 1995; Crystal 1997; Бодуен де Куртене 1963.

**Aperiodic sound** /,eɪ,pɪəri'ɒdɪk 'saʊnd/ The term is used in acoustic phonetics to refer to the sound whose successive cycle periods are different as in, for instance, sound /s/. For aperiodic sounds there is no fundamental frequency, no harmonics, that is why a listener does not perceive any clear pitch for such sounds. The spectrum of aperiodic sounds is usually a continuous line representing the amplitude of vibration at every frequency. Due to the differences of the amplitude of vibration in some frequency regions over the frequency range the researchers can distinguish one aperiodic sound from another.

*Further reading:* Jassem 1983; O'Connor 1984; Crystal 1997; Clark et al 2007..

**Apex** /'eɪpeks/ Another term for *tip of the tongue*. (See **Tip of the tongue**)

*Further reading:* Laver 1995.

**Aphaeresis** /æ'fɪərəsɪs/ The term refers to the loss of one (or more) sound or letter at the beginning of a word as in *knife* (the loss of the letter *k* in the pronunciation of the word), *round* for *around*, *coon* for *raccoon*, *cause* for *because*, etc.

**Apical** /'æpɪkəl/ A term used to refer to the raised position of the tip tongue in the production of apico-alveolar phonemes. This term is usually contrasted with dorsal, used to refer to the position of the blade of tongue against the upper teeth like in the production of dental allophones of /t, d, s, z, n, l/ followed by the interdental /θ, ð/.

**Apico-alveolar** /'æpɪkəʊ əlvi'əʊlə/ The term used to refer to the alveolar phonemes /t, d, s, z, l, n/ in the production of which the tip of the tongue is in its raised position and against the alveolar ridge when they are pronounced in isolation. (See **Alveolar, Assimilation**)

**Apico-dental** /'æpɪkəʊ 'dentəl/ The term used to refer to the sounds produced with the help the tongue tip and edges or backs of upper incisors as the English *th* in the word *thin*.  
*Further reading: Clark et al 2007.*

**Apico-palatal** /'æpɪkəʊ 'pælətəl/ The term used to refer to the sounds produced with the help the tongue tip and palatal region  
*Further reading: Clark et al 2007.*

**Apico-postalveolar** /'æpɪkəʊ ˌpəʊstəlvɪ'əʊlə/ The term refers to the sounds produced with the help of the tongue tip and postalveolar region as the southern British English /r/ in the words *trip, drip*.  
*Further reading: Clark et al 2007.*

**Applied phonetics** /ə'plaɪd fə'netɪks/ or *practical phonetics*. The term refers to the branch of phonetics, which studies practical applications of the language phonetic phenomena. Applied phonetics uses information from both linguistic and non-linguistic sciences (sociology, psychology, anthropology etc.) in order to develop its own theoretical ideas and then to use this information in practical areas such as phonostylistics, teaching pronunciation, communication theory, culture of speech, etc.  
*Further reading: Аванесов 1956; Зиндер 1979; Кодзасов, Кривнова 2001.*

**Apposition** /,æpə'zɪʃən/ The term used to refer to two words, phrases, or

clauses in a sentence which have the same reference. In Phonetics the term is used when a sentence, or an utterance containing apposition is divided into syntagms (or intonation groups). Apposition always forms a separate intonation group and repeats the intonation of the intonation group to which it is in apposition. E.g.: *My ˌsister, ξ ˈHelen ˌWilson, ξ will ˌtravel ˌwith me*, where intonation group *ˈHelen ˌWilson* is in the apposition to the preceding intonation group *My ˌsister*.

*Further reading:* Jeffries 1998.

**Approximant** /əˈprɒksɪmənt/, or *frictionless continuant*. A phonetic term used to denote a consonant which makes very little obstruction to the airflow. These consonants are divided into: semivowels (a class of sound that functions in a way similar to consonants but is phonetically similar to vowels, e.g., the sounds /w/ and /j/ (as in the words /'wet/ and /'jet/) which are very similar to close vowels such as /u/ and /i/ but are produced as a rapid glide, and liquids, sounds which have an identifiable constriction of the airflow but not one that is sufficiently obstructive to produce fricative noise, compression or the diversion of airflow through another part of the vocal tract as in nasals. This category includes laterals such as English /l/ in /'li:d/ and non-fricative /r/ in /'ri:d/. Approximants therefore are never fricative and never contain interruptions to the flow of air. The three approximants /w, j, r/ are called central, and the approximant /l/ is called lateral.

*Further reading:* Vassilyev 1970; O'Connor 1984; Gimson 1980; Roach 1990; Crystal 1997.

**Arbitrary allophones** /'ɑ:bɪtrəri 'æləfəʊnz/ The term refers to the allophones which appeared as a result of idiolect (i.e. typical of the pronunciation of a single person, e.g.: *where* /wɛə/ instead of /wɛə/) or dialect (i.e. characteristic of the pronunciation of a group of people, e.g.: *loch* /lɒx/).

*Further reading:* Vassilyev 1970; O'Connor 1984; Gimson 1980; Roach 1990; Crystal 1997; Борисова, Метлюк 1980.

**Arc of articulatory tension theory** /'ɑ:k əv ɑ:'tɪkjʊklətəri 'tenʃən 'θiəri/ (See **Arc of loudness theory, Muscular tension theory**)

**Arc of loudness theory** /'ɑ:k əv 'laʊdnəs 'θiəri/, or *arc of articulatory tension theory*. The term refers to the theory of syllable formation based on L.V.Shcherba's statement that the centre of a syllable is the syllable-forming phoneme. Sounds, which precede or follow it constitute a chain, or an arc, which is weak in the beginning and in the end but strong in the

middle. In terms of the “arc of loudness” theory there are as many syllables in a word as there are “arcs of loudness” and the boundary between the neighboring syllables of a word corresponds to the points, where the arc of loudness begins or ends. In other words, initially weak consonants begin a syllable, finally weak consonants follow the syllable-forming element, i.e. finally strong consonants precede a syllabic phoneme, while initially strong consonants follow it. For example, the word *misdeal* consists of two arcs of loudness in which /m/ and /d/ are finally strong (or initially weak) consonants and /s/ and /l/ are initially strong (or finally weak) (/s/ constitutes the end of “the arc of loudness”, /d/ – its beginning). On the auditory level the peak of a syllable is louder and higher in pitch than the slopes. On the acoustic level the peak is characterized by a higher intensity and higher fundamental frequency than the slopes. Thus, in view of this theory a syllable can be defined as a phonetic unit which is pronounced by one articulatory effort accompanied by one muscular contraction, resulting on both acoustical and auditory levels in one uninterrupted arc of loudness.  
*Further reading:* Аванесов 1956; Щерба 1963; Жинкин 1958; Vassilyev 1970.

**Archiphoneme** /ɑ:kɪ'fəʊni:m/, or *hyperphoneme*. The term refers to a complex of features capable of differentiating meaning common for two phonemes in the position of neutralization, i.e. when two distinctive sounds are no longer in contrast, e.g. the vocalization of voiceless /t/ in the intervocalic position as in *letter*, *better*.

*Further reading:* Jassem 1983; Clark et al 2007; Трубецкой 2000; Селіванова 2006.

**Articulation** /ɑ:ˌtɪkjʊ'leɪʃən/ A term used to refer to the physiological movements involved in modifying airflow in producing different speech sounds: *alveolar* (when the speech sounds are made with the tongue tip or blade at the alveolar ridge), *bilabial* (the production of sounds when the lips are in contact with each other), *dental* (the sounds made with the tongue tip or blade and upper front teeth), *velar* (the sounds made with the back of the tongue and the soft palate), *homorganic* (sounds which are produced at the same place of articulation e.g. /p, b, m, w/), *heterorganic* (sounds involving independent articulations). In describing and analysing speech sounds a distinction is made between the *manner of articulation* (occlusives, constrictives, affricates) and the *place of articulation* (bilabial, labio-dental, dental, alveolar, post-alveolar, retroflex, palato-alveolar, palatal, velar, uvular, glottal). A consonant is often produced using two points of articulation, one closure being more marked than the other (“the

primary” articulation and “the secondary” articulation, correspondingly). There are four main kind of secondary articulation: (1) *labialisation* – the lips are rounded at the same time as the primary articulation is made, as in *twice* /twais/; (2) *palatalisation* – the tongue is raised to a high front position at the same time as the primary articulation is made, typical of Ukrainian but not English, as in *минь* /тін’/; (3) *velarization* – the tongue is raised to a high back position at the same time as the primary articulation is made, as in *pool* /pu:l/; (4) *pharyngealization* – the pharynx is narrowed at the same time as the primary articulation is made, typical of Arabic. The branch of phonetics that studies articulators and their actions is called *articulatory phonetics*.

*Further reading:* Christophersen 1970; Ladefoged 1975; Gimson 1980; O’Connor 1984; Roach 1990; Laver 1995; Crystal 1997; *Clark et all* 2007; Речь 1965; Сосюр 1998.

**Articulation basis** /ɑːtɪkjʊˈleɪʃən ˈbeɪsɪs/ A term refers to the articulatory habits characteristic of all the native speakers of a language. The peculiarities of the articulation basis of English determine the specific articulatory characteristics of its sound system, the character of sound modifications in connected speech and the physiological mechanism of syllable formation.

*Further reading:* Christophersen 1970; Vassilyev 1970; Crystal 1997; Chomsky, Halle 2002; Кочерган 2000; Селіванова 2006.

**Articulation rate** /ɑːtɪkjʊˈleɪʃən ˈreɪt/ The term refers to the tempo of articulating an utterance including filled pauses and prolongation of sounds and syllables but excluding all silent pauses. (See **Speaking rate**)

*Further reading:* Laver 1995.

**Articulator** /ɑːˈtɪkjuleɪtə/ A term used to refer to any specific part of the vocal apparatus involved in the production of a sound is called an articulator. There are two types of articulators: *active* articulators are the movable parts of the vocal apparatus which take an active part in the speech-sound production (the lips, tongue, soft palate with the uvula, lower jaw, etc.); *passive* (or fixed) articulators are the parts of the vocal tract which cannot move, but they serve as points of articulation, e.g. the upper teeth, hard palate alveolar ridge etc. The concept of the articulator is a very important one in phonetics. We can only produce speech sound by moving parts of our body, and this is done by the contraction of muscles. Most of the movements relevant to speech take place in the mouth and throat area (though we should not forget the activity in the chest for breath control), and

the parts of the mouth and throat area that we move when speaking are called *articulators*. The principal articulators are the tongue, the lips, the *lower jaw* and the teeth, the velum or soft palate, the uvula and the larynx. It has been suggested that we should distinguish between *active* articulators (those which can be moved into contact with other articulators, such as the tongue), and *passive* articulators, which are fixed in place (such as the teeth, the hard palate and the alveolar ridge) (See **Organs of speech**)

*Further reading:* Crystal 1997;

**Articulatory effort** /ɑ:ˈtɪkjʊlətəri ˈefət/ The term refers to the state of muscles in the production of sounds both vowels and consonants which requires deliberate, accurate, and maximally distinct articulation that involves considerable muscular effort. (See **Muscular tension**)

**Articulatory energy theory** /ɑ:ˈtɪkjʊlətəri ˈenədʒi ˌθiəri/ (See **Arc of loudness theory, Muscular tension theory**)

**Articulatory gesture** /ɑ:ˈtɪkjʊlətəri ˈdʒestʃə/ The term refers to a coordinated movement of speech organs by means of which the articulation of a definite speech sound is realized. Articulatory gesture consists in three discreet in time stages: (1) *excursion* (or *on-glide*, during which the speech organs move to the position necessary for the sound production), (2) *retension* (or *stop-stage*, during this stage the speech organs are kept for some time in the position necessary for the sound pronunciation), (3) *recursion* (or *off-glide, release*, during which the speech organs move away to the neutral position).

*Further reading:* Щерба 1963; Бондарко 1998; Кодзасов, Кривнова 2001; Зубрицкая 2002; Дудник 2004; Селіванова 2006.

**Articulatory phonetics** /ɑ:ˈtɪkjʊlətəri fəˈnetiks (/fəʊˈnetiks)/ The term refers to the branch of phonetics, which studies the way in which speech, sounds are articulated by the speech organs. It deals with the man's voice-producing mechanism and the way speech sounds are produced as well as prosodic phenomena. It also focuses on respiration, phonation, articulation and mental processes necessary for the mastery of a language phonetic system. *Methods* employed in articulatory phonetics are experimental. They involve palatography, laryngoscopy, photography, cinematography, X-ray photography, X-ray cinematography, electromyography, and various kinds of technique to study sound-production. Besides these objective methods articulatory phonetics uses its oldest subjective method – the method of direct observation that involves observation of speech organs

movements in pronouncing sounds and analysis of the speaker's muscular sensations during the speech sound articulation.

*Further reading:* Tatham 1966; Roach 1990; Laver 1995; Бровченко 2003; Борисова, Метлюк 1980; Crystal 1997, 2000.

**Articulatory precision** /ɑ:'tɪkjʊlətəri prɪ'sɪʒən/ The term used in phonetics to refer to the slow and very precise pronunciation of a word or an utterance as if the speaker is weighing his words with great care and is uttering an extremely important and significant remark. G.Brown regards articulatory precision as a stylistic device the function of which is to mark the word or words being articulated in this manner as standing quite apart from the surrounding utterances. This device is frequently used by actors who are playing the role of interrogator. After a question has been asked several times, with no response from the suspect, the interrogator swings round upon him in a menacing manner and repeats the question in this very precise way, giving an impression of biting ferocity. As a result of such a pronunciation the suspect as a rule yields. This stylistic effect depends on the fact that the sudden precision contrasts with the normal articulatory habits of the speaker. If used constantly this manner of speaking can sound wearily precise and pedantic, even offensively.

*Further reading:* Brown 1990.

**Articulatory setting** /ɑ:'tɪkjʊlətəri 'setɪŋ/ A term used in phonetics to refer to the setting of man's speech producing apparatus into an appropriate position or setting for speaking any language (e.g. English speakers are said to adjust their lips to a more flat shape (so-called *flat articulation*) while Ukrainian speakers adjust their lips to a more protruded and rounded shape). Besides articulatory setting relates to the characteristic overall voice quality provided by the extrinsic (the paraphonological effect of lip-spreading in smiling, for instance) together with the intrinsic features (physiological constraints). The concurrent components of voice quality are generally classed into three major groupings of articulatory settings of: (1) supralaryngeal adjustment, (2) laryngeal phonation types, and (3) different degrees of overall muscular tension. *Supralaryngeal* settings include quasi-permanent lip-protrusion, lip-rounding, valorization, pharyngeal constrictions, nasality, an "open" jaw position, etc. *Laryngeal* settings include phonation types such as breathy voice, whispery voice, harsh voice, creaky voice, falsetto and their combinations such as whispery voice, as well as normal voice. *Muscular tension* settings include tense voice and lax voice, often labeled "metallic voice" and "muffled voice" respectively, as well as neutral tension. These three articulatory settings are necessary to account for the manifestations of phonological and

paraphonological units. (See **Voice quality**)

*Further reading:* Abercrombie 1967; Brown 1990; Laver 1996; Crystal 1997; Артемов 1956.

**Arytenoid cartilages** /,æri'ti:nɔɪd 'kɑ:təlɪdʒɪz/ The term used to refer to a pair of structures at the posterior ends of the vocal cords. Their movements control different phonation types, such as nasal, supralaryngeal, laryngeal, etc.

*Further reading:* Laver 1995; Clark et al 2007.

**Aspiration** /,æspə'reɪʃən/ A term used to refer to the pronunciation of a consonant sound with an audible slight burst (or puff) of air after it. There are three voiceless plosives in English (/p, t, k/), the fortis nature of which manifests itself in aspiration when followed by a stressed vowel and in strong, energetic, distinct pronunciation in word-final position. The strongest degree of aspiration is registered in these consonants when they occur in word-initial position in the production of which the compressed air is prevented from escaping by the articulatory closure, followed by a sound similar to /h/. It is necessary to remember that when voiceless plosives /p, t, k/ are preceded by /s/ at the beginning of a word or syllable they are not aspirated, i.e. they are deaspirated. (See **Voice onset time**).

*Further reading:* Jones 1969; Gimson 1980; O'Connor 1984; Bolinger 1989; Brown 1990; Crystal 1997; Yule 2009; Сепир 2002.

**Assimilation** /ə,sɪmə'leɪʃən/ A term used to refer to a modification in the articulation of a *consonant* under the influence of a neighboring consonant. Assimilation may affect all the features of the articulation of a consonant or only some of them. Thus we speak of assimilation affecting (1) *the place of articulation*; (2) *the active organ of speech*; (3) *the manner of noise production*; (4) *the work of the vocal cords*; (5) *the lip position*; (6) *the position of the soft palate*.

Assimilation can be of three degrees: 1) **complete** when the articulation of the assimilated consonant fully coincides with that of the assimilating one, e.g. in the word *horseshoe*, /s/ in the word *horse* /hɔ:s/ changes to /ʃ/ under the influence of /ʃ/ in the word *shoe* /ʃu:/. In Ukrainian the cases of complete assimilation occur more often. For instance, in the word *сміюся* /СМІЙ'ЕС'С'А/ the sound /Ш/ is changed into /С'/ under the influence of the following /С'/, or in the word *зууму* /Ш'ШИТИ/ the sound /З/ is changed into /Ш/ under the influence of the sound /Ш/; the Ukrainian long sounds /Т',Д',С',З',Н',Л'/ etc. which developed from the combination of a soft consonant and /Й/ are also the result of complete assimilation; 2) **partial** when the assimilated consonant retains its main phonemic features and becomes only partly similar in some feature(s) of

the articulation to the assimilating sound, e.g. the consonant alveolar /n/ is assimilated into dental when followed by the interdental /ð, θ/ like in *in the*. Cases of partial assimilation often occur in Ukrainian when a palatalized consonant follows a non-palatalized one, for example, the Ukrainian /H/, /C/ become partially palatalized under the influence of the following palatalized /Ц'/ in the words *сонця* /'COH'Ц'A/, *міся* /'MIC'Ц'A/, *гаманця* /ГАМАН'Ц'A/; 3) *intermediate* between complete and partial when the assimilated consonant changes into a different sound, but does not coincide with the assimilating consonant, e.g. in the word *handkerchief* /'hæŋkətʃɪf/ the change of /d/ into /n/ is an instance of complete assimilation, the subsequent change of /n/ into /ŋ/ under the influence of /k/ is an instance of intermediate assimilation (comp. the Ukrainian *розкидати* /РОС'КИДАТИ/ instead of /РОЗ'КИДАТИ/ or *забезпечити* /ЗАБЕС'ПЕЧИТИ/ instead of /ЗАБЕЗ'ПЕЧИТИ/).

According to its *direction* assimilation can be: 1) *progressive* when the assimilated consonant is influenced by the preceding one, e.g. in the word *proud* the fully voiced variant of the phoneme /r/ is replaced by a partially devoiced variant of the same phoneme; progressive assimilation is seldom met in Ukrainian, e.g. in the word *мава* /M'ABPA/ the sound /A/ is slightly labialized under the influence of the preceding labial /M/; 2) *regressive* when the preceding consonant is affected by the one following it, e.g. the voiced consonant /z/ in *news* /nju:z/ is replaced by the voiceless consonant /s/ in the compound noun *newspaper* under the influence of the voiceless sound /s/ (com. the use of /Д'/ instead of /Т'/ in the Ukrainian word /МОЛОД'БА/); 3) *reciprocal*, or *double*, or *mutual* when two adjacent consonants influence each other, e.g. in the word *twenty* /'twenti/ the sonorant /w/ is assimilated to the voiceless plosive consonant /t/, in its turn, /t/ under the influence of the rounded /w/ is represented by its labialized variant. In Ukrainian reciprocal assimilation occurs more often than in English, e.g. in the word /С'Т'ІНА/ the sound /C/ becomes palatalized under the influence of the palatalized /Т'/, and /Т'/ becomes sibilant under the influence of the sibilant /C/.

An assimilation which took place at an earlier stage in the history of the language development is called *historical*, e.g. assimilation changes of the consonants /s, z, t/ when followed by /j/ in the unstressed syllables into /ʃ, ʒ, tʃ/ (/ə'keɪʒn/ instead of /o'kæzjɒn/, /'seʃən/ instead of /'sesjɒn/, /'neɪtʃə/ instead of /'nætjʊr/ etc.). When the articulation of a sound changes under the influence of the neighboring sounds in the living, spoken language at the given period of its development, the assimilation is termed *living*. In *contextual* assimilation a word comes to have a

pronunciation different from the pronunciation of the word when uttered in isolation, e.g. *does she* /dʌʃ ʃi/, but in combinations with other words the verb is pronounced /dʌz/ – *does he* /'dʌz hi/, *does it* /'dʌz it/. (See **Coarticulation**)

*Further reading:* Roach 1990; Brown 1990; Crystal 1997, 2000; Ohala 2001; Yule 2009; Сепир 2002; Шевельов 2002; Бровченко та ін. 2003; Парашук 2005.

**Assonance** /'æsənəns/ The term refers to the repetition of vowel sounds within stressed syllables of neighbouring words in a short passage of verse or prose. Assonance is more a feature of verse than prose. It is used in (mainly modern) English-language poetry, and is particularly important in Old French, Spanish and Celtic languages. E.g.: *Try to light the fire. Fleet feet sweep by sleeping geeks.*

*Further reading:* Bolinger 1950a; Селіванова 2006.

**Asyllabic** /əsi'læbɪk/ A term refers to the speech sounds which cannot be in the nucleus of a syllable, the so-called non-syllable-forming sounds.

**Attitudinal** /'æti'tju:diŋəl/ The term used to refer to the emotional element in meaning, as in different attitudes expressed by varying the intonation of an utterance (e.g. anger, sarcasm, etc.).

*Further reading:* Bolinger 1989; Калита 2001; Шаховский 2008.

**Auditory acuity** /'ɔ:di:təri ə'kju:əti/ The term refers in phonetics to the listener's ability to detect and discriminate a definite sound in the process of its perception. (See **Auditory memory**, **Auditory perception**)

**Auditory discrimination** /'ɔ:di:təri di'skrimi'neɪʃən/ The term used in phonetics to refer to the process of distinguishing between speech sounds or pitches in the process of their perception.

**Auditory memory** /'ɔ:di:təri 'meməri/ The term refers to memory of some people who are able to recognize shades of sounds previously heard and to use this recognition to the place of the speaker's geographical or social background. J.D.O'Connor states that a good auditory memory is one of the attributes necessary for the analysis of sounds as well as modifications of intonation patterns in connected speech. (See **Auditory acuity**, **Auditory perception**)

*Further reading:* O'Connor 1984.

**Auditory perception** /'ɔ:dɪtəri pə'sepʃən/ The term is used in phonetics to refer to the process of perceiving information received through the ears. This process makes the listener detect different kinds of acoustic signals and tell the differences between them on the basis of such acoustic characteristics as their frequency, intensity and duration as well as the order of their occurrence and the rate of presentation. (See **Auditory memory, Auditory acuity**)

*Further reading:* Артемов 1956; Laver 1995; Потапова, Потапов 2006.

**Auditory phonetics** /'ɔ:dɪtəri fə'netɪks/ (/fəʊ'netɪks/) or perceptual phonetics. branch of phonetics which focuses on the study of man's perception of segmental sounds, pitch variation, loudness, tempo, rhythm, pauses and timbre. It studies the way in which sound perception is determined by the phonetic system of a language. The methods used in perceptual phonetics are also experimental. They include various kinds of auditory tests.

*Further reading:* Vassilyev 1970; O'Connor 1984; Crystal 1997; Yule 2009; Бровченко 2003; Борисова, Метлюк 1980.

**Auditory system** /'ɔ:dɪtəri 'sɪstəm/ A term is used to refer to the human auditory system which generally consists of two broad components, the peripheral and central systems. The peripheral system and its properties in the processing the acoustic signals of speech shows the structure of the peripheral system. The peripheral system has three parts, the outer, middle and inner ears. Early research on speech perception took little account of the basic perceptual properties of the ear. It tried to correlate the perceptual properties of the speech signal with the kind of representation of a linear time-varying spectrum. The auditory system is capable of 1) making discriminations between successive changes in the frequency of an acoustic signal of about 0.5 per cent below about 1,000 Hz; this ability is very important for the listener's detection of cues to intonation and word tone encoded in speech signal fundamental frequency patterns; 2) resolving the contiguous frequency components of a complex acoustic signal such as speech; this aspect of the auditory system was first investigated in the 1920s and has been a continuing object of inquiry since. The auditory system has quite fine frequency resolution to about 500 Hz., i.e. the listener is able to resolve harmonic information in sounds such as vowels and sonorant consonants up to about 500 Hz, and phonologically relevant spectral peaks up to about 3,000 Hz.

*Further reading:* Zwicker, Fastl. 1990; Moore 2003; Clark et al 2007;

**Automatic speech recognition** /,ɔ:tə'mætɪk 'spi:tʃ rekəg'nɪʃən/ (See **Speech recognition**)

**Autonomy** /ɔ:'tɒnəmi/ (of intonation) The term is used in phonetics, namely in intonology, to indicate the linguistic independence of intonation from other linguistic means in conveying the utterance meaning. For instance, intonation and grammar are pragmatically but not linguistically interdependent. Phonological structures are independent of grammar. Neither can be used to define the other in any strict sense, but both cooperate in giving communicators a fix on their meaning.  
*Further reading:* Jassem, Gibbon 1980; Bolinger 1989; Johnson 2003.

**Autosegmental** /,ɔ:təuseg'ment<sup>ə</sup>l/ The term is used to refer to an approach to phonetic and phonological research that in the process of investigating a sound includes the study of features that extend beyond individual segments such as syllables, words, phrases, and sentences.  
*Further reading:* Laver 1995; Crystal 1997.

**Autosegmental phonology** /,ɔ:təuseg'ment<sup>ə</sup>l fəʊ'nɒlədʒi/  
*Further reading:* Clark et al 2007

## B

**Back-channels** /'bæk/ The term used to refer to the words (*yeah*) and sounds (*hmm*) by listeners while someone else is speaking.

**Back vowels** /'bæk vaʊəlz/ A term is used to characterize the vowels, which are formed with the bulk of the tongue in the back part of the mouth cavity, when it is raised towards the junction between the hard and soft parts of the palate; back vowels are /u:, ɒ, ɔ:, ɑ:/ and the nuclei of the diphthongs /ɔɪ, ɔə/.

**BACK-ADVANCED VOWEL** /'bæk əd'vɑ:nst 'vaʊəl/ – a vowel formed with the back-advanced position of the bulk of the tongue.

**Basilect** /'bæzɪlekt/ The term refers to the pronunciation of elderly people with little education in rather isolated areas, i.e. the pronunciation of the lowest social prestige.

*Further reading:* Honye 1991; Yule 2005.

**Beats** /'bi:ts/ The term refers to the gestures involving short quick movements of the hands or fingers that go along with the rhythm of talk.

**BBC** /'bi: 'bi: 'si:/ (of English pronunciation) The abbreviation refers to the type of English pronunciation which has the status of the national pronunciation standard in the United Kingdom. It is also known as the Southern English Pronunciation. (See **Orthoepic norm, Pronunciation norm, RP, Standard**)

*Further reading:* Gimson 1980, 2001; O'Connor 1984; Brown 1990; Wells 1982; Laver 1995; Parashchuk 2000; Ramsaran 1990; Шахбагова 1982.

**Bidialectal** /,baɪ,daɪə'lektʰl/ The term used to refer to the people capable of speaking two dialects.

**Bilabial** /baɪ'leɪbɪəl/ A term refers to the sounds in the production of which the lips are in contact with each other, i.e. the two lips are the primary articulators. Bilabial consonants in English are: /p, b, m, w/.

**Bilingual** /baɪˈlɪŋgwəl/ A term refers to describe a native speaker of two languages or a country with two official languages, in contrast to monolingual.

**Bilingualism** /baɪˈlɪŋgwəlɪzəm/ Another term for bilinguism (See **Bilinguism**).

**Bilinguism** /ˈbaɪlɪŋwɪzəm/ A term refers to the speaker's ability to use two languages with the fluency characteristic of a native speaker. In Phonetics, in cognitive phonetics in particular, the focus of interest is laid on cognitive strategies of mastering and using second/foreign language, the mechanism of comparison the processes of mastering pronunciation of the native and second/foreign language as well as the influence of cultural factors on bilingual speakers. Languages used by bilingual persons are said to be in contact. Language contacts may be of a mass character, when whole language communities are involved, or individual or group bilinguism. The major manifestation of bilinguism is interference. (See **Interference**)

*Further reading:* Weinreich 1968; Laver 1995; Wells 2000a; Romaine 2003; Walters 2004; Yule 2009; Борисова, Метлюк 1980; Метлюк 1986; Парашук 2005; Селіванова 2006; Щерба 2008; Валігура 2008.

**Binary feature** /ˈbaɪnəri ˌfi:tʃə/ The term refers to the feature that can be used for the classification of sounds in terms of two mutually exclusive possibilities such as, for instance, presence or absence of voice (as in the production of /t/ and /d/ where voice is one of the features which describe /t/ and /d/, consequently, these two phonemes are said to be in *binary opposition*), lip-rounding (as in /v/ and /w/), etc. The distinctive theories in phonology are grounded on binary features as their main principle. It is conventional to use +/- in square brackets to mark the oppositions, e.g. the sounds /d/ and /t/ are characterized as [+ voice] versus [- voice]; the nasal consonants can be specified as [+ nasal]; voiceless plosives /p, t, k/ are characterized as [- voice], [+ stop], [+ aspirated] when syllable initial, etc. (See **Distinctive features**)

*Further reading:* Fant 1972; Halle 1983; O'Connor 1984; Crystal 1997; Трубецкой 2000.

**Bisyllable** /ˌbaɪˈsɪləbəl/, or *disyllable*. A term used to refer to a word consisting of two syllables.

**Blade of the tongue** /ˈbleɪd əv ðə ˈtʌŋ/ The term refers to the part of the tongue situated behind its tip. (See **Tongue**)

**Body language** /<sup>1</sup>bɒdi ˌlæŋgwɪdʒ/ A term is used to refer to different non-verbal means, such as facial expressions, eye contact, gestures and body movements which are of great importance in conveying meaning from one person to another as well as his/her attitudes and emotions. Body language is opposed to speaking, writing or sign language used by deaf-mutes. (See **Paralinguistics**)

*Further reading:* Argyle, Dean 1965; Crystal 1971; Laver 2009; Крейдлин 2002; Кондильяк 2006; Шаховский 2008; Bjørseth; Seryakova 1997, 1998; Jeffries 1998.

**Boundary tone** /<sup>1</sup>baʊndəri ˌtəʊn/ or *nuclear tone*. The term refers to a marked change of pitch movement which occurs on the most prominent syllable (the so-called *tonic* syllable) of the intonation group. (See **Nuclear tone**)

**Brackets** /<sup>1</sup>brækɪts/ When we write phonetic or phonemic transcription it is conventional to use brackets at the beginning and end of the item or passage to indicate the nature of the symbols. Generally, slant brackets are used to indicate phonemic transcription and square brackets for phonetic transcription. For example, /p/ (phonemic transcription based on the principle “one symbol for one phoneme”) and [p<sup>h</sup>] (phonetic transcription based on the principle “one symbol for each allophone”). (See **Transcription**)

*Further reading:* Laver 1995; Chomsky, Halle 2002.

**Brain functions** /<sup>1</sup>breɪn ˌfʌŋkʃənz/ The term used to refer to the ability of the speaker’s brain to control thought and feeling. Since the act of communication starts in the brain of the speaker it is natural to think that the speaker’s brain performs two functions: (1) *a creative function* and (2) *a forwarding function*. The *creative* function is defined as central through which the message is conceived and formed, because a profound knowledge of how the language operates is stored in the speaker’s brain. There are three distinguishable phases of the creative function: a need to communicate; what medium to use (speech, writing, sign language, etc.); the form of the message (imperative, interrogative, etc.). The *forwarding* function manifests itself in controlling muscular movement to send out patterned instructions in the form of nervous pulses along the nervous pathways connecting the brain to the muscles of the speech organs. These instructions call upon the muscles concerned to perform various combinations and sequences of movement, which result in emitting the right sounds in the right order.

*Further reading:* O’Connor 1984; Laver 1995; 2009; Clark et al 2007.

**Breath-group** /'breθ gru:p/ A term is used to refer to a unit whose boundaries are marked by the places where we pause to breathe, i.e. a part of an utterance pronounced within a single expiration of breath. Unfortunately, although in the production of isolated sentences and in very careful speech the places where a speaker will breathe may be quite predictable, in natural speech such regularity disappears, so that the breath-group can vary very greatly in terms of its length and its relationship to linguistic structure. It is, consequently, little used in modern phonetics and linguistics. A breath-group usually coincides with a sense-group because pauses for breath are generally made after groups of words linked semantically, grammatically and intonationally. (See **Intonation group**, **Sense-group**, **Syntagm**, **Tone group**)

*Further reading:* Christophersen 1970; Vassilyev 1970; Crystal 1997; Clark et al 2007; Теоретична 2003; Борисова, Метлюк 1980.

**Breathy** /'breθI/ voice. The term refers to the description of not clear or strong voice quality or *phonation type*, with noticeable noise of breath (breathy voice). Breathy voice represents the most open glottal configurations. In breathy voice, the vocal cords vibrate though they are only slightly apart but at the same time they allow a considerable amount of air to escape through the glottis, i.e. the vocal fold vibration is accompanied by some continuous turbulent airflow; this adds noise (similar to loud breathing) to the sound produced by the vocal cords. It is thought that breathy voice makes women's voices sound attractive; it is also used by the speakers in television advertisements. Breathy voice is often associated with awe or shock; it may suggest ungovernable passion of the last straw. In television advertising "soft" or "breathy" quality of voice tends to be used for advertising cosmetics, toilet paper and detergents. Breathy voice is quiet, associated impressionistically with "sexy" voice. (See **Creaky voice**)

*Further reading:* Catford 1977; Esling 1994; Laver 1968, 1995, 1996; Laver, Trudgill 1979; Trudgill 1978, 1983; Brown 1990; Clark et al 2007.

**Broad** /brɔ:d/ In phonetics the term is used to refer to (1) the position of the tongue towards the hard palate in vowel production. There are two variations (*narrow* and *broad*) characteristic of each of the three main positions of the tongue: *close* or *high*, *mid* or *half open* and *open* or *low*. For instance, the vowels [i:, I] are both front, close (or high) but in the production of [i:] the front part of the tongue is raised a little higher than in the production of [I]; for this reason the defined as front-retracted, close (or high) and broad; (2) the term *broad* (vowel [i:] is defined as front, close (or high) and narrow, while the vowel [I] is *phonemic*, or *phonological*, or

*impressionistic*) is also used to present in transcription only the general phonetic quality of the sounds without any of the details of the pronunciation that are predictable by phonological rule thus giving a limited amount of phonetic information. (See **Transcription**)

**Broad transcription** /'brɔ:d (ɔ)træn'skripʃən/ (See **Transcription, Phonemic Transcription**)

**Broca's area** /'brəʊkəz 'ɛəriə/ The term refers to the part of the brain in the left hemisphere involved in speech production.

**Bronchial tubes** /'brɒŋkiəl 'tju:b/ The term refers to the tubes which connect the lungs to the windpipe and which join at the base of the trachea.

**Bronchioles** /'brɒŋkiəʊlz/ The term refers to the small tubes, which distribute the air supply throughout the lung.

**Bundle** /'bʌndl/ A term used in phonology to characterize one conception of the *phoneme*: a bundle of *relative phonetic distinctive features*, e.g., the English phoneme /s/ can be defined as a bundle (or a combination) of the following features: alveolarity, friction, voicelessness, etc.  
*Further reading*: Jones 1976.

**Burst** /bɜ:st/ When a *plosive* (such as the English /p, t, k, b, d, g/) is released while air is still compressed within the vocal tract, the air rushes out with some force. The resulting sound is usually referred to as *plosion* in general phonetic terminology, but in acoustic phonetics it is more common to refer to this as a *burst*. It is usually very brief somewhere around a hundredth of a second.

## C

**Cacology** /kə'kɒlədʒɪ/ The term used to refer to unacceptable pronunciation or use of language.

*Further reading:* Crystal 1997; Селіванова 2006.

**Cacophony** /kə'kɒfəni/ The term refers to the harsh of speech that demonstrates unpleasant phonaesthetics.

*Further reading:* Crystal 1997.

**Cacuminal** /kə'kju:mɪnəl/ The term refers to the consonants articulated by the tongue tip raised against the back part of the alveolar ridge as in the production of the English /r/.

**Caesura** /sɪ'zjʊərə/ The term refers to (1) a rhetorical break in the flow of sound in the middle of a line of verse; (2) a pause marking a rhythmic point of division of speech flow. (See **Pausation**)

**Cardinal vowels** /,kɑ:dɪn<sup>ə</sup>l 'vɑʊəlz/ The term refers to the classification of vowels independent of the vowel system of a definite language. This classification is based on the auditory comparison method, which established the *Cardinal Vowel system* invented by D. Jones to describe the vowels in any language. From the beginning it was important to locate the vowels on a chart or four-sided figure (the exact shape of which has changed from time to time), as can be seen on the IPA Chart. The *Cardinal Vowel* diagram was used both for rounded /ɔ, o, u/ and unrounded /i, e, ε, a, ɑ/ vowels. These eight vowels are known as the *primary cardinal vowels*. At the same time a secondary series of cardinal vowels was established: if the primary cardinal vowels are unrounded, the secondary cardinal vowels are rounded. And in case the primary cardinal vowels are rounded, the secondary vowels are unrounded. So the vowels found in this or that language can be compared with the Cardinal Vowels and described by reference to them.

*Further reading:* Jones 1969; O'Connor 1984; Roach 1990; Laver 1995; Crystal 1997.

**Cavity** /'kævəti/ The term used to refer to any of the anatomically defined

chambers in the vocal tract which are the principal formative influences on the character of a sound. The main cavities are: 1) *the pulmonic cavity*, made up of the lungs and trachea; 2) *the pharyngeal cavity*, from the larynx to the point where the soft palate contacts with the back of the throat; 3) *the mouth cavity*, made up of the whole of the mouth area; 4) *the nasal cavity*, made up of the nose and the part of the pharynx above the point of soft palate closure.

**Central vowel** /<sub>1</sub>sentrəl 'vaʊəl/ A term used to refer to a vowel produced with the central part of the tongue raised as in /ə/ or /ɜ:/ which are neither *front* like /i:/ or /e/ or *back* like /ɑ:/ /ɔ:/ /u:/). The phoneme /ə/, which is described as both central and mid, is usually named *schwa*.

**Centralization** /<sub>1</sub>sentrəlaɪ 'zeɪʃən/ The term used to refer to the process of moving the point of articulation towards the centre of the oral cavity (i.e. centralized articulation in the production, for instance, of back-advanced vowels in certain phonetic contexts under different degrees of emotional tension). There is a special diacritic mark [˙] put above the vowel which shows somewhat nearer to central production of a front, back or back-advanced vowel.

*Further reading:* Roach 1990; Wells 1994, 1997; Калита 2001.

**Centering diphthong** /<sub>1</sub>sentriŋ 'dɪfθɒŋ/ The term used to refer to a diphthong in the production of which the tongue moves to the centre of the mouth to the place where the schwa phoneme is articulated. There are three centering diphthongs in English: /ɪə/, /ʊə/ and /eə/, as in *mere* /mɪə/, *moor* /mʊə/ and *hair* /hɛə/. (See **Diphthong**)

*Further reading:* Jones 1969; Roach 1990; Laver 1995; Clark et al 2007; Теоретична 2003.

**Checked syllable** /<sub>1</sub>tʃekt 'sɪləbəl/ The term is used as a synonym for a closed syllable. (See **Closed syllable**, **Syllable**)

**Checked vowels** /<sub>1</sub>tʃekt 'vaʊəlz/ A term used for the vowels in the articulation of which there is no weakening of the force of articulation. They are pronounced abruptly at the end, immediately followed by a consonant that checks them. English historically short vowels under stress are called *checked vowels* and the syllabic boundary never occurs after them.

*Further reading:* Gimson 1980; Борисова, Метлюк 1980.

**Chest pulse** /<sub>1</sub>tʃest pʌls/ A term used to refer to (1) a contraction of the chest

muscles that forces air into the vocal tract; (2) a theory of syllable production. Early in the twentieth century it was believed by some phoneticians that there was a physiological basis to the production of syllables: experimental work was claimed to show that for each syllable produced, there was a distinct effort, or pulse, from the chest muscles which regulate breathing. It is now known that chest-pulses are not found for every syllable in normal speech, though there is some evidence that there may be chest-pulses for stressed syllables. For example, in such words as *seeing* /'si: – ɪŋ/, *being* /'bi: – ɪŋ/, *trying* /'traɪ – ɪŋ/, *going* /'gəʊ – ɪŋ/, *studying* /'stʌdɪ – ɪŋ/ it is doubtful whether a double chest pulse will be evident in the pronunciation of juxtaposed vowels. (See **Expiratory**)

*Further reading:* Vassilyev 1970; Ladefoged 1975; Gimson 1980; Crystal 1997; Борисова, Метлюк 1980; Бровченко, Корольова 2006.

**Chroneme** /'krəʊni:m/ The term refers to an abstract theoretical unit of speech sounds that can distinguish words by duration only of a vowel or consonant, e.g.: /i:/ – /ɪ/. For the purposes of analysis of a chronemic contrast, two words with different meaning that are spoken exactly the same except for length of one segment are considered a minimal pair. The International Phonetic Alphabet (IPA) denotes length by doubling the letter or by diacritics above or after the letters (: – long, ˘ – half-long, no symbol – short, ˘˘ – extra-short).

*Further reading:* Crystal 1997.

**Classification** /ˌklæsɪfɪ'keɪʃən/ The term used to denote the act or result of classifying different phonetic phenomena, for instance, vowels, consonants, tones, scales, etc., into groups according to certain principles or characteristic features.

**Clear** /l/ /klɪə/ The term is used to refer to one of the positional allophones of the phoneme /l/. Two types of /l/ are used in English, known as “clear” [l] and “dark” [ɫ] respectively. For both types the tip of the tongue is pressed against the teeth ridge, but there is a difference in the shape of the body of the tongue. For the “clear” [l] the front of the tongue, behind the place of contact, is raised towards the hard palate; for the “dark” [ɫ] the back of the tongue is raised towards the soft palate. The clear [l] is registered in RP only before vowels. This allophone of the phoneme /l/ is not typical of General American pronunciation.

*Further reading:* Jones 1969; Christophersen 1970; Vassilyev 1970; Ladefoged 1975; Gimson 1980; O'Connor 1984; Clark *et al* 2007..

**Click** /kɫɪk/ A term used to refer to non-speech sounds such as the “tut-tut” or “tsk-tsk” familiar for English people as sounds of disapproval. A lateral click is used to express satisfaction or to make a horse move on.

**Clitics** /'klɪtɪks/ A term used to refer to the unstressed or partially stressed syllables which either precede (enclitics) or follow (proclitics) the stressed syllable in a rhythmic unit (or a rhythmic group).

**Close juncture** /'kləʊs 'dʒʌŋktʃə/ Due to the distinctive importance of syllable division, the syllabic boundary is often regarded by the American descriptivists as a separate phonological unit – the juncture phoneme. There are two types of juncture: open and close. Close juncture (or close transition) occurs between sounds within one syllable, i.e. within one articulatory unit. Therefore, the transitions from one sound to another are closer within a syllable than between syllables, e.g. the close juncture in “we loan” is between /l/ and /əʊ/, /əʊ/ and /n/. This juncture may also be called *intrasyllabic juncture*. (See **Open juncture**)

#### **Open juncture**

- a) a 'nice \\_house || /ə 'naɪs \\_haʊs/
- b) a \\_nation || /ə \\_neɪʃn/
- c) 'Joy \\_sleeps || /'dʒɔɪ \\_sli:ps/
- d) a 'grey \\_tabby || /ə 'greɪ \\_tæbɪ/
- e) a 'Greek \\_spy || /ə 'gri:k \\_spaɪ/
- f) I \\_scream!! || /aɪ \\_skri:m/
- g) I 'saw her \\_race || /aɪ 'sɔ: hɜ: hɜ: \\_reɪs/

#### **Close juncture**

- a) an \\_ice-house || /ən \\_aɪshaʊs /
- b) an \\_Asian || /ən \\_eɪʃn/
- c) 'Joyce \\_leaps || /'dʒɔɪs \\_li:ps/
- d) a 'great \\_abbey || /ə 'greɪt \\_æbɪ/
- e) a 'Greek's \\_pie || /ə 'gri:ks \\_paɪ/
- f) Ice \\_cream || /aɪs \\_kri:m/
- g) I 'saw her \\_ace || /aɪ 'sɔ: hɜ:r \\_eɪs/

*Further reading:* Chomsky, Halle, Lakoff 1956; Bolinger 1963; Vassilyev 1970; Chomsky, Halle 2002.

**Close vowel** /'kləʊs vaʊəl/ The term is used to denote a vowel in the production of which the tongue is raised as close to the roof of the mouth as is possible without producing fricative noise. Close vowels (or *high vowels*) may be front (when the front of the tongue is raised), these are unrounded /i:, ɪ/; they may be back (when the back of the tongue is raised), these are rounded /u:, ʊ/. Besides the close position of the tongue has two variations: *narrow* and *broad*. For instance, the vowels /i:, ɪ/ are both front

and close (or high) but in the production of /i:/ the front part of the tongue is raised a little higher than in the production of /I/; for this reason the vowel /i:/ is defined as front, close (high) and narrow, while the vowel /I/ is characterized as front, close (high) and broad. (See **Open vowels**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Laver 1995; *Clark et al 2007*.

**Closed syllable** /'kləʊzd 'sɪləbl/, or *checked syllable*. The term used to refer to the syllables which have a consonant at the end, for instance, the word *book* /bʊk/ consists of one closed syllable which has the CVC structure; the word *system* /'sɪstəm/ is a disyllabic word, both syllables of which have the CVC structure, where the letter C stands for a consonant, and the letter V symbolizes a vowel.

*Further reading:* Vassilyev 1970; Laver 1995; Борисова, Метлюк 1980; Теоретична 2003; Паращук 2005.

**Closing diphthong** /'kləʊzɪŋ 'dɪfθɒŋ/ The term refers to the type of diphthongs classified according to the articulatory character of their second element. In the English closing diphthongs the second element is either the high broad /ɪ/ or /ʊ/; that is why the diphthongs /eɪ, aɪ, oɪ, əʊ, aʊ/ are termed *closing*. (See **Diphthong, Vowel**)

*Further reading:* Jones 1969; Gimson 1980; Laver 1995; *Clark et al 2007*; Теоретична 2003.

**Closure** /'kləʊzə/ The term is generally used in relation to the production of plosive consonants, which require a total obstruction to the flow of air. To produce this obstruction, the articulators first move towards each other, and then are held together to prevent the escape of air. Other phoneticians use this term to refer to the period when the compressed air is held in.

**Cluster** /'klʌstə/ The term used to refer to two or more consecutive consonants in a segment of speech. This can occur at the beginning, in the middle and at the end of a word. The branch of phonetics which studies the rules according to which the sounds are combined in connected speech in a certain language is called *phonotactics*. Languages differ in the ways in which consonants can form clusters, and in which they can occur in the word. Certain clusters of sounds are sometimes associated with particular feelings or human characteristics, e.g. *bump, lump, hump, rump, mump(s), clump* and others are associated with large blunt shapes; a whole family of such words *muddle, fumble, straddle, cuddle, fiddle, buckle (vb.), struggle, wriggle* are associated with clumsy, awkward or difficult action because

they all end with a plosive and a syllabic /l/. (See **Phonotactics**)

*Further reading:* O'Connor 1984; Roach 1990; Блумфилд 1968; Журавлев 1974, 1981; Воронин 1982; Михалев 1995; Шевельов 2002; Сепир 2002.

**Cluster analysis** /'klʌstə ə'næləsɪs/, or *segmentation analysis*, or *taxonomy analysis*. The term refers to the method, or analysis of discovering a system of organizing observations into groups, or of classifying objects into different groups, or partitioning of a data set into subsets, or clusters, so that the data in each subset share some common trait, or features. Thus cluster analysis seeks to identify a set of features, or groups which both minimize within-group variation and maximize between-group variation. The computational task of classifying the data set into k clusters is often referred to as k-clustering. There are three general approaches to cluster analysis: (1) *hierarchical clustering* allows users to select a definition of distance, then select a linking method for forming clusters, as well as to determine the number of clusters best suit the data. Hierarchical clustering generates representation of clusters in icicle plots and dendograms, the so-called "trees" that unite clusters; (2) *k-means clustering* enables the researcher to specify the number of clusters in advance, then calculate how to assign cases to the K clusters. K-means clustering is much less computer-intensive and is therefore sometimes preferred when datasets are large (>1,000). K-means clustering generates an Analysis of Variance table (ANOVA table) showing mean-square error; (3) *two-step clustering* creates pre-clusters, then it clusters the pre-clusters. Two step clustering handles very large datasets; it is the method chosen when the data are categorical, and it has the largest array of output options, including variable importance plots. Thus the cluster analysis allows the researcher:

1) to build a dendogram (or a classification tree) of an arbitrarily great number of objects, or features as their hierarchical groups, or clusters based on the criterion of minimum distance between the variables under study;

2) to partition a definite multitude of objects, or features into desired number of homogeneous (similar) subsets, or clusters according to the chosen criterion.

The peculiarity of the cluster analysis method, whose application requires the researchers' definite professional skills, consists in the capacity of pithy saturation or interpretation of the procedure of partitioning objects (features) into classes. Data clustering is a common technique for statistical data analysis, which is used in many fields, including machine learning, data mining, pattern recognition, image analysis and the like.

*Further reading:* Stockburger; Кантер 1988; Клименюк 2005, 2006; Селіванова 2006.

**Clustering** /'klʌstəriŋ/ The term refers to the process of classifying objects into different groups, or partitioning a data set into subsets or clusters, so that the data in each subset ideally share some common features based on combinations of interval variables. (See **Cluster analysis**)

*Further reading:* Stockburger; Кантер 1988; ШЕВЕЛЬОВ 2002; КЛИМЕНЮК 2005, 2006.

**Coalescent assimilation** /kəʊə'lesənt ə'sɪmə'leɪʃən/ Another term for *Reciprocal assimilation*. (See **Assimilation, Reciprocal assimilation**)

- **Coarticulation** /kəʊə:ɪtkju'leɪʃən/ The term refers to the overlapping of adjacent articulation. Consonant sounds very often change their place of articulation acquiring some features of a neighboring sound, for instance the English alveolar sounds /t, d, s, z, n, l/ are usually pronounced with the tongue contact on the teeth when they occur before the interdental /θ, ð/ as in *at the* /æt ðə/, *width* /wɪð/, *sometimes the* /sʌmtaɪmz ðə/, *sixth* /sɪksθ/, *tenth* /tenθ/, *tell them* /tel ðəm/; the nasalization is a coarticulation effect caused by the nasal consonant environment, for example *English* /'ɪŋɡlɪʃ/. The degree of coarticulation between two sounds depends on the closeness of their contact. For example, lip rounding (or **labialization**) occurs in the production of /t/ when it is immediately followed by a rounded vowel as in *two* /tu:/; the lesser degree of rounding occurs when the analysed sound is separated by the bilabial central sonorant /w/ as in *twice* /twɑɪs/. D.Crystal speaks about (1) *anticipatory* coarticulation, if the sound becomes more like a following sound, and (2) *perseverative* if the sound is influenced by a preceding sound, anticipatory coarticulation being more common. Coarticulation is closely related to *assimilation* though *assimilation* defines the process when one sound acquires some articulatory characteristics of a neighboring sound; in its turn, coarticulation is concerned with articulatory explanations for the assimilation occurrence as well as it considers the cases where the changes may spread over a number of neighboring sounds. Types of coarticulation: 1) **labialization**, rounding the lips while producing the obstruction, as in [k<sup>w</sup>] and English /w/; 2) **palatalization**, raising the body of the tongue toward the hard palate while producing the obstruction, as in **Russian** /t<sup>j</sup>/; 3) **velarization**, raising the back of the tongue toward the soft palate (**velum**), as in the English dark l, [l<sup>ɣ</sup>] or [ɫ ]; 4) **Pharyngealization**, constriction of the throat (**pharynx**), such as **Arabic** "emphatic" [t<sup>ʕ</sup>]; 4) Doubly articulated stop: a stop produced simultaneously

with another stop, such as [labial-velar](#) consonants like [k͡p], found throughout West and Central Africa. There are also [labial-alveolar consonants](#) [t͡p d͡b n͡m], found as distinct consonants only in [a single language in New Guinea](#), which also contrasts labial-postalveolar stops. [Somali](#) has a [uvular-epiglottal](#) stop [q̠ʕ].

*Further reading:* Ladefoged 1975; Laver 1995; Crystal 1997; *Clark et al 2007*.

**Coarticulation theory** /ˌkəʊɑːtɪkjʊˈeɪʃən ˈθɪəri/ The term refers to the theory which consists in assuming motor control of targets and coarticulatory effects to explain segment overlap or merging.

**Cockney** /ˈkɒkni/ The term refers to the broadest London working class accent representing much-localized non-standard English. It is considered as the major influencing factor in the development of RP. That is why some current changes in RP can be related to Cockney pronunciation. There are no differences in the inventory in vowels and consonants between RP and Cockney and there are very few differences of phoneme lexical distribution. However, there are a larger number of differences in realisation of phonemes. Most striking realisation differences were summed by Prof. A.C.Gimson in “Gimson’s Pronunciation of English”, which are as follows: (1) *within the system of consonants*: a) dropping of the /h/ phoneme when word initially, e.g., /ˈɪstəri/ instead of /ˈhɪstəri/ in RP; at the same time it appears in the initial position words which in RP begin with a vowel, e.g., /hɛə/, /ˈhæt məs fiə/ instead of /ɛə/, /ˈæt məs fiə/ in RP; b) glotalling of /t/ when it is preceded by vowels, lateral and nasal sonorants, e.g., *eat it* /iːʔ ɪʔ/, *filled up* /ˈfɪʔ ʔ ʌp/, *butterfly* /ˈbʌʔtəflaɪ/; besides, /t/ in intervocalic position is not aspirated, and is very often replaced by /d/, or /r/ or by the glottal stop, e.g., *better* /ˈbedə/, /ˈberə/, /ˈbeʔə/; similar replacement occurs in the production of /p/ and /k/ before a consonant, e.g., *soapbox* /ˈsəʊʔbɒks/, *technical* /ˈteʔniʔʊ/; c) vocalisation of the dark /ɜ/ in position not immediately before vowels, e.g., *milk* /mɪʊk/, and its complete disappearance when it is preceded by a vowel /ɔ:/, e.g., *called* /kʰɔ:d/; d) coalescence of /t/, /d/ before /j/ into /tʃ/, /dʒ/, e.g., *tube* /tʃu:b/, *during* /dʒʊəriŋ/; at the same time there is an elision of /j/ if preceded by /n/, e.g. *news* /nu:z/; e) fronting or stopping of *th*; the contrast between /θ/ and /f/ is completely lost and occasionally lost between /ð/ and /v/, e.g., *think* /fɪnk/, *father* /ˈfɑ:və/; when /ð/ occurs initially it is either dropped or replaced by /d/, e.g., *this and that* /ˈdɪsn ˈdæt/; (2) *within the system of vowels*: a) lengthening of /ɪ/ in word final positions, e.g., *city* /ˈsɪti:/;

b) weakening of the diphthong /əʊ/ to /ə/ when word final, e.g., *window* /ˈwɪndə/, *pillow* /ˈpɪlə/; c) diphthong shift, e.g., /eɪ/ → /aɪ/ as in *lady* /leɪdi/ → /laɪdi/; /aɪ/ → /ɒɪ/ ~ /ɑɪ/ as in *price* /praɪs/ → /prɒɪs/; /əʊ/ → /æʊ/ as in *load* /ləʊd/ → /læʊd/; /aʊ/ → /a:/ as in *loud* /laʊd/ → /la:d/; d) phonemes /e/ and /æ/ have less differences than in RP; e) diphthongisation of /i:/ → /əi/, /u:/ → /əʊ/, e.g., *bead* /bi:d/ → /bəid/, *boot* /bu:t/ → /bəʊt/; final /ɔ:/ is pronounced as /ɔwə/, e.g. *sore* /sɔ:/ → /sɔwə/, in non final position /ɔ:/ sounds as /ɔʊ/. (Examples are taken from [Gimson 2001:88]).

*Further reading:* Ladefoged 1975; O'Connor 1984; Wells 1994, 1997; Gimson 2001; Сепир 2002; Паращук 2005.

**Coda** /ˈkəʊdə/ The term refers to the end of a syllable. The central part of a syllable is almost always a vowel, and if the syllable contains nothing after the vowel it is said to have no coda (*zero coda*, i.e. the syllable has the CV structure, e.g. *paw* /pɔ:/ CV). English allows up to four consonants to occur in the coda (e.g. *texts* /teksts/ CVCCCC), so the total number of possible codas in English is very large about several hundred.

*Further reading:* Laver 1995; Борисова, Метлюк 1980; Паращук 2005.

**Code** /kəʊd/ The term refers to any system of signals used for sending messages. Language as a code used in the process of transmitting a verbal message from the addressor to the addressee consists of a lexicon, a grammar and phonology. (See **Communication**, **Verbal communication**, **Non-verbal communication**, **Language**)

*Further reading:* Laver 1995; Паращук 2005.

**Codification** /ˌkəʊdɪfɪˈkeɪʃən/ The term refers to the fixing (reflection) of actual pronunciation forms in pronunciation dictionaries and other sources of reference. Codification reflects the living pronunciation more or less precisely, but there is no one to one correlation between them: codified pronunciation is never fully adequate to the actual one since for technical reasons pronunciation dictionaries do not reflect the newest tendencies which take place in the living pronunciation. The most authoritative English pronunciation dictionaries such as *The English Pronouncing Dictionary* by D.Jones (later edited and revised by A.C.Gimson) and *The Longman English Pronunciation Dictionary* by J.Wells cover the two prestigious accents of English: RP/BBC English and GenAm.

*Further reading:* Wells 2000; Kenyon, Knott 1987; Паращук 2005.

**Cognitive approach** /ˈkɒgnətɪv əˈprəʊtʃ/ The term used in phonetics to refer

to the approach of speech research based on revealing the nature of the linkage between linguistic form (phonetic in this case), speech substance and mind, i.e. the study of phonetic problems from a cognitive standpoint. This problem can be solved, in J.Laver's opinion, through an examination of the production, perception and understanding of speech during acquisition, normal use or pathology, and through the relation between these and speech acoustics.

*Further reading:* Laver 1996; Tsur 1992; Halliday, Matthiessen 1999; Cook 2002; Singer 1990; Селіванова 2008.

**Cognitive phonetics** /'kɒgnətɪv fə'netɪks/ The term refers to a relatively new field of phonetics which studies the basic phonetic phenomena and processes of the knowledge representation during speech production, and of the mental processes that operate on those representations, namely *speech perception, recognition, understanding, and remembrance, or storing*. In combination these processes of coding and decoding of oral speech permit people to perform an unlimited variety of complex mental tasks connected with the use of language in general and its phonetic means in particular. In other words, the analysis of phonetic phenomena should be carried out through the speaker's overall cognitive capacities. Thus, cognitive phonetics can be regarded as an interdisciplinary science. According to N.Cook, the phonetic representation of people's knowledge in oral communication is usually organized around specific intonational patterns ("intonatopic maps" [Cook 2002:138]), or the form of an utterance, as well as sets of vowels and consonants, organizing definite speech acts. For example, one type of intonatopic mapping refers to the phonetic organization of stating the facts (or constatives), another – of asking for information, another – of getting people react to this or that stimulus (directives), others refer to definite ways of expressing and evoking certain emotions and feelings or accomplishing a goal, others still refer to the adequate phonetic representation of different forms of speech or various types of texts and speech situations, different psychological, social and age types of speakers, etc. All of these intonatopic maps play an important role in speech processing since they provide a framework for correct organizing and then expressing complex ideas and thoughts in oral communication. The assumption can be made that prosodic organization of speech is best studied and described with reference to its cognitive, experiential, and social contexts, which go far beyond the phonological system proper. Thus at present the aim of cognitive phonetics research is to examine the relation of phonetic phenomena (intonation patterns, sound sequences, etc.) to things outside language: the relation of language phonetic means and mind, counting the questions of phonological

universals; cognitive principles and mechanisms not specific to language, including principles of human categorization; the experiential and pragmatic background of language-in-use and interactional principles, as well as functional principles, such as iconicity, speech naturalness and economy. The results of cognitive phonetics research will facilitate the understanding of the problems connected with the questions of interference in non-native speakers' pronunciation. Cognitive linguistics in general and cognitive phonetics in particular is one of the most perspective spheres in interdisciplinary studies. (See also **Communication, Brain Functions, Phonoconcept**)

*Further reading:* Chomsky, Halle 1991; Baum, Pell 1999; Cook 2002; Tsur 1992; Laver 1996; Lamb 1999; Morton 1987; Tatham 1987; Steinhauer et al. 1999; Vanlacker-Sidtis 2003; Gandour 2000; Tatham, Morton 2004; Välimaa-Blum 2005; Винарская 1979; Жинкин 1982; Хомський 2000; Калита, Тараненко 2007, 2008.

**Cognitive semantics** /'kɒgnətɪv sə'mæntɪks/ The term refers to the sphere in cognitive linguistics which regards meaning as a mental phenomenon, connected with different ways of receiving, preserving and processing information by the human's brain. In cognitive phonetics the term refers to the role of phonetic means in interpreting the meaning of perceived information on the basis of a person's communicative-and-cognitive experience stored in his/her brain. It is important to take into account a set of phonetic means, for instance, while interpreting an utterance meaning, whose syntactic structure does not always correspond to the speaker's intentions. At the same time the interpretation of meaning of one and the same information by different listeners may vary depending on their communicative-and-cognitive experience, cultural and educational background, knowledge, age, gender, etc. (See also **Cognitive phonetics, Communication, Brain Functions**)

*Further reading:* Lakoff 1980; Baum, Pell 1999; Cook 2002; Laver 1996; Tsur 1992; Lakoff, Johnson 1998; Lamb 1999; Langacker 1990; Steinhauer et al. 1999; Tatham 1987; Morton 1987; Gandour 2000; Tatham, Morton 2004; Павленис 1983; Лакофф 2004.

**Coherence** /kəʊ'hɪərəns/ A term refers to the main principle of functional connectedness or identity of a piece of spoken or written language as an integral unit. Prosodic coherence of the text is usually associated with the sequence of terminal tones used at the juncture of intonation groups and sentences/utterances, pitch and range modifications, as well as variations of tempo, loudness and voice timbre. Thus while analysing the prosodic coherence of a text, one cannot interpret semantic ties between its

components without referring to the prosodic features mentioned above. Coherence is usually contrasted with *cohesion*, which refers to the syntactic or semantic connectivity of linguistic forms at a surface-structure level of analysis.

*Further reading:* Hallyday, Hasan 1976; Coulthard 1985; Bolinger 1980; Hatch 1992; Crystal 1997; Сепир 2002; Тараненко 2008.

**Cohesion** /kəʊ'hi:zən/ The term is used to refer to the property of larger units than the morpheme to bind together in constructions. Cohesion is regarded as the major concept, referring to those surface-structure features of an utterance or text, which link parts of sentences or larger units of discourse. (See **Coherence**)

*Further reading:* Halliday, Hasan 1976, 1991; Bolinger 1980; Hatch 1992; Crystal 1997; Jeffries 1998; Сепир 2002; Тараненко 2008.

**Combinatorial** /kəm'binətə:riəl/ The term is used to refer to the fundamental function of linguistic units to combine with one another to produce more complex pattern. For example, the combinatorial capacity of consonants and vowels in a syllable where a vowel is regarded as a nucleus (V), and consonants as margins (C), e.g. *big* (CVC), where the vowel /i/ is the nucleus of the syllable, and /b/, /g/ are called marginal.

*Further reading:* Laver 1995.

**Combinatory allophone** /kəm'baɪnətəri 'æləfəʊn/ A term refers to the allophones of a phoneme which appear as a result of assimilation, or adaptation (See **Allophone**)

**Communication** /kə'mju:nɪ'keɪʃən/ A term refers to the process of transmitting information between an addresser, who encodes the message with the help of a definite signaling system and an addressee, who decodes it. When one person wants to convey a message to another he/she can use a variety of means. He may write it down on a piece of paper and hand it over (*written communication*). He may transmit it in sign language, as deaf mutes do. He may stand on one alp and wave or drape flags in a pre-arranged way to the recipient standing on another hill; or he may prefer to flash a mirror. All these are visual means of communication. The message may also be passed by audible means, by fog-horn, Morse-key or drum, gestures (so-called *non-verbal means* of communication or *sign communication*); or it may simply be spoken: transmitted by sound generated by certain speech organs available to every human being (*oral communication*). In other words, during speech communication co-conversers generally use two codes: (1) *a*

*verbal code*, i.e. language, and (2) *non-verbal codes* or signals that are usually transmitted through particular communication medium or channel (so-called *paralinguistic means*, including (a) *a visual code* (*body language* or *bodily activity* (posture, gestures, facial expression, or mimics, eye contact, appearance), (b) *an auditory code* (*vocalics*, or *the use of voice*, embracing *vocal characteristics*: laughing, crying, yelling, moaning, yawning, etc.; *vocal qualifiers*: volume, pitch, tempo, resonance and tone; *vocal rate*; *vocal fillers*: sounds like *un-huh, shh, ohh, uh, mmh*, etc.), (c) *a contact code* (touch, space), (d) *time and place codes* (time, objects).

The spoken word, i.e. language, is the most frequent and the most important medium of communication between interlocutors. In the act of oral communication there are five main components: (1) *a speaker/sender/addresser/initiator of information*, (2) *a message which is transmitted*, (3) *one or more co-conversers (a hearer/listener/receiver/addressee)*, (4) *means (a mode/vehicle/medium) of transmitting information*: (a) the voice, face, body; the spoken word; (b) books, photographs, printings, etc; (c) telephone, radio, TV, computer networks, etc.; (5) *an effect produced by the message*. Spoken communication consists of three major stages: (a) *speech production*, (b) *speech perception*, (c) *speech understanding*, and manifests itself in the following functions: (1) *instrumental* – to achieve or obtain something; (2) *controlling* – to make someone behave in a certain way; (3) *information(al)* – to learn about something, to discover or explain something; (4) *expressive* – to express the speaker's feelings and emotions; (5) *social* – to maintain social contacts; (6) *alleviating* – to lessen an anxiety or ease a worry about something; (7) *stimulating* – to make the recipient react to the speaker's information; (8) *role-relating* – to mark/designate the co-conversers' social status or position.

Spoken communication offers one of the most accessible examples of the workings of this complex of systems. Therefore a comprehensive view of the human cognitive systems would be incomplete without understanding of the relationships between the production, perception and understanding of speech. Spoken communication thus deserves, in J.Laver's opinion, the concentrated attention of the cognitive sciences, since the act of communication starts in the speaker's brain, because a profound knowledge of how the language operates is stored in the speaker's brain, which performs two functions: a creative function and a forwarding function.

In the course of communication the co-conversers are governed by certain rules and principles, which an efficient speaker should know of. An attempt to discover the logic for rational behavior in conversations was made by P. Grice who singled out: (1) the *cooperative principle* of communication, consisting of four *maxims*, or ethical principles of speakers' communicative behavior: (a) *the maxim of quantity* (speakers

should provide the appropriate amount of information for their interlocutor to be able to interpret their intention); (b) *the maxim of quality* (speakers should tell the truth trying not to mislead the hearer); (c) *the maxim of relation* (speakers should provide information relevant to the topic of the conversation and the communicative situation); (d) *the maxim of manner* (speakers should express their ideas clearly, avoiding ambiguity); (2) *the principle of politeness* representing a set of social skills to ensure harmony and affirmation in social interactions. Two strategies of polite behavior are distinguished by P. Brown and S. Levinson: (a) *positive politeness* – the expression of the speaker’s involvement, interest, concern oriented to the co-converser’s positive image; (b) *negative politeness* – the expression of the speaker’s restriction and restraint in case he/she recognizes the recipient’s independence and rights to autonomy and freedom. The knowledge of these principles, as well as the ones called laws suggested by I. Sternin (e.g. the law of the listener’s progressing impatience, the law of public criticism rejection, the law of trust to simple words, the law of the emotional suppression of logic and others), is important for successful communication. (See **Brain Functions, Cognitive Phonetics, Language**)

*Further reading:* Grice 1975; Jassem 1983; Brown, Levinson 1987; O’Connor 1984, 1988; Ellis, Beattie 1986; Burgoon et al 1996; Novinger 2001; Watson, Hill 2000; Cook 2002; Laver 1996; Berge 2001; Thomas 2001, 2001a; Почепцов 2001; Стернин 2002; Паращук 2006; Калита, Тараненко 2008; Шаховский 2008.

**Communicative approach** /kə,mju:nɪkətɪv ə'prəʊtʃ/ The term used in phonetics to refer to an approach to studying phonetic phenomena that focuses on the function of a definite phonetic unit in connected speech. (See **Communication**)

**Communicative competence** /kə,mju:nɪkətɪv 'kɒmpɪtəns/ A term is used in phonetics, namely in intonology, to denote the situational appropriateness of the speaker’s use of phonetic means of the language. (See **Linguistic competence**)

*Further reading:* Tsur 1992; Duranti 2001.

**Communicative centre** /kə,mju:nɪkətɪv 'sentə/ The term refers to the most important and new for the listener piece of information conveyed in the utterance or intonation group. The communicative centre (or *semantic centre*, or *information focus*) may occupy any place in an utterance or intonation group and may be presented by a single word or a group of words, which take a certain terminal tone (falling, rising, falling-rising,

rising-falling, etc.). For example, in the utterances *Oh, yes.* || *Yes,| as 'soon as I ar\rive* || the words *yes,* *Yes* and *ar\rive* form the communicative centres and on these very words the tone changes its direction.

**Commutation test** /,kɒmjʊ:'teɪʃən 'test/ The term refers to the procedure of finding minimal pairs which consists in replacing one speech sound by another in the same position in order to see whether that substitution will produce a minimal pair (minimal set) or not. E.g. *pen – ben; ten – den; Ken – gen* (the last pair of words does not make up a member of minimal pair since the words have no lexical meaning). Commutation test is part of a more general method of distributional analysis. (See **Minimal pair**, **Minimal pair test**)

*Further reading:* Ladefoged 1975; Gimson 1980; Laver 1995; Crystal 1997; Chomsky, Halle 2002.

**Comparative phonetics** /kəm'pærətɪv fə'netɪks (/fəʊ'netɪks/)/ The term refers to the branch of phonetics which is concerned with the comparative study of phonological systems of two or more languages, i.e. with the study of similarities and differences of compared languages.

**Compensatory lengthening** /,kɒmpən'seɪtəri 'leŋθənɪŋ/ (See **Lengthening**)

**Complementary distribution** /,kɒmplɪ'mentəri ,dɪstrɪ'bju:ʃən/ A term refers to the allophones which never occur in the same environment. They are said to be in complementary distribution, e.g. clear /l/, which occurs before vowels and /j/ and dark /ɫ/ which occurs elsewhere (i.e. before consonants or a pause), or aspirated and non-aspirated allophones of /t/ in the word *state*. Since each of them has its own specific context in which it occurs, and does not occur in the contexts in which the others occur, we can say that each is in complementary distribution with the others. Sounds, which are in complementary distribution, are likely to belong to the same phoneme; they are classed as members of the same phoneme. Such sounds can never distinguish one word from another because they can never occur at the same place in words, whereas the initial consonants of *bat, rat, mat,* etc. can and do, since they are not in complementary distribution. (See **Phonemic principle**)

*Further reading:* Gimson 1980; O'Connor 1984; Roach 1990; Crystal 1997; Chomsky, Halle 2002; *Clark et al 2007.*

**Complex sentence** /'kɒmpleks 'sentəns/ A term refers to the sentences consisting of a principal clause and one or several subordinate, or

dependent clauses, e.g. *After much thought the woodcutter and his wife finally agreed that they would have to use the last wish to remove the sausage.* In this sentence the main, or principal clause is *After much thought the woodcutter and his wife finally agreed* and the second part of the sentence *that they would have to use the last wish to remove the sausage* is regarded as the subordinate clause. The intonation, which organizes complex sentences largely depends on the semantic ties between the principal and subordinate clauses as well as their type and location in the sentence.

**Complex word** /'kɒmpleks 'wɜ:d/ The term is used by P. Roach to refer to 1) the words made from a basic stem word with the addition of an affix (a prefix or a suffix) as the words *carelessness*, *recognizable* being composed of several grammatical units, and 2) compound words that are made of two or more independent words which function as a single word, e.g. *ice-cream*, *classroom*. (See **Compound word**)

*Further reading:* Roach 1990.

**Compound sentence** /'kɒmpaʊnd 'sentəns/ A term refers to the sentences consisting of two or more principal, or independent clauses, joined by coordination, e.g. *But Cinderella was having so much fun and she didn't realize how quickly time was passing.* This sentence consists of two principal clauses which are linked by the conjunction *and*. Both of them may be used as two separate sentences. The intonation in such sentences generally depends on the semantic links between the two clauses. When the ties are very close, a rising tone is used; a falling tone signals about the clauses' semantic autonomy and thus their lesser degree of sense linkage. Sometimes there occur the so-called compound-complex sentences like *His new wife was neither kind nor pretty and she had two daughters who were known by everyone in the town as the ugly sisters.* This sentence consists of two principal clauses (1) *His new wife was neither kind nor pretty*, (2) *she had two daughters* connected by the conjunction *and*. At the same time the second principal clause has a subordinate clause *who were known by everyone in the town as the ugly sisters* which can be classed as the subordinate attributive clause since it characterizes the object *two daughters* of the principal clause (2).

**Compound tune** /'kɒmpaʊnd 'tju:n/ The term refers to the intonation contour consisting of more than one kinetic, or moving tone while simple tunes have only one kinetic tone. Compound tunes are rather frequent especially in lively conversations and in reading aloud "expressively". In such intonation contours the last kinetic tone is the nuclear tone, while the kinetic tones which precede it are the parts of the head or the scale

depending on their position within the contour, or tune and are mainly used to highlight this or that word in the intonation group. (See **Simple tune**)  
*Further reading:* Kingdon 1966; Crystal 1969; Антипова 1979.

**Compound word** /'kɒmpaʊnd 'wɜ:d/ A term refers to the words consisting of two or more free morphemes (or words), which function as a single word, e.g. 'blackboard, 'bookcase, etc. Compound words are written either as a single word ('blackbird), as hyphenated words ('good-'looking), or as two words ('tape re'corder). (See **Complex word**)  
*Further reading:* Roach 1990.

**Computer speech recognition** /kəm'pjʊ:tə 'spi:tʃ rekəg'nɪʃn/ (See **Speech recognition**)

**Concept** /'kɒnsept/ The term is used in cognitive science and philosophy of mind to refer to an abstract idea, or a unit of knowledge, or a mental symbol, typically associated with a corresponding representation in a language or symbology. Concepts are bearers of meaning found in some particular difference in the course of human experience. They are useful in dealing with reality as well as they are helpful in (a) recognizing perceived information as being of a certain ontological kind; (b) understanding of the kind of delivered information, and (c) distinguishing a number of perceived particulars as being the same in kind and in discriminating between them. In order to make mental images into concepts, one must be able to: (a) *compare*, i.e. to find similarity of mental images to one another in relation to the unity of consciousness; (b) *reflect*, i.e. to be able to go back over different mental images and find out the ways they can be comprehended in one's consciousness and (c) *abstract*, i.e. to segregate everything else by which the mental images differ. These three logical operations of understanding are essential in generating any concept. The mechanism of concept transformation in cognitive phonetics lies in structural mapping, known as “intonatopic mapping”, in which properties of two or more source domains (e.g., prosody, emotions, communicative situation, etc.) are selectively blended into an intonatopic map.

*Further reading:* Keil 1996; Laurence, Margolis 1999; Barsalou 1999; Cook 2002; Barsalou et al. 2003; Bowerman, Levinson 2001; Carruthers 2002; Fodor 1998; Селиванова 2000, 2006; Бабушкин 1996; Вежбицкая 1996; Попова, Стернин 2007; Шаховский 2008.

**Conditioning factors** /kən'dɪʃənɪŋ 'fæktəz/ The term refers to the features of the context that are responsible for the allophonic variation, for instance, the

nasal consonant that conditions nasalization of a preceding vowel, the voicing of vowels that conditions voicing of an intervocalic stop, and so on.

**Connected speech** /kəˌnektɪd 'spi:tʃ/ A term used to refer to spoken language when analyzed as a continuous sequence in utterances and conversations. In natural speech many processes can be observed that result in the differences between isolated words and the same words occurring in connected speech (e.g., reduction in weak syllables, assimilation and elision, rhythm, prosodic phenomena).

*Further reading:* Gimson 1980; Roach 1990.

**Connotation** /ˌkɒnə'teɪʃən/ A term is used to refer to the additional meaning or a part of a meaning, that a linguistic unit (in phonetics an intonation group or an utterance) has besides its core meaning. This meaning reflects the speaker's emotional state, his/her attitudes towards whom he/she is talking, what he/she is saying, towards the reality, the associations which are suggested. In phonetics the term is used to express the personal emotional association conveyed in the utterance. The part of meaning covered by connotation is sometimes referred to as *affective meaning*, *connotative meaning* or *emotive meaning*.

*Further reading:* Markel, Hamp 1961; Mills 1995; Crystal 1997; Jeffries 1998; Телия 1981; Селіванова 2006.

**Consonant** /'kɒnsənənt/ A term is used to refer to the sounds made by a closure or narrowing in the vocal tract as a result of which the airflow is either completely blocked as in *plosives* /p, b, t, d, k, g/ which form a complete stoppage of the airstream and are known as the most consonantal. *Nasal consonants* /m, n, ŋ/ are characterized by the complete stoppage of the oral cavity though they are less obstructive than plosives since the air escapes through the nasal cavity. In the *lateral* sonorant /l/ production (both in its "clear" and "dark" allophones) the airstream is obstructed only in the centre of the mouth, not at the sides, and the air escapes at the sides of the mouth. In the pronunciation of *fricatives* /f, v, θ, ð, s, z, ʃ, ʒ, h/ the closure is so restricted that audible friction is produced, but there is no total closure of the airstream. In English there are some consonants, which lack the friction in their production. Such consonants are vowel-like in character and very often they are called *semi-consonants*, or *semi-vowels*, or *approximants*: /r, w, j/.

According to the active organ or place of obstruction the English consonants are classified into: *labial* made either with one (*labiodental* /f, v/) or both lips (*bilabial* /p, b, m, w/); *forelingual*: *interdental* /θ, ð/ produced with the tongue tip between the teeth; *alveolar* /t, d, s, z, n, l/ made

with the tongue tip or blade at the alveolar ridge; *post-alveolar* /r/; *palato-alveolar* /ʃ, ʒ, tʃ, dʒ/; *medio-lingual: palatal* /j/; *backlingual: velar* /k, g, ŋ/ made with the back of the tongue and the soft palate; *pharyngeal: glottal* /h/.

According to the manner of noise production, the English consonants are classed as: *constrictive* /w, l, r, j, f, v, θ, ð, s, z, ʃ, ʒ, h/ produced when the air passage is narrowed to such an extent that the air being forced through it produces the noise of friction; the narrower the passage, the more fricative noise is produced; *occlusive* /p, b, t, d, k, g, m, n, ŋ/ in the production of which the vocal tract is completely closed; and *occlusive-constrictive* or *affricates* /tʃ, dʒ/ in the production of which the air-pressure behind a complete closure in the vocal tract is gradually released; the initial release produces a plosive, but the separation which follows is sufficiently slow to produce audible friction, and there is thus a fricative element in the sound.

Usually a phonetic description of consonants involves information about the mode of vibration of the vocal cords (*voiced/voiceless* consonants). *Lenis consonants* are usually weakly articulated sounds; the term is used for voiced consonants, which are less strongly articulated than voiceless ones. The opposite term is *fortis* which refers to a sound articulated with a relatively strong degree of muscular effort and breath force. This explanation is based on phonetic criteria. As to the *phonological* characteristics of consonants, they are regarded as the marginal elements of syllables. Some consonants in English are *syllabic* or capable of forming a syllable, they are /m, n, l/, when preceded by a consonant. Over 60% of everything said is made up of consonants, and just under 40% of vowels. Practically a third of all the syllables have the CVC (consonant-vowel-consonant) structure as in *man*.

According to the active speech organ and the place of obstruction		LABIAL		LINGUAL					GLOTTAL	
		Bilabial	Labio-dental	<i>Forelingual</i>				<i>Medio-lingual</i> (palatal)		<i>Back-lingual</i> (velar)
				Interdental (apical)	Alveolar (apical)	Palato-alveolar (apical)	Post-alveolar			
According to the type of obstruction and the manner of producing noise										
OCCL	USIV	Plosives (noise consonants)	p		t				k	
ES			ɸ		d				g	

	Nasal sonorants	m			n				ŋ	
CONSTRUCTIVES	Fricatives (noise consonants)		f v	θ ð	s z	ʃ ʒ				h
	Sonorants	Medial	w				r	j		
		Lateral				l				
	Occlusive-constrictives (affricates)					tʃ dʒ				

*Further reading:* Christophersen 1970; Gimson 1980; Jassem 1983; O'Connor 1984; Roach 1990; Laver 1995; Crystal 1997; Ladefoged 2003; Yule 2009; Сепир 2002; Теоретична 2003; Бровченко, Корольова 2006.

**Consonant cluster** /<sub>1</sub>kɒnsənənt 'klʌstə/ A term used to refer to a sequence of two or more consonant phonemes (word initial, word medial or word final) within the same syllable with no vowel sound between them: for example, the word 'stray' /streɪ/ begins with three consonants, 'pastry' /'peɪstri/ with three consonants in the middle of the word and 'sixths' /sɪksθs/ ends with four consonants. It is not usual to refer to vowel clusters. Languages differ greatly in the ways in which consonants form clusters as well as positions in the word they can occur. J.D.O'Connor noted that final clusters are more complex in English than initial ones since they express grammatical meanings of plurality, tense, ordinal number, e.g. /-ksts/ as in *texts*, /-kst/ as in *mixed*, /-mpst/ as in *glimpsed*, /-ksθ/ as in *sixth*, /-ŋθs/ as in *strengths*. According to their position in the word phonetic structure, clusters can be divided into: 1) *prevocalic*, 2) *post-vocalic* and 3) *intervocalic*. In English prevocalic clusters the largest number of consonants is *three*. The clusters /spl-/ , /spr-/ , /str-/ , /skw-/ are used most frequently, the others less so. Most phonotactic analyses are based on the syllable since phonotactic possibilities of English phonemes, for instance, predetermine the rules of syllable division. Certain initial and final sequences are sometimes associated with particular feelings or human characteristics, e.g. /sl-/: *sly, slick, slothly, slothful, sluggard, sluggish, sloppy, slipshod, slime, slither, slug*, etc, /sn-/: *sniff, sneer, snigger, snatch, sneak, snivel, snob, snotty, snide, snuffle*, /kr-/: *crash, crack* generally evoke unpleasant

associations; /fl-/ associates with quick and light movement: *fly, flash, flame, flap, flip, flee, flit*; /gl-/ associates with: 1) static (unmovable) light, e.g.: *glow, glimmer, glare, gloat*; 2) obscure light, e.g.: *gleam, glitter, glisten*, 3) dusky light, e.g.: *gloaming*; /tr-/ associates with speed; /gr-/ – with grumbling; /br-, fr-, gr, pr-, r- / are typical of minor texts, while phonostemes /bl-, fl-, gl-, pl-/ characterize major texts; /br-/ is associated with noise and mess. Final consonantal clusters, for instance, 1) /-mp/ associates with awkwardness and clumsiness as well as with large blunt shapes, e.g.: *bump, lump, hump, rump, mump(s), clump*; 2) a whole family of such words *muddle, fumble, straddle, cuddle, fiddle, buckle (vb.), struggle, wriggle* are associated with clumsy, awkward or difficult actions because they all end with a plosive and a syllabic /l/. The assumption has been made that the type of a vowel under stress (i.e. its acoustic characteristics) is capable of differentiating the shades in the meaning of synonyms: *gleam, glister, glitter, glare, glow, glance*. (See **Phonotactics**)  
*Further reading:* Блумфилд 1968; Bolinger 1991; Yule 2009; Левицкий 1973, 1998; Журавлев 1974, 1981; Воронин 1982; Михалев 1995; Кушнерик 1996; Калита 2001; Львова 2005.

**Constative** /'kɒnstətɪv/ A term used to refer to an utterance, which asserts something, or states the fact that is either true or false. E.g. *A transcription of an utterance in phonetic symbols is said to be in phonetic notation or script.*

*Further reading:* Austin 1962; Searle 1970; Palmer 1982; Bolinger 1989.

**Constriction** /kən'strɪkʃən/ (**constricted**) The term refers to the narrowing of the vocal tract. The position of constriction and the degree of its narrowing are the most important ways, which serve to differentiate speech sounds from each other.

**Constrictive consonants** /kən'strɪktɪv 'kɒnsənənt/ The term refers to the consonants produced when the air passage is narrowed to such an extent that the air being forced through it produces the noise of friction; the narrower the passage, the more fricative noise is produced. Depending on the amount of noise in their production constrictive consonants are classed into: (1) *constrictive sonorants* /w, l, r, j/, in the articulation of which the narrowing is not wide enough to eliminate the noise of friction completely as it does in the case of vowel sounds; and (2) *constrictive fricatives* /f, v, θ, ð, s, z, ʃ, ʒ, h/, in the production of which the air passage is so narrow that no resonance is possible. (See **Constriction**)

**Content word** /'kɒntent wɜ:d/ The term used to refer to the words such as nouns, verbs, adjectives and adverbs which designate things (*a vowel, a tone-group*), actions (*to pronounce, to utter*), quality (*syllabic*), state (*stressed*) and have the so-called *lexical meaning*, when they are used alone.

*Further reading:* Bolinger 1989; Crystal 1997.

**Context** /'kɒntekst/ A term used in phonetics to refer to the semantically linked utterances (or discourse) that help in understanding the meaning of a definite utterance or word which is the focus of attention. In this case we speak about this or that linguistic item's (the utterance or word) *contextual meaning*. The use of the utterance appropriate intonational pattern is largely determined by the *context of situation* that embraces the whole set of linguistic and non-linguistic features which take part in the utterance meaning creation. Variants of one and the same intonation pattern of an utterance conditioned by different components of the situation are called *contextual variants* of the intonation pattern. For instance, the utterance *So you're the new secretary, are you?*, realized in different speech situations due to a certain intonational model acquires a definite contextual meaning, e.g.:

(a) *So* <sup>1</sup>*you're the* <sup>•</sup>*new* <sub>1</sub>*secretary,* <sup>2</sup>*are you?* || (the speaker knows that the new worker performs the duties of a secretary); (b) <sub>1</sub>*So* | *-you're the* <sup>1</sup>*new* <sub>1</sub>*secretary,* <sup>2</sup>*are you?* || (the speaker suspects the new secretary is a spy); (c) *-So* <sup>1</sup>*you're the* <sup>↑</sup>*new* <sub>1</sub>*secretary,* | <sup>1</sup>*are you?* || (the speaker expects the new secretary to be another person); (d) *-So* <sup>1</sup>*you're the* <sub>1</sub>*new* <sub>1</sub>*secretary,* <sup>2</sup>*are you?* || (the speaker suddenly realizes that he speaks to a new secretary); (e) <sub>1</sub>*So* | <sup>1</sup>*you're the* <sup>•</sup>*new* <sub>1</sub>*secretary,* | <sup>1</sup>*are you?* || (the speaker considers the new secretary to be an attractive woman).

*Further reading:* Lyons 1981; Bolinger 1989; Laver 1995; Crystal 1997; АХМАНОВА 1969; КАЛИТА 2001.

**Contextual analysis** /kən'tekstuəl ə'næləsis/ In phonetics the term is used to refer to the process of establishing the meaning of linguistic units considering their prosodic actualization.

**Continuant** /kən'tɪnjuənt/ A term is used in the distinctive feature theory of phonology and refers to the sound produced with an incomplete closure of the vocal tract. All vowels and fricatives are called continuants; they are marked as [+continuant]. The plosive sounds, or stops, which are pronounced with a complete closure of the vocal tract, are known as *non-continuant*s and are marked as [-continuant].

*Further reading:* Ladefoged 1975; Gimson 1980; Crystal 1997.

**Contour** /'kɒntʊə/ A term used in intonology to refer to the configuration of the voice pitch movement, or tune, in the intonation group. The structure of an intonation *contour* consists of the following sections: *a pre-head* (the unstressed and partially stressed syllables preceding the head), *a head* (the very first stressed syllable in the structure of an intonation group), *a scale* (the optional part of an intonation contour which begins with the first stressed syllable and together with the intervening unstressed syllables stretches up to the nuclear tone), *a nuclear tone* (a marked change of pitch movement which occurs on the most prominent syllable in the intonation group) and *a tail* (the unstressed and partially stressed syllables following the nuclear tone). The nuclear tone is obligatory and the most important section. The combination of the nuclear tone and the tail is termed as *the terminal tone*. The rest of the sections of the intonation contour are optional. For instance, in the utterance, (1) *I* <sub>1</sub>*want* *nothing from you*; | (2) *I* <sub>1</sub>*ask* *nothing of you*; | (3) *why* <sub>1</sub>*cannot we be* *friends?* ||, which consists of three intonation groups, the intonation contour of the first intonation group (1) *I* is a low level pre-head, *want* is a low level head, *noth-* is the nuclear tone, and *-ing from you* functions as a rising tail. The intonation contour of the utterance *'Here is the 'six o'clock* <sub>1</sub>*news* does not contain a pre-head and a tail; it is represented only by two sections: a scale (*'Here is the 'six o'clock*) and a nuclear tone (*(news)*). (See also **Pre-head, Head, Scale, Nuclear tone, Tail, Terminal tone**)

*Further reading:* Ladd 1990, 1997; Laver 1995; Crystal 1997; Светозарова 1982, 1997; Калита 2001, 2007.

**Contrast** /'kɒntrɑ:st/ The term is used in phonetics to refer to the linguistically relevant differences in the prosodic structure of some utterances in conveying contrasted meanings. Prosodic contrasts are generally actualized by the following components of intonation: pitch, range, interval, rhythm, utterance stress, tempo, timber, etc. For example, the contrasted meaning in the utterance (1) *Malcolm* <sub>1</sub>*never stops* *working* || (2) *and James* <sub>1</sub>*never starts* *working* || is achieved by means of opposition of terminal tones (the low rising tone in the first intonation group vs. the high falling tone in the second). Besides these two intonation groups are opposed by the types of scale (the Regular Descending Stepping Scale in the first intonation group vs. the Regular Ascending Stepping Scale in the second). In segmental phonology many linguists use the term *opposition* (e.g. *phonological opposition*) in the same sense in the process of establishing the language phoneme inventory.

*Further reading:* Bolinger 1961; Vassilyev 1970; Roach 1990; Laver 1995; Jeffries 1998; Chomsky, Halle 2002; Jassem 1983; Артемов 1956; Дубовский 1983; Калита 2001.

**Contrastive stress** /kən'trɑ:stɪv 'stres/ The term refers to the placement of nuclear or tonic stress in order to highlight a semantic contrast of the intonation group or utterance. For instance, in the sentence *\James \never \starts \working* || the contrastive stress is located on the word *James* emphasizing the fact that it is James, and not someone else, who never starts working. Instead of *contrastive stress* Ph.Carr offers the terms '*contrastive intonation*' or '*contrastive tonic placement*' which seem to him more appropriate.

*Further reading:* Bolinger 1961; Clark et al 2007; Carr 2008; Дубовский 1983.

**Conversation** /,kɒnvə'seɪʃən/ A term used to refer to the process of the speakers' interaction during their oral communication. In addition to verbal communication of semantic information, in conversation the speakers derive the meaning from a number of other communicative systems such as paralinguistic, which convey different types of information by the following non-verbal means: *audible*, *visible* (proximity, spatial orientation), *kinesic* (posture, body movements, gestures), *eye contact*, *facial expression* (e.g. a lift of an eyebrow), etc. The phoneticians' interest in specialized studies of verbal interaction between speakers is to look at factors such as turn-taking, the way in which interruptions are managed, the use of intonation to control the course of the conversation and variations in rhythm. (See **Communication, Paralinguistics**)

**Conversational maxims** /,kɒnvə'seɪʃənəl 'mæksɪmz/ In phonetics the term refers to the most general rules of communication prosodic organization which contribute to successful cooperation between the speakers. In the course of communication the co-conversers are governed by certain rules and principles, which an efficient speaker should be aware of. An attempt to discover the logic for rational behavior in conversations was made by P. Grice who singled out: (1) the *cooperative principle* of communication, consisting of four *maxims*, or ethical principles of speakers' communicative behavior: According to H.P.Grice there are four such maxims: (a) the maxim of quantity (speakers should provide the appropriate amount of information for their interlocutor to be able to interpret their intention), (b) the maxim of quality (speakers should tell the truth trying not to mislead the hearer), (c) the maxim of relevance

(speakers should to express relevant information) and (d) the maxim of manner (speakers should express their ideas clearly, avoiding ambiguity); (2) ***the principle of politeness*** representing a set of social skills to ensure harmony and affirmation in social interactions. Two strategies of polite behavior are distinguished by P. Brown and S. Levinson: (a) *positive politeness* – the expression of the speaker's involvement, interest, concern oriented to the co-converser's positive image; (b) *negative politeness* – the expression of the speaker's restriction and restraint in case he/she recognizes the recipient's independence and rights to autonomy and freedom. The knowledge of these principles, as well as the ones called laws suggested by I. Sternin (e.g. the law of the listener's progressing impatience, the law of public criticism rejection, the law of trust to simple words, the law of the emotional suppression of logic and others), is important for successful communication. (See **Communication, Cooperative principles**)

*Further reading:* Leech 1985; Brown, Levinson 1987; Jeffries 1998; Thomas 2001; Sternin 2002; Грайц 1985.

**Conversational style** /<sub>1</sub>kɒnvə'seɪʃənəl 'stɑɪl/ The term used in Phonetics to refer to the phonetic organization of speech that occurs in spontaneous, everyday communication. It is also called *familiar*, or *informal* style since it is familiar to the majority of native speakers and occurs in informal speech of well-acquainted people, friends, relatives and so on.

*Further reading:* Щербач 1915; Аванесов 1972; Jones 1969; Crystal, Davy 1969, 1971.

**Convey meaning** /kən'veɪ 'mi:nɪŋ/ The term used in phonetics to refer to the process of communicating meaning (ideas, thoughts, feelings, emotions etc.) with the help of phonetic means.

**Cooing** /'ku:ɪŋ/ The term refers to the earliest use of speech-like sounds by an infant in the first few months of his/her life.

**Cooperative principles** /kəʊ'ɒpərətɪv 'prɪnsəp<sup>ə</sup>lɪz/ The term is used to refer to the rules which influence the form of conversational exchange. In phonetics (namely in intonology) these principles are taken into account in the process of establishing modifications of an intonation pattern in definite communicative situations. (See **Communication, Conversational maxims**)

*Further reading:* Leech 1985; Грайц 1985; Brown, Levinson 1987; Sternin 2002; Yule 2009.

**Coronal** /'kɒrən<sup>ə</sup>l/ consonant. The term used to relate to dental, alveolar and postalveolar consonants produced with the blade of the tongue. (See **Distinctive feature**)

**Corpus** /'kɔ:pəs/ In phonetics the term is used to refer to a collection of language material (for example, recorded speech), prepared for the experimental study of a certain phonetic phenomenon.

**Correctness** /kə'rektnəs/ of pronunciation. A term is used in phonetics to refer to the approved or accepted standard of pronunciation in a definite language community.

**Correlation** /,kɒrə'leɪʃ<sup>ən</sup>/ A term used to refer to a systemic relationship between, for instance, two groups of sounds (voiced and voiceless plosives), in the production of which speaker's voice is the mark of correlation.

**Covered** /'kʌvəd/ The term used to refer to the type of a syllable, which begins with a consonant and ends with a vowel sound, i.e. has the CV structure. E.g., the syllable /fɔ:/ in the word *four* is called *covered and open*. (See **Syllable**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Topcyeb 1975.

**CPS** /'si: 'pi: 'es/ The abbreviation used in acoustic phonetics in the description of the number of *cycles per second* known as the frequency of vibration.

**Creak** /'kri:k/ The term used to refer to a special type of vocal fold vibration most commonly found in adult male voices when the pitch of the voice is very low, and the resulting sound has been likened to the sound of a stick being run along railings. However, creak is also found in female voices, and it has been claimed that among female speakers creak is typical of upper-class English women. Most people can produce, or imitate, creak or a creaky voice by saying a sustained [a] vowel on the lowest note – as low in their pitch range as they can go. It is possible to produce creak at any pitch, and a number of languages make use of it to change meanings.

**Creaky** /'kri:kɪ/ The term used to refer to the sounds in the production of which the arytenoid cartilages are tightly together, so that the vocal cords can vibrate only at the other end. This is a very low pitched sound that occurs at the ends of falling tones. Creaky-voiced sounds may also be called laryngealized. There is no IPA diacritic mark to indicate the use of creaky voice, though some phoneticians use the mark [̰] placed under the symbol.

*Further reading:* Catford 1977; Esling 1994; Laver 1968, 1995, 1996; Laver, Trudgill 1979; Trudgill 1978, 1983; Brown 1990; Chomsky, Halle 2002.

**Creaky voice** /'kri:kɪ 'vɔɪs/ The term refers to the description of voice quality or *phonation type*, characterized by very low pitched laryngealized sounds. In television advertising “creaky voice” tends to be associated with products that the advertisers wish to portray as associated with high social class (e.g. expensive sherry and luxury cars), accompanied by an exaggeratedly refined accent; products aimed exclusively at men (e.g. beer, men’s deodorants) seem to aim for an exaggeratedly “manly” voice with some harshness. In English it is most commonly found in adult male voices when the pitch of the voice is very low. However, creak is also found in female voices, and it has been claimed that among female speakers creak is typical of upper-class English women. J.Laver and P.Trudgill state that creakiness as well as whispering are more highly valued in some varieties of British English in the sense of social prestige.

*Further reading:* Laver 1968, 1995, 1996; Catford 1977; Laver, Trudgill 1979; Brown 1990; Esling 1994; *Clark et al 2007*; Chomsky, Halle 2002.

**CVC** /'si: 'vi: 'si:/ The abbreviation used in phonetics in the description of a syllable structure where the letter C stands for a consonant and the letter V stands for a vowel, e.g. *cup* /kʌp/. (See **Syllable**)

## D

**Dactyl** /'dæktɪl/ The term is used in metrical phonology to refer to the measure of poetry consisting of one strong (or long) beat followed by two weak (or short) beats (— / — —). Trochaic and dactylic metres are called falling because their movement supposedly falls from the stressed syllable to the unstressed syllable or syllables. (See **Foot, Rhythm, Metrical phonology**)  
*Further reading:* Abercrombie 1967; Dvorzhetskaya, Logvin 1985; Crystal 1992, 1997; Kiparsky 1977; Зубрицкая 2002.

**Dark** /l/ /dɑ:k/ The term is used to refer to the sound typically found in English (BBC and similar accents) when /l/ occurs before a consonant (e.g. *help* /heɫp/) or before a pause (e.g. *hill*). As is known there are two types of /l/ in English: “**clear**” [l] and “**dark**” [ɫ] respectively. For both types the tip of the tongue is pressed against the teeth ridge, but there is a difference in the shape of the body of the tongue. For the “**clear**” [l] the front of the tongue, behind the place of contact, is raised towards the hard palate; for the “**dark**” [ɫ] the back of the tongue is raised towards the soft palate. The clear [l] is registered in RP only before vowels. This allophone of the phoneme /l/ is not typical of General American pronunciation. (See **Clear l/**)  
*Further reading:* Jones 1969; Christophersen 1970; Vassilyev 1970; Ladefoged 1975; Gimson 1980; O’Connor 1984; *Clark et al* 2007.

**Deaccenting** /,di:ək'sentɪŋ/ The term used to refer to the process of losing stress by a stressed word or syllable in a definite phonetic context.

**Decibel** /'desɪbel/ A term (abbreviated as dB) used to refer to the acoustic measurement of intensity, or amplitude, of the variations in the air pressure relative to the amplitude of some other sounds. The greater the amplitude, the greater the intensity of the sound is as well as the greater the sensation of loudness. When one sound has the intensity 5 dB greater than another, then it is approximately twice as loud. A change in intensity of 1 dB is a little more than the smallest noticeable change in loudness. The ear will pick up a sound of 250 Hz at around 15 dB, and will hear it throughout the whole decibel range, until the loudness discomfort level is reached. The area of greatest sensitivity to sound is between 500 and 5000 Hz. To say that a sound is 90 dB

means that it has intensity, which is 90 dB greater than the reference level. At around 120-130 dB, the sensation of hearing is replaced by that of pain, thus it means that the threshold of audibility is 120-130 dB.

*Further reading:* Jassem 1983; Crystal 1997; Fant 2004; *Clark et al* 2007; ФАНТ 1964; Цеплитис 1974; Блохина, Потапова 1977; Светозарова 1982; Бровченко, Волошин 1986; Златоустова и др. 1986; Кодзасов, Кривнова 2001.

**Decoding** /di:'kəʊdɪŋ/ The term refers to the process of understanding the meaning of a word, sentence or an utterance. In order to decode an utterance the listener must hold the utterance in short-term memory, analyze the utterance into segments and identify clauses, phrases, and other linguistic units, identify the underlying propositions and illocutionary meaning.

**Degree** /di'gri:/ The term refers in phonetics to the linguistically relevant force of prominence in realization of different syllables in a word or different words in an utterance. (See **Word Stress, Utterance Stress**)

**Dental sounds** /,dent<sup>ə</sup>l 'saʊndz/ A term used to refer to the articulation of sounds made with the tongue tip or blade and upper front teeth: the tongue tip may be protruded between the upper and lower teeth (as in a careful pronunciation of the English apico-alveolar /t, d, s, z, n, l/ followed by the interdental /θ, ð/ which are sometimes called dental.

**Descriptive phonetics** /di'skriptɪv fə'netɪks/ The term refers to the branch of phonetics which studies the contemporary phonetic system of a particular language describing all the language phonetic units. Descriptive phonetics is based on general phonetics.

**Devoicing** /<sub>(v)</sub>di:'vɔɪsɪŋ/ A term is used to refer to a voiced sound which is pronounced without voice in a particular context: for example, the /r/ in the word *brave* is voiced, but in the word *pray* the /r/ is voiceless because of the preceding voiceless plosive /p/. Such sounds are called devoiced. (See **Voiceless**)

**Diachronic** /,daɪə'krɒnɪk/ The term refers to an approach in Historical Phonetics used in the studies how a language phonetic system changes over a period of time, e.g. the change in the sound system of English from Early English to Modern British English. (See **Synchronic**)

**Diacritic** /ˌdaɪəˈkrɪtɪk/ The term refers to a mark added to an existing symbol to show modification in its pronunciation under the influence of the surrounding phonetic context. These marks are called diacritics. The International Phonetic Association recognizes a wide range of diacritics: for vowels, these can indicate differences in frontness, backness, closeness or openness, as well as lip-rounding or unrounding, nasalization and centralization. In the case of consonants, diacritics exist for voicing [ɹ̥] or devoicing [ɹ̥̥], for syllabic [ŋ̥], non-syllabic phonemes [ŋ̥], aspiration [tʰ], nasal plosion [d̥], lateral plosion [d̥], labialised phonemes [tʷ], lingualabialized phonemes [t̥̥], pharyngealization [t̥̥] and for many other aspects.

**Dialect** /ˈdaɪəlekt/ A term used to refer to a variety of a language, spoken in one part of a country (*regional dialect*), or by people belonging to a particular social class (*social dialect or sociolect*), which is somewhat different from other forms of the same language not only in some words and grammar but in pronunciation. It is usual to distinguish between *dialect* and *accent*. Both terms are used to identify different varieties of a particular language, but the word “accent” is used for varieties, which differ from each other only in matters of pronunciation while “dialect” also covers differences in such things as vocabulary and grammar. (See **Accent, Dialectology, Diaphonic, Idiolect, Idiolectal, Allophonic, Sociolect**)  
*Further reading:* Brazil 1986; Bolinger 1989; Honey 1991; Laver 1995; Pennington 1996; Yule 2009; Jeffries 1998; Britain, Trudgill 1999; Trudgill 1999; Gimson 2001; Romaine 2001; Simpson 2001a.

**Dialect area** /ˈdaɪəlekt ˈɛəriə/ The term refers to a definite region on the territory of which a certain pronunciation dialect functions. The term belongs to the *areal linguistics, linguistic geography* and *dialectology* as well as to that part of *phonetics* which studies different types of pronunciation. (See **Dialect, Dialectology, Sociophonetics**)  
*Further reading:* Gimson 1981; Simpson 2001a.

**Dialectism** /ˈdaɪəlektɪzəm/ In phonetics the term refers to the pronunciation of a word which has some deviations from that of the language orthoepic norm not codified in the language Pronunciation Dictionary.

**Dialectology** /ˌdaɪəlekˈtɒlədʒi/ The term used to refer to the branch of linguistics which provides systemic studies of regional variations of a language. Dialectology focuses on studying lexical and grammatical

differences existing in various dialects as well as on different pronunciation of the same word in different dialects. In recent years much attention is paid to social (age, sex, social status, etc.) as well as ethnic factors. There exist some other terms, which denote the same sphere of linguistic studies. They are *dialect geography* or *linguistic geography*, though all these terms (*dialectology*, *dialect geography*, *linguistic geography*) are not exact equivalents since the latter two terms suggest a much wider regional scope of the subject than the term *dialectology*.

*Further reading:* Laver 1995; Chambers, Trudgill 1998; Crystal 1997; Simpson 2001a; Yule 2009; signəɫ Romaine 2001; Кочерган 2000.

**Diaphone** /'daɪəfəʊn/ The term refers to a sound used by one group of speakers together with other sounds which replace it consistently in the pronunciation of other speakers.

**Diaphonic** /,daɪə'fəʊnɪk/ A term used to refer to the variation of a phoneme in connected speech that affects the quality and quantity of particular phonemes. It is caused by definite historical tendencies active in certain localities. Diaphonic variants do not affect intelligibility of speech, yet they inform the listener about the speaker's origin and his social standing. (See **Idiolectal**, **Allophonic**)

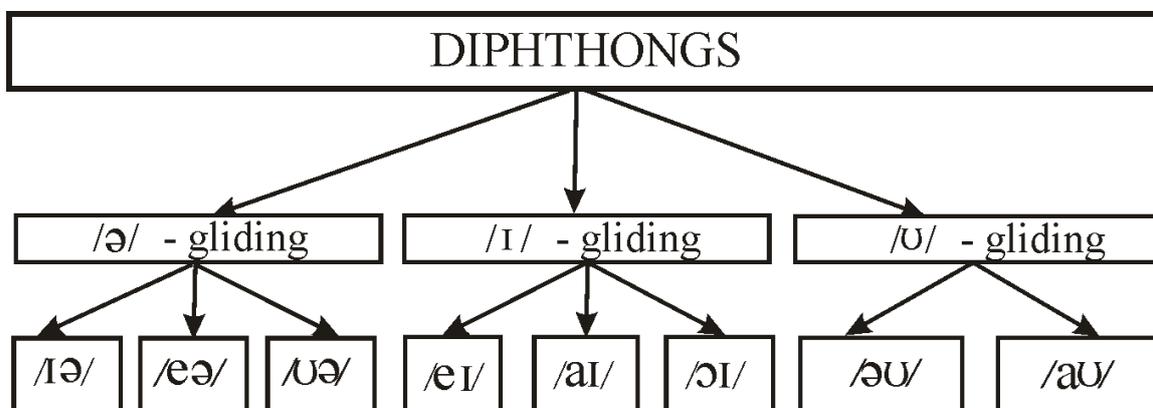
**Diglossia** /daɪ'glɒsiə/ The term refers to the situation when speakers of a language regularly use, or at least understand more than one variety of that language. In phonetics diglossia is studied from the point of view of interference.

**Digital signal processing** 'dɪdʒɪt<sup>ə</sup>l 'sɪgnəl 'prəʊsesɪŋ/ software/, or DSP. The term refers to the software packages which run on a variety of computers and workstations including most current PCs. These packages generally include facilities for editing primary recordings of speech, spectrographic analysis and pitch analysis, and often allow the integrated recordings and management of segmentation and labelling data.

**Digraph** /'daɪgrɑ:f, 'daɪgræf/ A term used to refer to a pair of letters that represent a single sound, e.g. in the word *head* the digraph *ea* stands for the vowel sound /e/. (See **Grapheme**, **Graphophonemics**)

**Dimeter** /'dɪmɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of two rhythmic units. (See **Metre**)

**Diphthong** /'dɪfθɒŋ/ The word *diphthong* comes from Greek and means “double sound”. In phonetics it is used to refer to a sound, which changes its quality in the course of its production, i.e. it consists of movement or *glide* from one vowel to another. The first element of a diphthong which remains constant and does not glide is called the *nucleus*. The nucleus of the diphthong is much longer and stronger than the glide. The total number of diphthongs in English is eight. According to the glide they are classified into three groups: (1) ending in /ə/ (ɪə, eə, ʊə), (2) ending in /ɪ/ (eɪ, aɪ, ɔɪ) and (3) ending in /ʊ/ (əʊ, aʊ). Diphthongs can also be classed according to the nucleus: they are termed *falling* when the nucleus is stronger than the glide, and *rising* when the glide is stronger than the nucleus; when both elements are equal such diphthongs are called *level*. Besides, according to the articulatory character of the second element the English diphthongs /eɪ, aɪ, ɔɪ, əʊ, aʊ/ are also termed *closing*, diphthongs /ɪə, eə, ʊə/ are called *centering*. Opinions differ as to whether a diphthong should be treated as one phoneme, or as a combination of two phonemes, though the majority of scholars in the field of phonetics define a diphthong as a unisyllabic sound in the articulation of which the speech organs start from one position and then glide to another. (See **Falling Diphthong**, **Rising Diphthong**)



*Further reading:* Jones 1969; Gimson 1980; Jassem 1983; Roach Yule 2009; Трубецкой 2000; Теоретична 2003.

**Diphthongization** /,dɪfθɒŋgaɪ'zeɪʃn/ The term used to refer to the new tendency in the pronunciation of English monophthongs that lies in a slightly changed position of speech organs as a result of which there appears a glide following them, e.g. the sound /ɪ/ in the word *Sunday* /'sʌndɪ/ is pronounced as /'sʌndeɪ/.

*Further reading:* Barber 1964; Laver 1995; Chomsky, Halle 2002; Clark et al 2007.

**Diphthongoid** /<sup>1</sup>dɪfθɒŋɡɔɪd/ The term used to refer to the vowel sounds in the articulation of which the organs of speech slightly change their position. In English such diphthongized vowels are /i:/ and /u:/ when they occur in open syllables and before lenis or nasal consonants. In allophonic transcription they can be represented as /i:ɪ/ and /u:ʊ/.

*Further reading:* Jones 1969; Barber 1964; Vassilyev 1970; Борисова, Метлюк 1980; Теоретична 2003.

**Direct observation method** /daɪ<sup>ə</sup>'rekt ɒbzə'veɪʃ<sup>ə</sup>n 'meθəd/ The term refers to the oldest, simplest and most readily available method of investigation (visual or auditory) consisting in (1) observing the movements and positions of one's own or other people's organs of speech in pronouncing various speech sounds; (2) analyzing the kinaesthetic sensations during speech sounds articulation; (3) in comparing speech sounds with the resultant auditory impressions.

**Directive** /dɪ'rektɪv, daɪ'rektɪv/ A term refers to a speech act that performs the function of getting the listener do something, for example, a suggestion, a request, or a command. For instance, in the utterances (1) <sup>1</sup>Look at <sup>1</sup>this <sup>h</sup>hat! // (2) <sup>1</sup>What a <sup>\</sup>sight I <sup>1</sup>am!, the first one has a typical grammatical structure of an imperative sentence, the meaning of which is enhanced by the adequate prosodic structure. The second utterance, which has the grammatical structure of a question, implicitly makes the listener react at what the speaker is saying due to the prosodic contrast within its intonation pattern conveying the emotional state of the speaker. This directive colouring of the analysed speech act is achieved by the interplay of the following set of prosodic means: moderate → slowed down tempo, moderate → soft loudness, regular rhythm (in the first utterance), wide tonal interval between the head and the nuclear tone, widened tonal range (in the second utterance).

*Further reading:* Austin 1962; Searle 1970; Селіванова 2006.

**Discourse** /<sup>1</sup>dɪskɔ:s/ A term used to refer to the language produced as the result of an act of oral or written communication. Discourse may relate to any extended, coherent message, i.e. to larger units of language than clauses, phrases, and sentences. This includes narrative and expository texts, speeches, poetry, conversation, and many other familiar types of communication. The study of both written and spoken discourse is known as *discourse analysis*. The analysis of spoken discourse is sometimes called *conversational analysis* while the investigation of written discourse

is generally referred to text linguistics.

*Further reading:* Coulthard 1985; Hirschberg, Pierrehumbert 1986; Brown 1988; Nunan 1993; Mills 1995; Jeffries 1998; Drew 2001; Кибрик, Плунгян 2002; Шейгал 2004.

**Discourse analysis** /'dɪskɔ:s ə'næɪlɪsɪs/ the term refers to the study of language phenomena beyond the sentence, in text and conversation.

**Discrete** /dɪ'skri:t/ A term refers to a linguistic unit which forms a separate entity and has clearly defined boundaries. In phonetics the discrete sound unit of a language is a phoneme. For example, the word *tin* /tɪn/ consists of three discrete units: /t/, /ɪ/, /n/.

**Dissimilation** /,dɪsɪmɪ'leɪʃən/ The term refers to the process of speech sound interaction as a result of which they become less alike. (See **Assimilation**)  
*Further reading:* Chomsky, Halle 2002; Кочерган 2000.

**Dissonance** /'dɪsənəns/ The term used in phonetics to refer to the use of sounds to convey unpleasant effects.

**Distinctive** /dɪs'tɪŋktɪv/ The term used in phonology to refer to a feature capable of making a difference of meaning between other identical forms. (See **Distinctive features**)

**Distinctive features** /dɪs'tɪŋktɪv 'fɪ:tʃəz/ (differential features of phoneme) The term first suggested by N.Trubetsky refers to a small set of important differences (or contrasting components) between certain phonemes: vowels and some consonants, plosives and affricates, nasal and oral consonants, and so on. These differences are identified by phonologists, and are known as *distinctive features*. The English phoneme /p/, for example, is a combination of the following distinctive features “voicelessness”, “plosiveness” and “bilabiality”. The features are generally shown in the form of a binary opposition, that is the feature is either present [+] or absent [-]. There is no agreement about how to define the features (e.g. according to either articulatory or acoustic characteristics), nor about the number of features needed for the classification of the sounds of all the languages in the world. There are the following distinctive features peculiar to each language, which form the following oppositions: vocalization vs. non-vocalization, consonant vs. vowel, fortis vs. lenis, voiced vs. voiceless, glotalized vs. non-glotalized, nasalized vs. non-nasalized, anterior vs. non-anterior, labial vs. non-labialised, dorsal vs.

non-dorsal, coronal vs. non-coronal, continuant (fricative) vs. non-continuant, strident vs. non-strident, apical vs. non-apical, etc. For the classification of Ukrainian phonemes they usually use from nine to eleven features: vocalism, consonantism, diffuseness, low tonality, flatness, sharpness, discontinuity, sonority, etc. (See **Binary feature, Generative phonology**)

*Further reading:* Fant 1972; Halle 1983; Jassem 1983; O'Connor 1984; Ladefoged 1975; Chomsky, Halle 2002; *Clark et al* 2007; ФАНТ 1964; Трубецкой 2000.

**Distributional method** /,dɪstrɪ'bju:ʃənəl 'meθəd/ The term refers to the method based on the phonological rule that different phonemes can freely occur in one and the same position, while allophones of one and the same phoneme occur in different positions and, therefore, cannot be phonologically opposed to each other. The distributional method of analysis is a purely formal method of the language phonemes identification.

*Further reading:* Борисова, Метлюк 1980.

**Disyllabic** /,daɪsɪ'læbɪk/ A term used to refer to a word or other language form consisting of two syllables. E.g.: the words *distant* /'dɪs – tənt/, *contact* /'kɒn – tækt/. (See **Bisyllabic**)

**Dorsal** /'dɔ:s<sup>ə</sup>/ The term used to refer to the lowered position of the tip tongue in the production of dental allophones of the apico-alveolar phonemes [t, d, s, z, l, n] when they are followed by the interdental [θ, ð].

**Double-peaked** /,dʌb<sup>ə</sup>l 'pi:kt/ The term refers to the consonants in the articulations of which both the beginning and the end are energetic whereas the middle is weak. These consonants occur at the juncture of words or morphemes and acoustically they produce an impression of two consonants, e.g.: *midday* /mɪd<sup>l</sup>deɪ/, *that time* /ðæt<sup>l</sup> taɪm/, *good day* /gʊd<sup>l</sup> deɪ/, *misspell* /mɪs<sup>l</sup>spel/, *misstate* /mɪs<sup>l</sup>steɪt/, *penknife* /pen<sup>l</sup>naɪf/, etc. The double-peaked /dd/, /tt/, /nn/, /ss/ occur at the juncture of two syllables. These sounds (/dd, tt, nn, ss/) are strong at both ends and weak in the middle; phonologically they consist of two successive allophones of the same phoneme. (See **Muscular tension theory**)

*Further reading:* Vassilyev 1970; Борисова, Метлюк 1980; Теоретична 2003; Щерба 2008.

**Doubled assimilation** /'dʌb<sup>ə</sup>ld ə,sɪmə'leɪʃən/ Another term for *Reciprocal assimilation*. (See **Assimilation, Reciprocal assimilation**)

**Downdrift** /'daʊndrɪft/ The term refers to the successive lowering of tones throughout the intonation group.

*Further reading:* Bolinger 1980; Laver 1995; Clark et al 2007.

**Duration** /dju'reɪʃən/ The term is used in acoustic phonetics and refers to the physical, objectively measurable time that a sound (or a syllable, a stretch of utterance, for instance, an intonation group) lasts. The duration of a sound is the amount of time during which the same vibrations continue. Long vowels are said to be articulated with greater duration than short vowels. Duration is measured in milliseconds (ms). In auditory phonetics the amount of time that a sound lasts is called length. Duration, or length is a very important parameter in conveying meaning of a sound, an intonation group, utterance, and text though it varies from speaker to speaker, depending on the context and rate of speech.

*Further reading:* Jassem 1983; Laver 1995; Crystal 1997; Фант 1964; Цеплитис 1974; Блохина, Потапова 1977; Светозарова 1982; Бровченко, Волошин 1986; Златоустова и др. 1986; Кодзасов, Кривнова 2001; Бровченко, Корольова 2006.

**Dynamic** /daɪ'næmɪk/ A term used to refer to the pronunciation of a syllable in a word with greater intensity of articulation as compared with that of the other syllables of the same word. Word accent affected by this means is called *dynamic*, or *force*, stress. (See **Word stress**)

## E

**Ear-training** /'iə treɪnɪŋ/ A term used to refer to an essential technique of practical phonetic training used to develop the student's ability (1) to hear and distinguish very small differences between sounds, and (2) to identify particular sounds by working from recorded material in isolation after receiving special training from a professional phonetician. This method was first introduced by Professor Daniel Jones in the English language teaching process and is still very popular in Britain.

*Further reading:* Jones 1969; Crystal 1997.

**Egressive** /ɪ'ɡresɪv/ The term refers to the sounds produced using an outwards-moving airstream mechanism. A vast majority of speech sounds are made using pulmonic egressive air.

*Further reading:* Ladefoged 1975; Laver 1995; Crystal 1997.

**Ejective** /ɪ'ɡʒektɪv/ The term refers to the consonant sounds produced using the glottalic airstream mechanism. Sounds of this type are found in Caucasian, many American Indian and African languages and are called ejective (See **Airstream mechanism**, **Egressive**, **Ingressive**)

*Further reading:* Ladefoged 1975; Laver 1995; Crystal 1997; *Clark et al* 2007.

**Electroaerometer** /ɪ,lektərəʊ'ɛərəʊmi:tə/ The term used in experimental phonetics to denote an instrument that records the airflow in the process of speaking.

**Electrokymograph** /ɪ,lektərəʊ'kaɪməʊgrɑ:f/ A term refers to an instrument used in articulatory phonetics that records the changes in *oral* and *nasal* airflow in the process of speaking. *Electrokymography* involves the use of a face-mask, which can differentiate the two kinds of airflow, and associated equipment which can measure air volume and rate, and record it visually (as an *electrokymogram*).

*Further reading:* Catford 1977; Crystal 1992.

**Electrolaryngograph** /ɪ,lektərəʊ'lærɪŋgəʊgrɑ:f/ The term used in experimental phonetics to refer to an instrument recording the vocal cord vibration.

**Electromyogram** /ɪˌlektərəʊˈmaɪəgræm/ A term used in experimental phonetics to refer to the pictures demonstrating muscular contractions in the process of speaking.

**Electromyograph** /ɪˌlektərəʊˈmaɪəgrɑːf/ The term used in experimental phonetics to refer to an instrument which records muscular contractions during the process of speaking.

**Electromyography** /ɪˌlektərəʊˈmaɪəgrəfi/ The term used in experimental phonetics to refer to the techniques of instrumental study of articulation for obtaining information about muscular contractions in the process of speaking.

**Electropalatograph** /ɪˌlektərəʊˌpæləˈtɒgrəf/, or *EPG*. An instrument used in articulatory phonetics to enable a continuous record to be made of the contacts between tongue and palate during speech.

**Electropalatography** /ɪˌlektərəʊˌpæləˈtɒgrəfi/ The term refers to the technique which gives detailed information in real time about the location and sequence of tongue-palate contacts. Electropalatography involves the use of an artificial palate containing several electrodes, which register the tongue contacts as they are made. The results are presented visually as *electropalatograms*. (See **Palatography**)

*Further reading:* Crystal 1997.

**Element** /ˈelɪmənt/ A term is used in phonetics in the general sense of “*part*”. For example, elements of an *intonation group* or an *intonation contour*, elements of the language *segmental* or *suprasegmental* level.

**Elision** /ɪˈlɪʒən/ A term used in *phonetics* and *phonology* to refer to the omission or missing out of a consonant or vowel, or both in connected speech. The most frequent place to find consonant elision is at the end of a syllable. The commonest consonants involved in elision are /t/ as in *first three* /ˈfɜːs ˈθriː/ (instead of /ˈfɜːst ˈθriː/) and /d/ as in *four thousand* /ˈfɔː ˈθaʊzən wə/ (instead of /ˈfɔː ˈθaʊzənd wə/. Sometimes whole syllables may be elided. Unstressed conjunctions and prepositions, such as *and* and *of* are particularly often elided, e.g.: *boys 'n' girls*, *cup 'o' tea* (before consonants). Elision is typical of rapid, casual speech, that is why in conversational speech vowels and consonants in unstressed syllables within *polysyllabic words* regularly elide, e.g. *camera* /ˈkæmrə/; weak

vowels after /p, t, k/ are often lost as in *potato* /p'teɪtəʊ/ instead of /pə'teɪtəʊ/, *tomato* /t'mɑ:təʊ/ instead of /tə'mɑ:təʊ/; weak vowels before /n, l, r/ are often elided as in *tonight* /tnaɪt/ instead of /tə'naɪt/, *police* /pli:s/ instead of /pəli:s/, *correct* /krekt/ instead of /kə'rekt/; moreover in such a position these sonorants (/n, l, r/) became syllabic. *Complex consonant clusters* are also often reduced or simplified, e.g.: *twelfths* /'twelfθs/ becoming /'twelθs/ or /'twelfs/. Elision may also occur at word boundaries, e.g. *next day* /'neks 'deɪ/ instead of /'neks t 'deɪ/, *all right* /'ɔ: raɪt/ instead of /'ɔ:l 'raɪt/.

*Further reading:* Gimson 1980; O'Connor 1984; Brown 1990, Roach 1990; Chomsky, Halle 2002; *Clark et al* 2007; Yule 2009; Васильев 1980.

**Emic** /'emɪk/ The term used in phonology to refer to an approach to the analysis of speech that sets up a system of abstract contrastive units, especially phonemes.

**Emotion** /ɪ'məʊʃən/ The term used to denote the affects a human being feels. Emotions are regarded as psychological responses to social events that give rise to individuals' emotions. These social events constitute the “contents” of emotions presented in oral communication by definite sets of linguistic means in general and phonetic means of segmental and suprasegmental levels in particular. The psychological states can be categorized with a commonality among people – across cultures, races and generations. The most important question for phoneticians connected with emotions (*positive* and *negative*) is the realization of emotional valency in oral communication. Many studies have shown that emotions can be conveyed through prosody, particularly speech melody, or voice pitch (as the most important carrier of information) and different pitch combinations, spectrum of vowels, as well as by tempo, intensity and their interactions and combinations. In other words, all components of intonation can be correlated with emotions. It means that there is no simple answer concerning the link between a definite acoustic feature and the emotion conveyed, i.e. the connection between pitch characteristics and specific emotions seems very approximate though the fundamental frequency is more important than other auditory and visual factors for sending and receiving affective information, and also in establishing social relations. Since emotions are both sociocultural and personal, as well as universal and relative, their prosodic expression in speech should be studied in the connection with the communicative situation. (See **Feeling**)

*Further reading:* Abercrombie 1967; Arnold, Gasson 1968; Bolinger 1980,

1986, 1989; Beym 1986; Tsur 1992; Kalita, Yancheva 1994, 1994a; Wierzbicka 1995; Mozziconacci 2002; Brown 1990; Ladd 1990; Ekman 2001, 2007; Cook 2002; Scherer 2003, 2005; Dalai Lama, Ekman 2008; Изард 1980, 2000; Цеплитис 1974; Носенко 1981; Вилюнас 1984; Сепир 2002; Калита 2003, 2007; Шаховский 2008.

**Emotional** /ɪ'məʊʃənəl/ The term used in phonetics to refer to the prosodic markers that express basic and general human emotions and feelings such as anger, love, happiness and the like.

*Further reading:* Nushikyan 1987; Fedoriv, Kalita 1997; Потапова, Потапов 2006.

**Emotional length** /ɪ,məʊʃənəl 'leŋθ/, or *prolongation of a sound*. The term used to refer to a somewhat prolonged realizations of a sound under the influence of positive or negative emotions or strong feelings as lengthening of /l/ in *Lllooovely!* /'l::ʌ::vli/, or /n/ in *Wonnnderful!* /'wʌn::dəfʊl/. The added length does contribute to meaning of a word or an utterance since it reflects the speaker's emotional state and his/her attitude towards who he/she is speaking, what he/she is saying, why he/she is uttering this or that information (See **Lengthening**).

*Further reading:* Bolinger 1963, 1982; O'Connor 1984; Laver 1995.

**Emotivity** /,eməʊ'tɪvɪtɪ/ The term denotes a specific case of expressivity, thus referring to the emotional aspect of language, as well as the expression of emotional attitude and the way it is communicated by linguistic means in general and prosodic in particular, the feeling of being moved, culture-based feelings and sentiment expressed through the use of verbal and non-verbal means. All linguistic means are potentially emotive. Emotivity is said to be experienced, felt, interpreted and negotiated in a sociocultural context and that is why emotivity should be regarded and analyzed from a social point of view. To understand emotivity, one must investigate a variety of potential emotives in real-life discourse data, and advance their interpretation corresponding to the data. Thus emotivity is both sociocultural and personal, as well as universal and relative.

*Further reading:* Selting 1994; Vorobyova, Gladio 2001; Воробьева 1995; Волкова 1997; Ионова 1998; Троилина 1995; Шаховский 2008.

**Empathy** /'empəθɪ/ The term refers to the quality of being able to imagine and share the thoughts, feelings and point of view of other people as well as the capacity to recognize or understand another person's state of mind and emotions. In phonetics empathy is studied in terms of its actualization with

the help of segmental and suprasegmental means. The term “empathy” was first introduced by Edward Titchener, a psychologist, in 1909, which by the end of the 19th century was understood in German philosophical circles as an important category in philosophical aesthetics. Empathy is thought to contribute to the speaker’s attitude(s) towards a person or a group of people with different language and culture, and it may add to the success of learner’s mastering another language.

*Further reading:* Adams 2001; Darwall 1998; Decety, Lamm 2006; Gallese 2003; Lamm et al. 2007; Stueber 2008; Wispe 1987; Eisenberg 2000; Шаховский 2008.

**Emphasis** /<sup>1</sup>emfəsis/ A term used to refer to special force given in speaking to certain words, ideas, or details to show that they are particularly important. We can emphasize words by pronouncing them more energetically, louder, longer and/or higher (realized with a special rise). The emphasized word can also be preceded by a pause. Emphasis may be of different degree.

*Further reading:* Roach 1990; Davis, Kraus 1997; Теоретична 2003; Сепир 2002.

**Empty onset** /<sup>1</sup>emptɪ <sup>1</sup>ɒnset/ The term is used to refer to a syllable which has no consonant in the onset as in the word *aid* /eɪd/. Empty onsets are very often involved in the process of resyllabification, where a consonant which occupies a coda position in the final syllable of one word, comes to occupy an onset position of the following word, as for instance in the word combination *green eye*, in which the consonant /n/ in the coda position of the syllable /gri:n/ in connected speech becomes an onset consonant of the syllable /aɪ/, as a result of which *green eye* is pronounced as /gri:.naɪ/, where the full stop represents the syllable boundary. (See **Juncture, Markedness, Onset**)

*Further reading:* Laver 1995; Carr 2008.

**Enclitics** /ɪn<sup>1</sup>klɪtɪks/ A term refers to the unstressed syllables that follow the stressed syllables or the nucleus of the rhythmic unit (or phonetic word).

*Further reading:* Кочерган 2000.

**Encoding** /ɪn<sup>1</sup>kəʊdɪŋ/ The term used to refer to the process of turning a message into a definite set of symbols, as part of the act of communication. In order to encode speech the speaker must select a meaning to be conveyed; turn it into linguistic form using semantic systems, i.e. proper words, clauses, phrases, and phonological systems (adequate segmental and suprasegmental means).

**Environment** /ɪnˈvaɪərənmənt/ The term used in phonetics to refer to (1) the phonemic surrounding of a definite phoneme which may either undergo influence of a preceding or following phoneme, or may influence them; (2) the social or contextual situation in which a particular intonation functions. (See **Assimilation**)

**Epenthesis** /eˈpenθəsis/ The term used in phonetics to refer to the insertion of an extra sound at the juncture of words, for example the *intrusive* ‘r’ of *non-rhotic* varieties of English as in *India and Asia* /ˈɪndɪər ənd ˈeɪʃə/, or in the middle of a word in the Ukrainian learners’ pronunciation depending on the degree of interference, e.g.: *table* /ˈteɪbəl/ instead of ˈteɪbəl/ or The inserted sound (consonant or vowel) is called epenthetic. (See **Rhotic**)

**Epenthetic sound** /ˌepənˈθetɪk ˈsaʊnd/ (See **Epenthesis**)

**EPG** /iː ˈpiː ˈdʒiː/ The abbreviation refers to the term electropalatograph, i.e. an instrument used in articulatory phonetics to enable a continuous record to be made of the contacts between tongue and palate during speech. (See **Electropalatograph, Electropalatography**)

**EPP** /iː ˈpiː ˈpiː/ The abbreviation stands for the utterance *emotional and pragmatic potential*. (See **Principle of conserving the utterance pragmatic potential**)

*Further reading:* Калига 2007.

**Estuary English** /ˌestjʊəri ˈɪŋɡlɪʃ/, or *EE*. The term refers to a new accent of English that has appeared in the mid 80s of the last century, whose status has not been defined yet and that is why this accent should be used with care. This accent incorporates a mixture of south-eastern, RP and Cockney features and which has been gaining popularity due to high mobility of the population of the country. The term was introduced by David Rosewarne. The idea originates from the sociolinguistic observation that some people in public life who would previously have been expected to speak with a BBC (or RP) accent now find it acceptable to speak with some characteristics of the accents of the London area (the Estuary referred to is the Thames estuary), such as glottal stops, which would in earlier times have caused comment or disapproval. The major phonetic characteristics of Estuary English that distinguish it from RP are as follows: (1) tensing of /ɪ/ in a word final position, e.g., *happy* /ˈhæpi/ (RP) vs. /ˈhæpiː/ (EE);

(2) glottaling of /t/, e.g., *quite nice* /kwaɪʔnaɪs/; (3) vocalisation of /l/ in preconsonantal and final positions, e.g. *milk* /mɪwk/; (4) coalescence of /t/, /d/ before /j/ into /tʃ/, /dʒ/, e.g., *tube* /tʃu:b/, *duke* /dʒu:k/; (5) diphthong shift, e.g., /eɪ/ → /aɪ/ as in *lady* /leɪdɪ/ → /laɪdɪ/; /aɪ/ → /ɔɪ/ ~ /ɑɪ/ as in *price* /praɪs/ → /prɔɪs/; /əʊ/ → /æʊ/ as in *load* /ləʊd/ → /læʊd/; /aʊ/ → /a:/ as in *loud* /laʊd/ → /la:d/. Estuary English differs from Cockney in the absence of (1) dropping of /h/, (2) fronting of *th*; (3) glottaling of /t/ within a word before a vowel. (See **Cockney**)

*Further reading:* Coggle 1993; Rosewarne 1994, 1994a; Wells 1982, 1994; Maidment 1994; Parashchuk 2000; Парашчук 2005.

**Etic** /'etɪk/ The term used in phonetics to refer to the analysis of speech physical patterns without reference to their function within the language.

**Etymology** /,etɪ'mɒlədʒɪ/ The term refers to the branch of linguistics which deals with the history, or derivation, or origin of words and changes in their meaning: when they entered a language, from what source, and how their form and meaning changed with time. Etymologists apply the methods of comparative linguistics to reconstruct information about languages. Etymological theory recognizes that words originate through a limited number of basic mechanisms, the most important of which are the following: (1) *borrowing*, i.e. the adoption of loanwords from other languages; (2) *word formation* such as derivation and compounding; (3) *onomatopoeia* and *sound symbolism*, i.e. the creation of imitative words. While the origin of newly emerged words is often more or less transparent, it tends to become obscured through time due to: (1) *sound change*: for example, it is not obvious at first sight that English *set* is related to *sit* (being originally a causative formation of *set*), or *bless* is related to *blood* (a derivative with the meaning “to mark with blood”), etc.; (2) *semantic change*: English *bead* originally meant “*prayer*”, and acquired its modern sense through the practice of counting prayers with beads. The combination of sound change and semantic change often creates etymological connections that are impossible to detect by merely looking at the modern word-forms. For instance, English *lord* comes from Old English *hlāf-weard*, meaning literally “*bread guard*”. The components of this compound, in turn, yielded modern English *loaf* and *ward*. Etymologists apply a number of methods to study the origins of words, some of which are: (1) *philological research* (changes in the form and meaning of the word can be traced with the aid of older texts, if such are available); (2) *use of dialectological data* (the form or meaning of the word might show variation between dialects, which may give evidence of its

historical development); (3) *the comparative method* (a systematic comparison of related languages helps etymologists to detect the words derived from their common ancestor language and the words later borrowed from another language); (4) *semantic change* (etymologists often have to make hypotheses about changes of meaning of particular words).

*Further reading:* Crystal 1988, 1997; Claiborne 1989; Brohaugh 1998; Dunbar 1996; Garrison 2000; Liberman 2005; Маковский 1997, 1998; Кочерган 2000.

**Euphemism** /'ju:fəmi:zəm/ The term refers to the use of a word which is thought to be less offensive, less troublesome or unpleasant for the speaker and listener than another word, for example, *to pass away* instead of *to die*. Euphemism is studied in experimental phonetics in terms of the use of pleasant-/unpleasant-sounding sets of phonemes constituting euphemistic words or phrases. (See **Emotional length**, **Euphony**, **Phonosemantics**)

*Further reading:* Dyen et al. 1967; Bolinger 1980; Neaman, Silver 1990; Mills 1995; Кочерган 2000; Калита 2001; Селіванова 2006.

**Euphony** /'ju:fəni/ The term used to refer to a pleasing sequence of sounds, as in the words *marvellous*, *fabulous*, *superb*, *lovely*, where the stressed vowels, namely: the long back vowel /ɑ:/, the long central vowel /ɜ:/ and half long allophones of the short front low vowel /æ/ and the short back-advanced /ʌ/ in the combination with emotionally lengthened sonorants /m/, /l/ serve for conveying positive meanings of these words. The plosives /p/ and /b/ as well as the lengthened fricatives /f/ and /s/ in the words *fabulous*, *superb* intensify, in their turn, the expression of the burst of deep positive emotions experienced by the speaker. (See **Euphemism**, **Phonosemantics**)

*Further reading:* Dyen et al. 1967; Neaman et al. 1990; Bolinger 1980, 1991; Калита 2001. Marchand 1966; Wescott 1980; Bloomfield 1984; Ohala 1994; Lu 1998; Matisoff 1994; Magnus 1999; Левицкий 1973, 1998; Журавлев 1974, 1981; Воронин 1982, 1990 and others.

**Evolutionary phonetics** /,i:və'lu:ʃənəri fə'netiks/ (/fəʊ'netiks/), or *historical phonetics*. A term used to refer to the branch of phonetics which studies written documents and compares spelling and pronunciation of one and the same word in different periods of the language history. (See **Historical phonetics**)

*Further reading:* Laver 1995.

**Excrement** /ɪk'skresənt/ The term used to refer to a sound added to a word to

make its pronunciation easier, especially on the initial stage of mastering English pronunciation, e.g. /sedɪ/ instead of /sed/, where the sound /ɪ/ is excrescent.

**Excursion** /ɪk'skɜːʃən/, or *on-glide*. The term is used to refer to first stage of the articulatory gesture during which the speech organs move to the position necessary for the sound production. (See **Articulatory gesture**)  
*Further reading:* Vassilyev 1970; Gimson 1980; Кочерган 2000.

**Exhalation** /ɪkʃə'leɪʃən/ The term used to refer to the act of breathing the air out of the lungs and the mouth cavity.

**Experimental phonetics** /ɪk,speri'mentəl fə'netiks (/fəʊ'netiks)/, or *laboratory phonetics*, or *instrumental phonetics*. The term refers to the branch of phonetics aimed at the development and scientific testing of hypotheses. Abbé J-P (1859-1921) is regarded as the “father of experimental phonetics”. Together with Rosapelly (1876) he pioneered and refined the use of the kymograph for study of speech articulations. His dissertation (1891) was a philological survey of the sound changes that gave rise to the contemporary pronunciation and an instrumental phonetic study of the factors that may have caused them. Experimental phonetics is very well-established nowadays, with acoustic investigations dominated by spectrography, a technique which had been introduced to phonetics by American researchers in speech communication, coming from military and industrial backgrounds. Experimental phonetics can be *quantitative* which is based on numerical measurement. Experimental research is carried out in all branches of phonetics: in the *articulatory phonetics* (the process of speech production is measured and studied), in the *acoustic phonetics* (the relationship between articulation and the resulting acoustic signal as well as physical properties of speech sounds are examined), in the *auditory phonetics* (perceptual tests are carried out to discover how the listener’s ear and brain interpret the information in the speech signal). The great majority of experimental research makes use of instrumental phonetic techniques. Experimental work in phonetics laboratories has produced many important discoveries about how speech is produced and perceived. (See **Acoustic phonetics, Instrumental phonetics**)

*Further reading:* Fry 1958; 1976; Lass 1976; Roach 1990; Ohala 1991; Crystal 1997; Артемов 1956; Близниченко 1963; Дубовский 1975; Башкина, Бухтилов 1977; Калита 2000; Кодзасов, Кривнова 2001; Перебийніс 2002.

**Expiratory** /ɪk'spaɪ'rətəri/ The term refers to the theory according to which the syllable is defined as a sound or a group of sounds that are pronounced in one chest pulse accompanied by increases in the air pressure. This theory is also known as the *chest pulse theory* or the *pressure theory*. (See **Chest pulse, Syllable**)

*Further reading:* Vassilyev 1970; Ladefoged 1975; Gimson 1980; Crystal 1997; Борисова, Метлюк 1980; Бровченко, Корольова 2006.

**Expression** /ɪk'spreʃən/ The term is used in phonetics to refer to the physical actualization of emotions and emotional states, attitudes and feelings with the help of phonetic means.

*Further reading:* Bolinger 1986; Ellis, Beattie 1986; Веум 1986; Reinke 2000; Cook 2002; Goddard 1991; Нушикян 1986; Шаховский 1987; Калита 2001, 2003.

**Expressive** /ɪk'spresɪv/ The term is used in phonetics to refer to the sets of phonetic means (emphatic stress, emphatic variants of different tones, pauses, loudness, tempo, voice quality, etc.) that help to realize speaker's emotions or feelings, i.e. his/her emotional state and attitudes in the moment of speaking.

*Further reading:* Веум 1986; Bolinger 1986; Ellis, Beattie 1986; Goddard 1991; Tsur 1992; Reinke 2000; Cook 2002; Нушикян 1986; Шаховский 1987, 2008; Телия 1991, 1991а; Сепир 2002; Калита 2001, 2003.

**Extralinguistic** /ek'strəlɪŋ'gwɪstɪk/ The term refers to anything (situation, speaker's education, occupation, age, status and sex, etc., i.e. other than *language*) in relation to which language is involved. All these features are termed the *extralinguistic situation*. The term *extralinguistic characteristics (features)* is used (1) generally, to refer to any properties of such situations and (2) specifically, to refer to properties of communication which are not clearly analyzable in linguistic terms, e.g.: gestures, facial expression, body movements, eye contact and the like. Some linguists refer to the former class of features as *paralinguistic*.

*Further reading:* Bolinger 1983; Колшанский 1974; Кондильяк 2006; Seryakova 1997, 1998; Крейдлин 2002.

**Extralinguistic factors** /,ek'strəlɪŋ'gwɪstɪk 'fæktəz/ A term used in Phonetics to refer to the main factors, or circumstances of reality that cause phonetic modifications in speech; these circumstances are as follows: (1) the aim of speech (to inform, to instruct, to persuade, to narrate, to advise, etc.); (2) the extent of spontaneity (prepared / unprepared speech, etc.); (3) the

nature of interchange, i.e. the use of a form of speech which may suggest either only listening or both listening and an exchange of remarks (a lecture, a discussion, a conversation, etc); (4) social and psychological factors, which determine the extent of formality of speech and the attitudes expressed (a friendly conversation with close friends, a quarrel, an official conversation, etc.).

*Further reading:* Bolinger 1983; Колшанский 1974; Seryakova 1997, 1998; Крейдлин 2002.

**Extrinsic vocal features** /<sub>(v)</sub>eks'trɪnsɪk ˌvəʊkəl 'fi:tʃəz/ The term used to refer to vocal features made up of all aspects of vocal activity which are under the volitional control of the speaker, whether 'consciously' or not. J.Laver regards them as made up of two initial categories: firstly, *unique* events, for instance, a momentary clearing of the throat; such unique events are discarded from further consideration. Secondly, the *recurrent* features which are in some sense under the speaker's control. These features are in the centre of articulatory phonetics studies. The recurrent features are classed by J.Laver into *exponent* and *concurrent* aspects to show that side by side with phonetic component supporting the linguistic code they include the learnable component of a speaker's voice quality. The exponent features embrace only those vocal features which serve as signals for phonological and paraphonological units (such as signs, manifestations, realizations). They are the familiar phonetic features. The exponent features are divided into *supralaryngeal* (labial, lingual, pharyngeal, velic processes), *laryngeal* (glottal state) and *tension* aspects (tense / lax state) necessary for the study of phonetic manifestations of phonological and paraphonological units. The concurrent features provide the background, quasi-permanent auditory colouring to the voices of speakers and together with the intrinsic features give them their characteristic overall voice quality. The concurrent features are sub-divided into three major groupings of articulatory settings, i.e. (1) settings of *supralaryngeal adjustment* (quasi-permanent lip-protrusion, lip-rounding, velarisation, pharyngeal constriction, nasality, etc.), (2) *laryngeal phonation types* (breathy voice, whispery voice, harsh voice, creaky voice, falsetto and their combinations, as well as normal voice), (3) different *degrees of overall muscular tension* (neutral tension, tense (or metallic) voice and lax (or muffled) voice. (See also **Voice quality**)

*Further reading:* Abercrombie 1967; Crystal 1969, 1971; Laver 1996.

## F

**Facial expression** /ˌfeɪʃəl ɪkˈspresʃən/ The term used in phonetics to refer to characteristic movements of a speaker's face that are associated with certain meanings and which help the listener to adequately understand and decode the meaning of a word, sentence or an utterance expressed with the help of different language means including intonation.

*Further reading:* Bolinger 1989; Wierzbicka 1995; Lover 1996, Колшанский 1974; Seryakova 1997, 1998; Крейдлин 2002.

**Falling** /ˈfɔːlɪŋ/, **fall** /fɔːl/ The term used to refer to the tone movement direction when the speaker's voice goes down. The falling tone is more often associated with completeness and definiteness. It occurs in speech in its variants or allotones (the Low Falling (LF) and the High Falling (HF) tone being most frequently analyzed), which have certain spheres of their use. Thus the LF is said to make the utterance sound final, neutral, official, reserved, unemotional, unsympathetic, cool, cold and even hostile. The meaning of the utterance is specified by the type of the pre-nuclear tone (or the Scale). The HF on the contrary makes the utterance sound interested and concerned. When preceded by the Ascending Stepping Scale the HF helps to convey objection.

*Further reading:* Kingdon 1966; Jones 1969; Crystal 1969; Cruttenden 1981; O'Connor 1984; Bolinger 1989; Антипова 1979.

**Falling diphthong** /ˈfɔːlɪŋ ˈdɪfθɒŋ/ The term refers to the type of a diphthong in which its first element is the most prominent one, known as the head of a diphthong, as in /ɪə/ and /ʊə/ where /ɪ/ and /ʊ/ are the heads of the diphthongs and /ə/ is their glide. These two diphthongs are said to be falling. (See **Diphthong**, **Rising diphthong**)

*Further reading:* Jones 1969; Gimson 1980; Кочерган 2000; Теоретична 2003.

**Falsetto** /fɔːlˈsetəʊ/ A term taken from musical terminology to refer to a particular unnaturally high-pitched voice quality. It is almost always attributed to adult male voices, and is usually associated with a rather "thin" quality; it is sometimes encountered when a man tries to speak like a boy, or like a woman. In phonetics an excursion into falsetto can be

regarded as an indication of surprise or disbelief, or for effect or perhaps for the sake of contrast. (See **Timbre**)

*Further reading:* Laver 1968, 2009; Bolinger 1989; Davydov, Yakovleva 2001.

**Feature** /'fi:tʃə/ The term refers to the smaller elements (or constituents) phonemes could be broken down into. The features are capable of distinguishing each phoneme of a language from every other phoneme of that language. For instance, all consonants possess the feature “*consonantal*”, a group of consonants called voiced have the feature “*voice*”, those consonants which do not share this feature are called voiceless. The features distinguish each phoneme of a language from every other phoneme of the same language; it means that a minimum number of features is needed to distinguish the phonemes; so each phoneme has a definite set of “*plus*” (+) or minus (–) features that is different from that of any other phoneme. Features are used more in phonology than in phonetics, and in this use they are normally called *distinctive features*. (See **Distinctive features**)

*Further reading:* Vassilyev 1970; O’Connor 1984; Chomsky, Halle 2002.

**Feedback** /'fi:dbæk/ The term used in phonetics to refer to the information speakers obtain by monitoring their own speech activity.

**Feeling** /'fi:liŋ/ The term used to denote a category that includes the entire set of uncontrolled, non-verbal, autonomic nervous system responses (including a racing heart, profuse sweating, irregular breathing, shaking knees, and so on) to external stimuli. Those feelings may be powerful, but they are contentless in terms of human relations. In addition to the autonomic feelings, human beings will experience human emotions of pity, joy, anger, sympathy, worry, sadness, etc.

*Further reading:* Arnold, Gasson 1968; Cook 2002; Ekman 2001, 2007; Ekman, Friesen 2003; Dalai Lama, Ekman 2008; Изард 1980, 2000; ЭКМАН 2007.

**Filled onset** /'fild 'ɒnset/ The term is used to refer to a syllable or a monosyllabic word which has one or more consonants in the onset as, for instance, in the word *green* /gri:n/. (See **Onset**, **Empty onset**)

*Further reading:* Carr 2008.

**Filled pause** /'fild 'pɔ:z/, or *voiced pause*. The term used to refer to the type of a pause filled with sounds, words or sometimes even syntagms at the

juncture of two neighbouring intonation groups or within one and the same intonation group to express doubt or hesitation. E.g. 'Do you ə 'want me to ,do 'anything 'this 'evening, 'Nora?. This one syntagm sentence contains an intrasyntagmatic pause presented by the sound /ə/ thus expressing the speaker's uncertainty and hesitation. The phonetic manifestations of filled pauses differ across sociolinguistic communities. (See **Fillers, Pausation, Pause**)

*Further reading:* Brennan, Maurice 1995; Swerts 1998; Laver 1995; Crystal 1997; Yule 2009; Борисова, Метлюк 1980.

**Fillers** /'fɪləz/ The term is used in phonetics to refer to the sounds, words or syntagms pronounced at the juncture of two neighboring intonation groups or within one and the same intonation group to signal the speaker's hesitation, uncertainty, doubt, suspense or to fill the thinking time with /ə, ɜ:, or ɜ:m/, or other positive hesitation noises, or the combination of these means may be used, e.g.: *You, er, – appreciated it?* /ju: ɜ: [silence] ə'pri:ʃɪɪtɪd it/. In the analyzed utterance the filled pause is represented by the phoneme /ɜ:/ followed by silence which in written speech is marked with a dash. Such pauses, not contributing much to the new information content of an utterance, may also be used for emphasizing special importance of the word, which follows it. These fillers usually have the quality of the central vowels, e.g.: /ə, ɜ:, or ɜ:m, etc./. Besides, verbal fillers perform in speech the following valuable functions; the speaker uses them: (1) to simultaneously *plan* what he/she is going to say next; (2) in order to concurrently *monitor* what he/she is saying as well as to *observe* an adequately correct manner of his/her pronunciation; (3) to simultaneously *correct* what he/she has said; (4) to *choose* a particular word in order to replace it by another one within the same syntactic structure; (5) to *concentrate* on whether what he/she is saying fits into the context of what he/she has just said as well as into the discourse as a whole; (6) to *observe* how the audience is reacting to what he/she is saying, modifying some warm expressions of opinion if he/she sees that he/she has lost their sympathy; (7) to *fill* the silence and *maintain* the speaker's right to speak while he/she is organizing what he/she wants to say, i.e. he/she gives him/herself time to prepare an ordered response before he/she begins to speak, taking the advantage of his/her position; besides, the fillers are used to give the co-converser time to think as well as to warn the listener that this is what is going on; (8) to be *confident* that he/she will not be interrupted if he/she fails to fill the pause immediately. In ordinary everyday conversations between equals it is important to note that this use of verbal fillers does not necessarily mean that a speaker is considered to be particularly hesitant. On the contrary, the ability to keep on speaking even while saying remarkably

little is the mark of a fluent speaker. (See **Filled pause**)

*Further reading:* O'Connor 1984; Brown 1990; Crystal 1997; Swerts 1998; Борисова, Метлюк 1980; Теоретична 2003.

**Filter** /<sup>1</sup>fɪltə/ The term refers in acoustic phonetics to a device used for separating frequency component of a sound wave.

**Filtered speech** /<sup>1</sup>fɪltəd <sup>1</sup>spi:tʃ/ The term refers in acoustic phonetics to the speech that passed through filters to change its acoustic characteristics.

**Finally strong** /<sup>1</sup>fainəli <sup>1</sup>strɒŋ/ consonant. The term refers to the consonants, in the articulation of which the beginning is weak while the end is more energetic. Such consonants occur at the beginning of a syllable preceding a syllabic phoneme. (See **Arc of loudness theory**)

*Further reading:* Щерба 1963; Жинкин 1958; Vassilyev 1970; Борисова, Метлюк 1980; Теоретична 2003.

**Fixed stress** /<sup>1</sup>fɪkst <sup>1</sup>stres/ The term refers to the type of stress which always falls on one and the same syllable (as in Czech, Slovak, Persian (though there are some exceptions) and Finish in which stress is located on the first syllable, or on the last syllable as in French and Turkish, or as in Italian, Polish and Welsh in which the placement of stressed is fixed on the penultimate syllable). English stress is free: it may be on the first (as in the word <sup>1</sup>single), or on the second (as in *po<sup>1</sup>lite*), on the third (as in the word *eco<sup>1</sup>nomic<sup>1</sup>al*) syllable. Because of this freedom it is possible for stress to be contrastive, especially in noun/verb differences as in cases <sup>1</sup>subject – *to subject*, <sup>1</sup>export – *to export* etc. Ukrainian stress is also free, e.g., *се<sup>1</sup>ло – <sup>1</sup>села, ро<sup>1</sup>са – <sup>1</sup>посу*, etc. (See **Stress, Word accent**)

*Further reading:* Christophersen 1970; Gimson 1980; Jassem 1983; O'Connor 1984; Halle, Vergnaud 1990; Roach 1990; Теоретична 2003; Николаева 1982, 2004.

**Flat articulation** /<sup>1</sup>flæt a:tɪkjʊ<sup>1</sup>leɪʃ<sup>ə</sup>n/ The term refers to the type of articulation according to which speakers have to adjust their lips to a more flat shape.

**Flat rounding** /<sup>1</sup>flæt <sup>1</sup>raʊndɪŋ/ The term used to refer to a flat shape of lips typical of English sounds articulation, while in Ukrainian pronunciation lips are usually protruded.

**Forelingual** /<sup>1</sup>fɔ:lɪŋgwəl/ The term refers to the consonants articulated by the blade of the tongue, the blade with the tongue tip or by the tip against the

upper teeth or the alveolar ridge. According to the position of the tongue tip the English forelingual consonants are classified into *apical* (consonants articulated by the tip of the tongue against either the alveolar ridge: /t, d, s, z, n, l/) or the upper teeth: /t, d, s, z, n, l/ when followed by /θ, ð/, or between the teeth: /θ, ð/, and *cacuminal* (consonants articulated by the tip of the tongue raised against the back part of the alveolar ridge: /r/). According to the place of articulation the English forelingual consonants are divided into *interdental* /θ, ð/ produced with the tongue tip between the teeth; *alveolar* /t, d, s, z, n, l/ made with the tongue tip or blade at the alveolar ridge; *post-alveolar* /r/; *palato-alveolar* /ʃ, ʒ, tʃ, dʒ/.

**Foot** /fʊt/ A term refers to a basic unit of rhythm used in the study of verse metre. Each English foot consists of one stressed syllable and any unstressed syllables that follow it; the next foot begins when another stressed syllable is produced. English feet are usually equal, or *isochronous* in length. It means that in order to keep the rhythm there has to be a certain compression of the unstressed syllables if a foot contains several syllables. The foot is a central part of *metrical phonology*. The term is used in traditional studies of metrical verse structure where the regular patterns of stressed / unstressed syllable sequence were classed into: *iambic* (in unstressed + stressed pattern: —  $\overset{/}{\text{—}}$ ); *trochaic* (for a stressed + unstressed pattern:  $\overset{/}{\text{—}}$  —), *spondaic* (for a pattern of two stresses:  $\overset{/}{\text{—}}$   $\overset{/}{\text{—}}$ ), *dactylic* (for a stressed + two unstressed syllables:  $\overset{/}{\text{—}}$  — —), *anapaestic* (for a pattern of two unstressed syllables + a stressed syllable: — —  $\overset{/}{\text{—}}$ ). Four types of metre are traditionally analysed in English verse: the *iamb*, *trochee*, *anapaest*, and *dactyl*. (See **Rhythm, Metre, Metrical phonology, Isochrony, Stress-timing**)

*Further reading:* Abercrombie 1967; Catford 1977; Brown 1990; Laver 1995; Crystal 1997; Clark et al 2007.

**Forensic phonetics** //: the term refers to the type of phonetics used for forensic (legal) purposes.

**Formant** /'fɔ:mənt/ The term is used to refer to the peaks of energy in the spectrum of a sound present at particular frequencies which contribute to the perceived quality of the sound. These peaks or banks of energy are known as the formants of the vowel. It is usual to number them from the lowest to the highest peaks: formant 1 (F1) is centered on 500, F2 on 1,780 and F3 on 2,500 cps. (or cycles per second). Their frequency is measured in Hertz (Hz). Vowels generally have more than three formants. The first

formant is related to the vowel height; the second formant frequency decreases as a person's speech organs move from the high vowel to the low vowel and vice versa. The distance between the two formants decreases in front vowels. The higher formants are connected with identifying a particular speaker's voice quality. The degree of lip rounding affects the formant frequencies: the more the lip rounding in the production of a sound is the more decreased are the frequencies of the higher formants. Closure of the lips causes a lowering of all the formants. Vowels and sonorants display a clear formant structure; all voiced and non-constrictive sounds can be summed up acoustically in terms of their formants. Fricative sounds give rather messy-looking spectrograms as compared with those of vowels. The formant analysis can be carried out quickly and accurately by means of the acoustic spectrograph.

*Further reading:* Duffy 1970; Ladefoged 1975, O'Connor 1984; Ohala 1994; Laver 1995; Fant 1959, 1968, 2004.

**Forte** /'fɔ:teɪ/ The term is used in auditory phonetics and refers to the type of loudness which is louder than intermediate.

**Fortis** /'fɔ:tɪs/ (meaning strong) A term used for the phonetic classification of consonants on the basis of their manner of articulation refers to a sound articulated with a relatively strong degree of muscular effort and breath force, e.g. /k, p, t, etc./. The term is similar to the term *tense* more usually used in relation to long vowels. Those English consonants which are usually voiced tend to be articulated with relatively weak energy, whereas those which are always voiceless are relatively strong, e.g. the phoneme /s/ may be defined as strong or fortis and /z/ – as weak or lenis. (See **Lenis**)

**Free allophonic variation** /'fri: ælə'fɒnɪk vɛəri'eɪʃən/ The term refers to the allophones of a phoneme that occur in the same environment, but have no distinctive force, i.e. they do not cause the change of meaning. In this case they are said to be in free variation, e.g., /ə'gen – ə'geɪn/, /'dræstɪk – 'drɑ:stɪk/, /'ɪʃu: – 'ɪʃju: – 'ɪʃju:/, etc. (See **Free phonemic variation**)

*Further reading:* Laver 1995; Crystal 1997; Wells 2000; Парашык 2005.

**Free phonemic variation** /'fri: fə'ni:mɪk vɛəri'eɪʃən/ The term used to refer to the alternation of different phonemes within the phonemic structure of words without causing any change of meaning, e.g. *always* /'ɔ:lweɪz/, /'ɔ:lwɪz/, /'ɔ:lwəz/; *often* /'ɒfən/, /'ɒftən/, etc. The pronunciation variants of the analysed words are regarded as literary correct, though the ordering of such variants means that the variant that comes first is the commonest, or the main pronunciation variant. The less common variants are

considered as alternative variants. In the course of pronunciation development the order of variants may be changed due to particular tendencies.

*Further reading:* Gimson 1981, Laver 1995; Crystal 1997; Wells 2000; *Clark et al 2007*; Паращук 2005.

**Free vowels** /<sub>1</sub>fri: 'vaʊəlz/ A term used for the vowels (long monophthongs, diphthongs and unstressed short vowels) pronounced in an open syllable with a weakening in the force of articulation towards the end.

**Frequency** /'fri:kwənsi/ A technical term for an acoustic property of a sound – namely the number of complete repetitions (cycles) of variations in the air pressure occurring in a second. The unit of frequency measurement is the Hertz, usually abbreviated as Hz. If the vocal cords make 220 complete opening and closing movements in a second, we say that the frequency of the sound is 220 Hz. (See **Formants**, **Fundamental frequency**)

*Further reading:* Ladefoged 1975; Duffy 1970; Ohala 1984, 1994; Crystal 1997; *Clark et al 2007*; Фант 1964; Цеплитис 1974; Блохина, Потапова 1977; Светозарова 1982; Бровченко, Волошин 1986; Златоустова и др. 1986; Кодзасов, Кривнова 2001.

**Fricative** /'frɪkətɪv/, or *spirant*. A term refers to the sounds made when two organs of speech come so close together that the air moving between them produces audible noise, or friction /f, v, θ, ð, s, z, ʃ, ʒ, h/. Fricatives are *continuant* consonants, which means that one can continue making them without interruption as long as one has enough air in one's lungs. (See **Spirant**)

**Friction** /'frɪkʃən/ A term refers to the audible noise in the process of articulating fricative consonants /f, v, s, z, θ, ð, ʃ, ʒ, h/. (See **Consonant**)

**Frictionless** /'frɪkʃənləs/ A term refers to the sounds functioning as consonants but which lack audible friction, e.g. the common variety of Southern British [r] which has neither the closure, nor the noise component characteristic of consonantal articulation.

**Front vowels** /<sub>1</sub>frʌnt 'vaʊəlz/ The term used to refer to the vowels produced with the bulk of the tongue in the front part of the mouth while the front of the tongue is raised to the hard palate. The English front vowels are [i:], [e], [æ] and the nuclei of the diphthongs /eə, eɪ/.

**Front-retracted** /<sub>1</sub>frʌnt rɪ'træktɪd/ The term used to refer to the vowels produced with the bulk of the tongue in the front part of the mouth being somewhat retracted, while the front of the tongue is raised towards the hard palate. There is only one front-retracted monophthong in English [ɪ]. The nuclei of the English diphthongs [aɪ] and [aʊ] are also front-retracted.

**Fronting** /'frʌntɪŋ/ The term used to refer to the articulation of a sound further forward in the mouth than it is normal.

**FSP** /'ef 'es 'pi:/ The abbreviation refers to the term functional sentence perspective. (See **Actual division of the sentence**, **Functional sentence perspective**)

*Further reading:* Mathesius 1975; Kopple, William 1982; Esser 1983; Firbas 1992; Brazil 1997; Фаулер 2002; Мартине 2004.

**Functional** /'fʌŋkʃənəl/ The term used in phonetics to refer to the role of this or that sound phenomenon in constituting, differentiating and identifying various linguistic units.

**Functional load** /'fʌŋkʃənəl 'ləʊd/, or *functional loading*, or *functional yield*. The term used in phonetics and phonology to refer to the ability of one of the phoneme distinctive features to differentiate pairs of words (the so-called minimal pairs), e.g: /t/ and /d/ where the presence/absence of voice (+contrast) is of high functional load, since it distinguishes the meanings of the words *tip* /tɪp/ – *dip* /dɪp/. (See **Minimal pair**, **Distinctive feature**)

*Further reading:* Vassilyev 1970; Ladefoged 1975; Gimson 1980; Laver 1995; Crystal 1997; Chomsky, Halle 2002; Фант 1964, Трубецкой 2000.

**Functional phonetics** /'fʌŋkʃənəl fə'netiks/ Another term for phonology that studies the language sound matter in use. (See **Phonology**)

*Further reading:* Gleason 1956; Chomsky, Halle 1968; Ladefoged 1975; Sommerstein 1977; Gimson 1980; O'Connor 1984; Beym 1986; Ohala 1991; Laver 1995; Giegerich 1995; Lass 1996; Ladd 1997; Pierrehumbert 2000; Касевич 1981; Сосюр 1998; Трубецкой 2000; Сепир 2002; Зубрицкая 2002; Потапова, Потапов 2006.

**Functional sentence perspective** /'fʌŋkʃənəl 'sentəns pə'spektɪv/, or *FSP*. The term refers to the theory of functional sentence perspective used by the Prague School of linguists (the Prague Linguistic Circle) being concerned with the distribution of information as determined by all meaningful elements, from word order, intonation (in oral speech) to context. There are

three dominant conceptions of functional sentence perspective: (1) a sentence should be subdivided into several segments, each having a different degree of communicative dynamism; (2) a sentence should be analyzed into two segments, the theme and the rheme; and (3) a sentence should be analyzed into two segments, the topic and the comment. A central feature of FSP is communicative dynamism. The distribution of the degrees of communicative dynamism over sentence elements, as Jan Firbas regards it, determines the orientation or perspective of the sentence. The semantic value of each major element in a sentence is viewed with respect to its dynamic role in communication. FSP is aimed at examining the relation of theme and rheme and the ways of their implementation by syntactic components. Special attention is paid to the relation between FSP and intonation as well as the interplay of all FSP factors, establishing the concept of prosodic prominence. The concepts of functional sentence perspective and communicative dynamism derived from the Prague School of linguists are still widely used in Czech Republic and some other countries of Europe.

*Further reading:* Mathesius 1975; Kopple, William 1982; Esser 1983; Firbas 1992; Brazil 1997; Фаулер 2002; Мартине 2004.

**Functional yield** /'fʌŋkʃənəl 'ji:lɪd/ Another term for *functional load* (See **Functional load**)

**Fundamental frequency** /,fʌndə'ment<sup>ə</sup>l 'fri:kwənsi/ (F<sub>0</sub>) The term refers to the frequency of the vocal cords (or vocal folds) vibrations over their whole length. Changes in the fundamental frequency, or pitch, are used in speech to produce intonation. In adult female voices the frequency of vibration tends to be around 200 or 250 cycles per second, and in adult males the frequency is about half of this. It is usual to express the number of cycles per second as Hertz (abbreviated Hz), so a frequency of 100 cycles per second is a frequency of 100 Hz. The frequency is called fundamental because all speech sounds are complex sounds made up of energy at many different component frequencies, when a sound is voiced, the lowest frequency component is always that of the vocal fold vibration – all other components are higher. So the vocal fold vibration produces the fundamental frequency.

*Further reading:* Ladefoged 1975; O'Connar 1984; Duffy 1970; Ohala 1984, 1994; Laver 1995; Crystal 1997; Фант 1964; Цеплитис 1974; Блохина, Потапова 1977; Светозарова 1982; Бровченко, Волошин 1986; Златоустова и др. 1986; Кодзасов, Кривнова 2001.

## G

**GA** /'dʒi: 'eɪ/ The abbreviation stands for the General American accent, or pronunciation. (See **General American**)

**Geminate** /'dʒemɪnət/ The term is used in phonetics to refer to the sequence of identical adjacent sounds in one morpheme.

*Further reading:* Laver 1995; Clark et al 2007.

**Gemination** /,dʒemɪ'neɪʃən/ In phonetics the term is used to refer to the phenomenon when a spoken consonant is pronounced for an audibly longer period of time than a short consonant. Most languages, including English, do not have distinctive long consonants. However, in some languages, for instance Arabic, Estonian, Finnish, Russian, Ukrainian, Hebrew, Hungarian, Italian, Japanese, consonant length is said to be distinctive. As to the vowel length it is distinctive in more languages than consonant length.

*Further reading:* Laver 1995.

**GenAm** /'dʒen 'æm/ The abbreviation stands for the General American accent, or pronunciation. (See **General American**)

**Gender** /'dʒendə/ The term refers to one of the direction in sociolinguistic, psycholinguistic, linguocultural and the like researches studying the peculiarities of men/women speech behavior. In phonetics the term is used to indicate men's/women's pronunciation differences.

*Further reading:* O'Connor 1984; Jespersen 1922; Yule 2009; Сепир 2002; Селіванова 2006.

**General American** /,dʒen'ərəl ə'merɪkən/ (abbreviated as *GA* or *GenAm*). The term refers to the accent usually held to be the standard accent of American English. GA, which is also known as Network English or Western American, is the accent of the majority of Americans. It is traditionally identified as the accent spoken throughout the U.S.A. except in the northeast (roughly the Boston and New England area as well as New York City) and the southeastern states (Virginia, North and South Carolinas, Tennessee, Florida, Georgia, Alabama, Mississippi, Arkansas, Louisiana,

Texas, etc.). GA or GenAm is the most extensively studied due to its importance, prestige and social advantage in certain localities in the U.S.A. *Further reading:* Vassilyev 1970; Pike, Wells 1982; Kenyon, Knott 1987; Laver 1995; Gimson 2001; Шахбагова 1982; Паращук 2005.

**General phonetics** /ˌdʒenərəl fəˈnetɪks (/fəʊˈnetɪks)/ The term refers to the branch of phonetics which is concerned with the study of man's sound producing possibilities and the functioning of his speech mechanism. It establishes the types of sounds, which exist in various languages, the ways they are produced, and their role in forming and expressing thoughts. General Phonetics is based on the extensive material provided by *special phonetics* of different languages and on the material of other sciences. It focuses on the complex nature of speech sounds and the formulation of a number of theories such as the phoneme theory, the theory of syllable formation, theories of stress, intonation, etc.

*Further reading:* Abercrombie 1967; Ladefoged 1975; O'Connor 1984; Ohala 1991; Laver 1995; Pierrehumbert 2000; Аванесов 1956; Зиндер 1979; Златоустова и др. 1986; Бондарко та ін. 1991; Сосюр 1998; Кодзасов, Кривнова 2001; Сепир 2002; Щерба 2008.

**Generative phonology** /ˈdʒenərətɪv fəʊˈnɒlədʒi/ The term refers to the branch of phonology whose aim is to describe the knowledge or competence which a native speaker must have to be able to produce and understand the sound system of his/her language. In generative phonology the phonemes of a language are represented as groups of distinctive features. Thus every sound is represented by a different set of features. For example, the differences between /p, b, m/, /t, d, n/, /k, g, ŋ/ can be accounted for in terms of three general articulatory features: stop *vs.* nasal, fortis *vs.* lenis, and place of articulation, etc. Sounds combine and vary in connected speech according to definite phonological rules.

*Further reading:* Fant 1972; Halle 1983; Jassem 1983; O'Connor 1984; Laver 1995; Chomsky, Halle 2002; Фант 1964; Трубецкой 2000; Зубрицкая 2002.

**Gesture** /ˈdʒestʃə/ The term refers to (1) the non-verbal means of communication such as a movement of the body or limbs that side by side with linguistic means and intonation expresses or emphasizes an idea, sentiment, or attitude; (2) a coordinated movement of speech organs (known as an articulatory gesture) by means of which the articulation of a definite speech sound is realized. (See **Paralinguistics, Articulatory gesture**)

*Further reading:* Laver 1996; Артемов 1956; Крейдлин 2002; Дудник 2004; Кондильяк 2006.

**Glide** /glaid/ The term refers to a non-significant sound produced by the passing of the vocal organs to or from the articulatory position of a speech sound. In the case of diphthongs the glide is comparatively slow. A more or less gradual glide from one quality to another is their essential part of diphthongs differentiation. In English there are three groups of diphthongs that differ in a gliding element: ə-gliding (ɪə, eə, uə); ɪ-gliding (eɪ, aɪ, oɪ); ʊ-gliding (əʊ, aʊ). (See **Diphthong**)

*Further reading:* Jassem 1983; Roach 1990; Crystal 1997; Трубецкой 2000; Теоретична 2003.

**Glottal** /'glɒt<sup>ə</sup>l/ A term used to refer to a type of airstream. A *glottalic airstream* is produced by making a tight closure of the vocal cords and then moving the larynx up or down: raising the larynx pushes air outwards causing an egressive glottalic airstream while lowering the larynx pulls air into the vocal tract and is called an ingressive glottalic airstream. Sounds of this type found in language are called *ejective* (found in Caucasian, in many American Indian and African languages) or *implosive* (common in American Indian and African languages) respectively, e.g. /ʔ, h/. Ejectives and implosives are pronounced with a *glottalic airstream mechanism*.

*Further reading:* Crystal 1997; Ladefoged 1975.

**Glottal reinforcement** /'glɒt<sup>ə</sup>l ,ri:ɪn'fɔ:smənt/ (See **Glottalisation**)

**Glottal stop** /'glɒt<sup>ə</sup>l 'stɒp/ The term refers to the complete obstruction to the air passage that occurs when the vocal cords are held tightly together, and the result is a period of silence marked by a special diacritic symbol – [ʔ]. The glottal stop often occurs in the realization of /p/ (never of /b/) in RP and other accents. In RP the glottal stop is added before the bilabial plosive, and before a pause. Glottal stop does not occur between vowels in RP but it does in Cockney. Glottal stops are found in many accents of English: sometimes a glottal stop is pronounced in front of a /p/, /t/ or /k/ if there is not a vowel immediately following (e.g. *captive* ['kæʔptɪv], *catkin* ['kæʔtkɪn], *arctic* ['ɑ:ʔktɪk]; a similar case is that of /t/ when following a stressed vowel (or when syllable-final), as in *butcher* ['bu:ʔtʃə]. This addition of a glottal stop is sometimes called *glottalisation* or *glottal reinforcement*. In British English the glottal stop is most commonly heard in those dialects that have been influenced by London speech, for instance,

Cockney and Estuary English where the glottal stop often replaces the voiceless alveolar plosive /t/ when it follows a stressed vowel, so that *getting better* is pronounced ['geʔɪŋ 'beʔə]. (See **Cockney, Estuary English**)

*Further reading:* Barber 1964; O'Connor 1984; Wells 1994, 1997; Laver 1995; Gimson 2001; Паращук 2005.

**Glottalisation** /,glɒt̚laɪ'zeɪʃ̚n/, or *glottal reinforcement*. The term is used to refer to the process in which the closure in an oral articulation is accompanied by a glottal stop articulation, as in *happy* ['hæʔpɪ], *picky* ['pɪʔkɪ], etc. Glottalisation is typical of the North-East English pronunciation.

*Further reading:* Barber 1964; O'Connor 1984; Wells 1994, 1997; Laver 1995; Gimson 2001; Паращук 2005.

**Glottalling** /'glɒt̚lɪŋ/ The term is used to refer to the switch from an alveolar to a glottal articulation of /t/ as a result [t] is pronounced as [ʔ] in the syllable-final position. Such a pronunciation of /t/ is typical of casual RP and it generally occurs (1) *before obstruents* (plosives, fricatives, affricates) as in *it's quite good* [ɪʔs 'kwaʔ 'gʊd] or (2) *before other consonants* as in *partly* ['pɑ:ʔlɪ], *Gatwick* ['gæʔwɪk], as well as finally (3) *before vowels* in younger RP-speakers pronunciation as in *Let's start* ['leʔs 'stɑ:ʔ]. The increased frequency of glottal stops in the RP-speakers pronunciation is ascribed to the influence of Cockney and other working-class pronunciation on RP.

*Further reading:* Barber 1964; O'Connor 1984; Wells 1994, 1997; Laver 1995; Gimson 2001; Паращук 2005.

**Glottis** /'glɒtɪs/ The term is used to refer to the opening (or space) between the vocal cords (or vocal folds). In the process of normal breathing the glottis is quite wide, usually being wider for breathing in than for breathing out. When the vocal cords are pressed together the glottis disappears; the fully closed position of the vocal cords is known as *closed glottis*; the *narrowed glottis* is the state of the vocal cords appropriate for voicing; for whisper as well as for the production of the phoneme /h/ the glottis are less narrowed than for voicing. In the production of aspirated voiceless plosives there is usually a momentary very wide opening of the glottis just before the release of the plosive.

*Further reading:* Ladefoged 1975; O'Connor 1984; Roach 1990; Laver 1995.

**Grapheme** /'græfi:m/ The term is used to refer to a combination of letters in the spelling system of a language which are pronounced as a single unit. Graphemes which contain two letters are called digraphs. An example is the “*th*” grapheme used in English spelling, which corresponds to the phonemes /θ/ and /ð/, or “*ea*” which corresponds to the phoneme /e/ as in *head* (when this grapheme is followed by the letter *d*) or /i:/ as in *tea*, *please*, etc.

*Further reading:* Кочерган 2000; Селіванова 2006.

**Graphophonemics** /,græfəfə'ni:miks/ The term is used to refer to the study of the relationship between spelling and pronunciation, more precisely the relationship between the *graphemes* of an alphabetic writing system and the *phonemes* of the language. A complete account of the graphophonemics of a language provides a comprehensive description of all the grapheme-phoneme correspondences.

*Further reading:* Carr 2008; Селіванова 2006.

**Grave feature** /'greiv 'fi:tʃə/ The term refers to the acoustically-based feature that specifies the amount of acoustic energy in the lower, as opposed to the upper, frequencies. It is required for the explanation of some sound patterns that occur in language and is especially important in classifying plosives (or stops) and fricatives, e.g. the sounds [p] and [k] are followed by a comparatively low frequency burst of aspiration and that is why they are marked as [+ grave]. At the same time the aspirated sound [t] differs from [p] and [k] in the amount of energy in the aspiration which is at a much higher frequency, therefore it is marked as [- grave] and is termed as an acute sound. Thus, referring to the predominance of the higher or lower part of the spectrum, the grave sounds [p] and [k] are in opposition to the acute sound [t]. The sounds also form opposition *compact – diffuse* referring to the energy concentrated in the central part of the spectrum as opposed to concentration in a non-central part. (See **Acute sound, Opposition**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; *Clark et al 2007*; Трубецкой 2000.

**Great Vowel Shift** /'greit 'vaʊəl 'ʃift/, or *GVS*. The term refers to a historical change known as *The Great Vowel Shift* which took place in the history of English. It describes the changes of all ME (Middle English) monophthongs and some of the diphthongs. According to the great vowel shift all the vowels became closer and some of the vowels occupied the place of the next vowel in the vowel chart, e.g.: more open [ɛ:] took the place of [e:], and

later moved one step further in the same direction and merged with the former [e:] in [i:]; the long [o:] shifted one step to become [u:], while ME [u:] changed to [au]. The long vowels [u:], [i:], [ɑ:] broke into diphthongs [au], [aɪ], [eɪ] respectively. The diphthong [əʊ] did not undergo any modification. The Great Vowel Shift has been interpreted both as a *drag chain* (*pull chain*) and a *push chain* (See **Sound Law**).

*Further reading:* Page 1998; Ohala 2001; Carr 2008; Yule 2009; Ильиш 1972; Расторгуева 1983.

**Grimm's Law** /'grɪmz 'lɔ:/ The term refers to a law describing the regular changes undergone by Indo-European stop consonants represented in Germanic, essentially stating that Indo-European *p, t, k* became Germanic *f, th, h*; Indo-European *b, d, g* became Germanic *p, t, k*; and Indo-European *bh, dh, gh* became Germanic *b, d, g*. (See **Sound Law**)

*Further reading:* Chomsky, Halle 2002; Ильиш 1972; Расторгуева 1983.

**Groove consonant** /'gru:v 'kɒnsənənt/ The term used to refer to a fricative produced with the tongue slightly hollowed along its central line as in [s, ʃ].

**GVS** /'dʒi: 'vi: 'es/ The abbreviation stands for the Great Vowel Shift.

# H

**Half-close** /'hɑ:f 'kləʊs/, or *high mid*, or *mid* (narrow variation) *vowels*. The term refers to the vowels /e, ɜ:/ which are articulated higher than the neutral position of the tongue but not as high as high vowels /i:, ɪ, ʊ, u:/.

**Half-open** /'hɑ:f 'əʊpən/, or *low mid*, or *mid* (broad variation) *vowels*. The term refers to the vowels /ə, ʌ/ in the production of which the tongue occupies a slightly lower position than in the articulation of half-close /e, ɜ:/.

**Hard palate** /'hɑ:d 'pælət/ A bony structure in the front part of the roof of the mouth. (See **Soft palate**)

**Harmonic** /hɑ:'mɒnɪk/, or *overtone*. A term refers to the sinusoidal components of any complex periodic sound. The higher harmonics or overtones are always simple multiples of the lowest harmonic which is known as the *fundamental frequency* ( $F_0$ ). In Physics  $F_0$  counts as the first harmonic (200 Hz); 400 Hz would be the second harmonic; 600 Hz would be the third harmonic and so on. This kind of framework is particularly useful in analyzing vowels, certain consonants, and intonation patterns. Depending on the nature of the vibrating object different sets of harmonics are established, and these are heard as differences in sound quality or timbre. The difference we hear between two voices is a contrast of timbre caused by different harmonics. (See **Fundamental frequency**, **Overtone**)  
*Further reading*: Fant 1959, 1968; Ladefoged 1975; Jassem 1983; O'Connor 1984; Артемов 1956, 1974; Фант 1964.

**Harsh voice** /hɑ:ʃ 'vɔɪs/. The term refers to the description of voice quality or *phonation type*, typical of exaggeratedly “manly” voice with some harshness. Thus it is widely used in advertising products aimed exclusively at men (e.g. beer, men’s deodorants, etc.). Besides harshness functions as an indicator of some varieties of dialectal speech; it can also be highly valued in many popular singing styles. (See **Voice quality**)  
*Further reading*: Catford 1964; Esling 1994; Laver 1968, 2009; Laver, Trudgill 1979; Davydov, Yakovleva 2001.

**Head** /hed/ The term refers to (1) the most prominent element of a diphthong;

(2) the first rhythmic group of an intonation contour; (3) the section of an intonation contour comprising all syllables from the first stressed syllable up to the nuclear tone (also known as scale). For example, in the sentence *'Here is the 'six o'clock news* the words *'Here is the 'six o'clock* represents the head (or scale) of the intonation contour, where *'Here* is the head syllable or the head of the scale; while *news* is regarded as the nuclear tone of the intonation group. If there are unstressed or partially stressed syllables preceding the head, they constitute a *pre-head*.

*Further reading:* Kingdon 1966; Carr 2008; Калита 2003.

**Heptameter** /hep'tæmɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of seven rhythmic units. (See **Metre**)

**Hertz** /hɜ:ts/ The term used in phonetics to refer to the number of cycles per second (cps) and serves for measuring frequency. The abbreviation Hz usually stands for Hertz. (See **Formants**, **Frequency**, **Fundamental Frequency**)

*Further reading:* Ladefoged 1975; O'Connor 1984; Crystal 1997; Fant 2004; Фант 1964; Цеплитис 1974; Блохина, Потапова 1977; Златоустова и др. 1986; Кодзасов, Кривнова 2001.

**Hesitation** /ˌhezɪ'teɪʃən/ A term used in phonetics to refer to a type of a pause which is generally understood to be involuntary, and often due to the need to plan what the speaker is going to say next. Hesitations are also often the result of difficulty in recalling a word or expression. Phonetically, hesitations and pauses may be *silent* or may be *filled* by a voiced sound: different languages and cultures have very different hesitation sounds. BBC English tends to use [ə] or [hm]. (See **Pause**)

**Hexameter** /hek'sæmɪtə/ The term is used in phonetics in the analysis of poetic speech prosodic peculiarities and refers to a line of verse consisting of six rhythmic units. (See **Metre**)

**Hierarchy** /'haɪərɑ:kɪ/ of phonological units. It is convenient in phonology to have a hierarchy of units each built up from the next smaller one. The minimum unit is the phoneme; then comes the syllable, made up of phonemes in certain arrangements; then comes the rhythm group, consisting of a sequence of syllables; then the intonation group, consisting of a sequence of rhythm groups being united by the definite pattern of intonation it carries; and finally beyond that a larger group still, consisting

of a sequence of intonation groups (such as utterances, texts).

*Further reading:* O'Connor 1984; Gimson 1980; Jeffries 1998; Борисова, Метлюк 1980.

**High** /haɪ/ The term used in phonetics to refer to (1) the vowels classed according to the vertical position of the tongue as *close*, or *high* e.g. /i:/, /ɪ/. (2) pitch level of the tone, e.g.: *high* /<sup>1</sup>m/, *mid* /<sub>1</sub>m/, *low* /<sub>1</sub>m/, *low falling* /<sub>1</sub>m/, *high falling* /<sup>1</sup>m/, etc.

**High mid** /<sup>1</sup>haɪ <sup>1</sup>mid/ Another term for *half-close*. (See **Half-close**)

**Histogram** /<sup>1</sup>hɪstə'græm/ The term used in experimental phonetics for representing a frequency distribution of a certain phenomenon or parameter by means of rectangles whose widths represent class intervals and whose heights stand for corresponding frequencies.

**Historical phonetics** /hɪs,tɒrɪk<sup>ə</sup>l fə'netɪks/ (/fəʊ'netɪks/), or *evolutionary phonetics*. A term used to refer to the branch of phonetics which deals with the study of the changes in the phonetic system of a definite language (or a language family) at different stages of its historical development (diachronically). Historical phonetics uses the philological method of investigation. It studies written documents and compares the spelling and pronunciation of one and the same word in different periods of the history of the language. Historical phonetics is the part of the history of the language.

*Further reading:* Laver 1995.

**Hoarseness** /<sup>1</sup>hɔ:snəs/ The term used in phonetics to refer to the phonation (or voicing) that occurs as a result of illness or extreme emotions. (See **Voice quality**)

*Further reading:* Abercrombie 1967; Catford 1964; Crystal 1969, 1997; Laver 1968, 1996.

**Homograph** /<sup>1</sup>hɒməgrɑ:f/ The term refers to the words which have the same spelling but different pronunciation (e.g. *wind* /wɪnd/ vs. *to wind* /waɪnd/).

**Homophone** /<sup>1</sup>hɒməfəʊn/ The term refers to the words which have the same pronunciation, but are different in meaning, origin and spelling. For example, the words *knew* /nju:/ and *new* /nju:/ are homophones since they have identical pronunciation. At the same time homophony may occur when

the words have the same spelling but different meanings, e.g. the verb *to bear* /bɛə/ and the noun *bear* /bɛə/; compare also the verb *to see* /si:/ and the noun *sea* /si:/, etc.

*Further reading:* Laver 1995; Yule 2009.

**Homophony** /hə'mɒfəni/ 'Homo' means 'the same' and 'phon' means 'sound'. Thus the term refers to the phenomenon when two or more words sound identically but have different meanings, as in *meat, meet, mete, etc.* Such words are called homonyms or homophones. The examples given above are not spelled the same and yet they have different meanings but identical sounding. They are said to be bone-fide homophones. Homophony is created by phonemic mergers. (See **Homograph, Homophone**)

**Homorganic** /,hɒmɔ:'gæni:k/ The term is used to define the sounds that have the same place of articulation, for instance all apico-alveolar sounds /t, d, n, l, s, z/ are classed as homorganic since they have the same place of articulation.

*Further reading:* Roach 1990.

**Hyperlect** /'haɪpələkt/ The term refers to the pronunciation typical of a small minority of RP/BBC English speakers; it is spoken in a number of famous British schools and Oxbridge colleges by a minority of teachers and academia. (See **Acrolect, Basilect, Mesolect, Sexolect, Sociolect**)

*Further reading:* Honey 1990; Yule 2005.

**Hyperphoneme** /,haɪpə'fəʊni:m/, or *archiphoneme*. The term refers to the complex of features capable of differentiating meaning common for two phonemes in the position of neutralization, i.e. when two distinctive sounds are no longer in contrast, e.g. the vocalization of voiceless /t/ in the intervocalic position as in *letter, better*. (See **Archiphoneme**)

*Further reading:* Аванесов 1972; Якобсон 1985; Трубецкой 2000; Селіванова 2006.

# I

**Iamb** /aɪ'æm/ also *iambus* /aɪ'æmbəs/ The term is used in metrical phonology to refer to the measure of poetry consisting of one weak (or short) beat followed by one strong (or long) beat (—/).

E.g.: *I had a penny,*

*A bright new penny,*

*I took my penny*

*To the market square.* (From “Market Square” by A.Milne)

Iambic and anapaestic meters sometimes are called rising because their movement supposedly rises from unstressed syllable or syllables to the stressed ones. (See **Foot, Rhythm, Metrical phonology**)

*Further reading:* Abercrombie 1967; Kiparsky 1977; Dvorzhetskaya, Logvin 1985; Crystal 1992, 1997; Jeffries 1998; Зубрицкая 2002.

**Iconic** /aɪ'kɒnɪk/ The term refers to the signals whose physical form corresponds to features of the entities to which they refer (as in onomatopoeia, e.g. *cuckoo*).

*Further reading:* Wescott 1980; Tsur 1992; Crystal 1997; Jeffries 1998; Magnus 1999, 2001; Whissel 1999a, 1999b.

**Iconicity** /aɪkɒ'nɪsɪti/ The term refers to a natural resemblance, or correspondence, or analogy between the form of a sign ('the signifier', be it a letter or sound, a word, a structure of words, or even the absence of a sign) and the object, or concept ('the signified') it refers to in the real world or rather in our perception of the world. The similarity between sign and object as well as the meaning it conveys may be due to common features inherent in both: direct inspection of the iconic sign enables one to apprehend true information about its object. Such a similarity between the signifier and the signified is known as '*imagic*' *iconicity* (as in a portrait or in onomatopoeia, e.g. *cuckoo*) and the sign is called an 'iconic image.' The analogy or similarity between the signifier and the signified may be more abstract when it consists of a certain plurality of signs. In this case we deal with the so-called *diagrammatic iconicity* that is based on a relationship between signs that mirrors a similar relation between objects or actions. Both imagic and diagrammatic iconicity are not clean-cut categories but form a continuum on which the iconic instances arise from almost perfect mirroring (i.e. a semiotic relationship that is independent of any individual

language) to a relationship that becomes more and more suggestive and also more and more language-dependent. In linguistic literature on the subject one can come across the terms “*primary diagrammatic iconicity*” (where there is still some language independent (semiotic) relation present) and “*second degree diagrammatic iconicity*” (where the semiotic relation has become marginal and it is the linguistic relation between the forms used that suggests a similar relation between the concepts it refers to). The second-degree iconicity type plays a significant role in folk etymology, word formation, sound-symbolism, and it is used mostly in poetry to produce a greater effect.

The following iconic principles are distinguished in literature: (1) *quantity principle*: formal complexity corresponds to conceptual complexity; the use of quantity of phonetic material to iconically mark increased quality or quantity can be noted in the lengthening of words to indicate a greater degree as in /lɒŋŋŋ/. It is also common to use reduplication to iconically mark increase. E.Sapir noted that this process is generally employed, with self-evident symbolism, to indicate such concepts as distribution, plurality, repetition, customary activity, increase of size, added intensity, continuance, and the like; (2) *proximity principle*: conceptual distance tends to match with linguistic distance; (3) *sequential order principle*: the sequential order of events described is mirrored in the speech chain. The mentioned principles may be regarded as natural tendencies in language and are also a part of an individual’s cognitive and biological structure.

Linguistic research has shown that iconicity operates at every language level (phonology, morphology, syntax) and in practically every known language. Recent literary criticism has confirmed that iconicity is also pervasive in the literary text, from its prosody and rhyme, its lineation, stanzaic ordering, its textual and narrative structure to its typographic layout on the page.

It is also important to realize that the perception of iconicity in language and literary texts is semantically motivated. Hence, the interpretative process must always move from meaning to form and never the other way round. Thus, the perception of iconic features in language and literature depends on an interpreter who is capable of connecting meaning with its formal expression.

In functional and cognitive linguistics, as well as in semiotics, iconicity is the conceived similarity or analogy between a form of a sign and its meaning, as opposed to arbitrariness.

Onomatopoeia may be seen as a kind of iconicity, though even onomatopoeic sounds have a large degree of arbitrariness. (See **Onomatopoeia**)

*Further reading:* Wescott 1980; Woodworth 1991; Tsur 1992; Sonneson 1998, 1998a; Whissel 1999a, 1999b; Magnus 1999, 2001; Журавлев 1974, 1981; Воронин 1982; 1990; Сепир 2002.

**Idiolect** /'ɪdiəlekt/ The term refers to the individual peculiarities of articulating sounds, as a result of specific shapes and forms of the speaker's speech organs and of his/her articulatory habits.

*Further reading:* Laver 1995; Mills 1995; Yule 2009; Борисова, Метлюк 1980; Селіванова 2006.

**Idiolectal** /,ɪdiə'lektəl/ A term used to refer to the variation that embraces the individual peculiarities of articulating sounds, caused by the shape and form of the speaker's speech organs and by his/her articulatory habits. Idiolectal variation may cause a lot of difficulties in communication. At the same time it enables people to identify the speech of definite individuals.

**Idiom** /'ɪdiəm/ A term used in intonology to refer to the intonation pattern which functions as a single unit of certain lexemes and corresponding tune, whose stable meaning cannot be worked out from separate words or sections of the intonation contour irrespective of the situation it is used in. The intonation structure of English limericks is regarded as an example of the intonational idiom.

*Further reading:* Bolinger 1981; Cruttenden 1995; Логвин 1989.

**Idiophone** /'ɪdiəfəʊn/ The term is used to denote a speech sound pronounced by a single speaker (idiolect) in place of the same sound pronounced by other speakers in the same phonetic context as allophones of the same phoneme. (See **Diaphone**, **Idiolect**, **Idiolectal**)

**Imitation** /,ɪmɪ'teɪʃən/ The term is used in phonetics to refer to the process of copying someone else's intonation, or sounds, or voice quality, or someone's accent, etc., used in teaching pronunciation.

*Further reading:* Jones 1969.

**Implication** /,ɪmplɪ'keɪʃən/ The term is used in phonetics to refer to a suggestion in spoken language that is not pronounced directly but that people are expected to understand with the help of intonation and paralinguistic features.

**Implicature** /ɪm'plɪkətʃə/ The term is used to refer to the use of conversational maxims to imply meaning during conversations. In intonology implicatures, or implications are studied by phoneticians to establish the

sets of intonational means facilitating the expression of implicatures meaning, as well as their perception and interpretation.

*Further reading:* Grice 1981; Crystal 1990; Jeffries 1998; Golluscio 2000; Yule 2009.

**Implosive** /ɪmˈpləʊsɪv/ A term refers to the stops produced with an ingressive glottalic airstream mechanism, in the articulation of which the downward moving larynx is not usually completely closed. Implosives are common for America Indian and African languages. (See **Ejective, Ingressive**)

*Further reading:* Ladefoged 1975; Crystal 1997; Laver 1995.

**Informant** /ɪnˈfɔːmənt/ The term used in phonetics to refer to a person, usually a native speaker, acting as a source of information for phonetic analysis of a definite language. Using native speakers as informants is needed to more objective methods of enquiry. Informants' judgments are very important when the phonetic analysis is made by a non-native phonetician or linguist. At the same time while selecting informants it is important to take into account such things as the informant's age, sex, social background, the informant's personal qualities, his/her psychological type, the level of speech formality, etc. since these factors influence the results of the experiment. (See **Native-speaker**)

*Further reading:* Crystal 1992, 1997.

**Information** /,ɪnfəˈmeɪʃən/ The term used in phonetics to refer to the facts or knowledge obtained by a phonetician from the analysis, study or investigation of a definite phonetic phenomenon.

**Ingressive** /ɪnˈɡresɪv/ air. The term refers to the sounds produced while the airstream is flowing inwards to the lungs (so-called pulmonic ingressive air). This process occurs when a speaker is trying to talk while laughing, crying, or when out of breath, or while under his/her breath or counting rapidly. Ingressive speech is of poor quality, muffled, croaky, and unpleasant to listen to.

*Further reading:* Ladefoged 1975; Laver 1995; Crystal 1997.

**Initially strong** /ɪˈnɪʃ<sup>ə</sup>li ˈstrɒŋ/ The term refers to the consonants in the articulation of which the beginning is stronger while the end is weaker. Such consonants occur at the end of a closed syllable. (See **Arc of loudness theory, Muscular tension theory**)

*Further reading:* Vassilyev 1970; Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Laver 1995; Топсыев 1975; Борисова,

Метлюк 1980; Плоткин 1981; Потапова 1986; Кочерган 2000; Сепир 2002.

**Initiator** /ɪˈnɪʃieɪtə/ The term refers to the organs of speech that serve as the source of air movement as, for instance, the lungs.

*Further reading:* Crystal 1997.

**Instrumental phonetics** /ɪˌstrəˈment<sup>ə</sup>l fəˈnetɪks (/fəʊˈnetɪks)/, or *laboratory phonetics*. The term used to refer to the branch of phonetics aimed at the analysis of speech by means of different instruments. It attempts to characterize speech in terms of measurements and numbers, rather than by relying on listeners' impressions. This field of phonetics can be divided into *acoustic* (the study of the vibration in the air caused by speech sounds) or *articulatory* (the study of the movements of the articulators which produce speech sounds). Many different instruments have been devised for the study of speech sounds, for instance, *spectrograph* (spectrography is the best known technique for acoustic analysis, in which a computer produces a "picture" of speech sounds; such computer systems also carry out the analysis of fundamental frequency for producing "pitch displays"), *radiography* (X-rays) used for the analysis of articulatory activity; there are many instrumental techniques in use as well as for examining activity inside the vocal tract, for instance, *laryngoscope* (for inspecting the inside of the larynx), *palatograph* (for recording patterns of contact between tongue and palate), *glottograph* (for studying the vibration of the vocal folds) and many others. (See **Experimental phonetics**)

*Further reading:* Lass 1976; Roach 1990; Crystal 1997; Ohala 2001; Ladefoged 2003.

**Intensification** /ɪnˌtensɪfɪˈkeɪʃən/ The term used in phonetics to refer to the process of highlighting or giving emphasis to a word, an utterance or an idea with the help of phonetic means. The meaning of any linguistic unit is intensified through all components of intonation: speech melody (i.e. through different pitch patterns, range contrasts, rate of tone changes, etc.); emphatic stress and more energetic articulation, contrasts of rhythm, loudness, tempo and pausation; modifications of voice quality as well as their interplay with the units of phonetic segmental level.

*Further reading:* Crystal 1969; Kingdon 1966; O'Connor 1984; Туранский 1987; Антипова 1979; Алексієвєць 2002; Теоретична 2003.

**Intensity** /ɪnˈtensəti/ The term is used to refer to the amount of energy being transmitted through the air at a particular point, say at the air-drum or at a

microphone within the range of a sound. Intensity is a physical measurement, or a sound physical property and is not to be directly equated with loudness; loudness is a perceptual matter, a matter of hearing and judging what we hear. But there is a close relationship between the physical dimension of intensity and the perceptual dimension of loudness. Intensity is the physical correlate of loudness. The intensity of a sound depends both on the amplitude of the sound wave and on its frequency. Intensity is measured in decibels (dB). Changes in intensity are associated with stress in those languages whose stress is dynamic. (See **Amplitude**)

*Further reading:* Ladefoged 1975; O'Connor 1984; Roach 1990; Laver 1995; Crystal 1997; Николаева 2004.

**Interdental** /,ɪntə'dent<sup>ə</sup>l/ The term used to refer to the consonants in the production of which the tip of the tongue is protruded between the teeth (*interdental* articulation). It is common to teach this articulation for /θ/ and /ð/ to learners of English who do not have such sounds in their native language.

**Interference** /,ɪntə'fɪərəns/ The term refers in phonetics to the use of some pronunciation rules from the native language when speaking a second/foreign language. Interference is the manifestation of bilingualism. It takes place on all language levels (phonetic, grammatical and lexical). On the phonetic level there are two types of interference: phonemic and prosodic. Prosodic interference is more essential with regard to intelligibility than phonemic interference. Of all kinds of interference prosodic interference is the most stable and widespread. (See **Bilingualism**)

*Further reading:* Jones 1969; Weinreich 1968; Laver 1996; Wells 2000a; Romaine 2003; Yule 2009; Торсуев 1969; Дубовский и др. 1979; Метлюк 1986; Багмут 1991; Сепир 2002; Селіванова 2006; Щерба 2008; Валігура 2008.

**Intermediate** /,ɪntə'mi:diət/ A term used to refer to the degree of assimilation intermediate between complete and partial, it means that the assimilated consonant changes into a different sound, but does not coincide with the assimilating consonant, e.g. in the word *gooseberry* /'guzbəri/ the consonant /s/ in *goose* /gu:s/ is replaced by /z/ under the influence of /b/; in the word *Congress* /'kɒŋɡres/ the consonant /n/ is replaced by /ŋ/ under the influence of /g/. (See **Assimilation**)

**International Phonetic Alphabet** /,ɪntə'næʃ<sup>n</sup>əl fə'netɪk 'ælfəbet/ (IPA) A term refers to a set of symbols for every speech sound type which is capable of functioning in a phonological opposition in a language. These

symbols, or phonetic alphabet, are provided by the International Phonetic Association (IPA) and are revised from time to time to implement new discoveries and changes in phonetic theory.

**International Phonetic Association** /<sub>1</sub>ɪntə'næʃ<sup>ə</sup>nəl fə'netɪk ə,səʊsi'eɪʃ<sup>ə</sup>n/ (IPA)

A term refers to the Association founded in France in 1886 by Paul Passy as a forum for teachers who were inspired by using phonetics to improve the teaching of the spoken language to foreign learners and wished to popularize their methods. The Association laid the foundations for the modern science of phonetics. The Association is still a major international learned society; it has its own journal (the Association's Journal), which has been in publication since the foundation of the Association. From time to time the Association holds official meetings. Since its beginning, the Association has taken the responsibility for maintaining a standard set of phonetic symbols to be used in practical phonetics, presented in the form of a chart.

*Further reading:* Laver 1995; Clark et al 2007; Yule 2009.

**Interpretation** /ɪn,tɜ:pri'teɪʃ<sup>ə</sup>n/ A term used in phonetics to refer to the process

of (1) understanding and explaining the meaning of an utterance or situation conveyed with the help of phonetic means of segmental and suprasegmental levels; (2) clarifying and elucidating the results obtained by a researcher at different levels of experimental investigation of sound phenomena.

**Intervocalic** /<sub>1</sub>ɪntəvəʊ'kæli:k/ The term used to refer to the position of a

voiceless consonant which occurs between either two vowels (like in *music* /'mju:zɪk/ where the consonant /s/ is vocalized under the influence of the vowels /u:/ and /ɪ/) or between a vowel and a voiced consonant (as in *actualized* /'æktʃʊəlaɪzd/ where the consonant /s/ is vocalised under the influence of the vowel /aɪ/ and a voiced consonant /d/).

**Intervocalic voicing** /<sub>1</sub>ɪntəvəʊ'kæli:k 'vɔɪsɪŋ/ A term refers to the process of

voicing voiceless sounds in an intervocalic position. Such a process is also called *lenition process*, where *voiceless* sounds become *voiced* between vowels.

**Intonation** /<sub>1</sub>ɪntə'neɪʃ<sup>ə</sup>n/ A term used to refer to the complex unity of speech

melody, sentence stress, rhythm, tempo, pausation, loudness and voice timbre, which enables the speaker to express his thoughts, emotions and attitudes towards the content of the utterance and the hearer. On the

*acoustic level* intonation is regarded as a combination of varying fundamental *frequency*, *intensity* and *duration*. Speech melody is primarily related with fundamental frequency, tempo – with duration. But there is no one-to-one relation between any of the acoustic parameters and such components of intonation as stress and rhythm. The definition of intonation given above is called *broad*. There is also the so-called *narrow* definition, which reduces intonation to the variation of the pitch of the voice, i.e. to only one component – speech melody. The unit of intonation within which all its components are actualized is called the *intonation group*. The intonation group is a meaningful unit. The structure of any intonation group depends on the number of rhythmic groups in it. Maximally, it contains the *prehead* (unstressed syllables preceding the first stressed one), the *head* (or *scale*, or *body* – the first stressed syllable and the following stressed and unstressed syllables up to the last stressed syllable), the *nucleus* (the last stressed syllable on which the tone changes its direction) and the *tail* (the unstressed and partially stressed syllables following the nucleus). The *nucleus* is an obligatory component of the intonation group and the most important functional element, which together with the tail forms the *terminal tone*. The terminal tone fulfills delimitative and distinctive functions as well as conveys emotional and modal meanings of an utterance. The prehead, the head and the tail are optional, or facultative elements of an intonation contour, which help express the utterance emotional and modal meanings.

Intonation performs several functions: *the constitutive function* (intonation forms utterances as communicative units); *the distinctive function* (intonation differentiates the communicative types of utterances, their emotional and modal meanings, the location of the semantic nuclei of utterances and other semantically important words, syntactical types of sentences and syntactical relations in them, phonetic styles of speech, etc.); *the identificatory function* (intonation provides a basis for the hearer's identification of the communicative and modal type of an utterance, its semantic and syntactical structure with the situation of the discourse). Intonation is often said to have an *attitudinal function*. It means that intonation is used to indicate to the hearer a particular attitude on the part of the speaker (e.g. friendly, doubtful, enthusiastic). *The pragmatic function* of intonation results in the speaker's influence upon the listener's reactions and actions, verbal (and non-verbal) behavior, thoughts, emotions, beliefs, etc. *The grammatical function* manifests itself in a perceived difference in grammatical meaning depending on the pitch movement, as in the following example: *She didn't \go because of her timetable* (meaning "she did go, but it was not because of her timetable") and *She didn't go because of her \timetable* (meaning "she didn't go, the

reason being her timetable”). *The discourse function* involves such aspects as indicating whether the particular thing being said constitutes new information or old, the regulation of turn-taking in conversation, the establishment of dominance and the elicitation of co-operative responses.

In its broader and more popular sense intonation is used to cover much the same field as “prosody”, where variations in such things as voice quality, tempo and loudness are included. (See **Prosody**)

*Further reading:* Armstrong, Ward 1926; Kingdon 1966; Halliday 1967; Crystal 1969; Cruttenden 1970, 1995; Uldall 1972; Brazil et al. 1980; Egan 1980; Bolinger 1989; Brown 1990; Ladd 1990, 1997; Pierrehumbert, Hirschberg 1990; Tench 1991; Pierrehumbert 1993; Selting 1994; Wennerstrom 1994, 2001; Laver 1995; Cutler et al. 1997; Дубовский 1978; Торсуева 1979; Светозарова 1982; Королева 1989; Черемисина 1989; Сепир 2002; Кондильяк 2006.

**Intonation contour** /,ɪntə'neɪʃən 'kɒntʊə/ (See **Contour, Tune**)

**Intonation group** /,ɪntə'neɪʃən 'gru:p/, or *tone unit*, or *tone group*, or *breath group*, or *intonational phrase*, or *rhythmic phrase*. The term refers to the meaningful unit of intonation within which all its components are actualized. One of the functions of intonation groups is to bundle up the stream of speech into information chunks. Besides they serve to relate the segmental, syllabic and rhythmic material to the higher-order grammatical level, and to the pragmatic level of interaction between the speaker and the listener. The intonation group contains some *obligatory* formal constituents. These are the *nuclear tone*, which occurs on the semantically most important word, and the *terminal tone*, i.e. pitch variations on the nucleus and the *tail* if any. The structure of the intonation group depends on the number of rhythmic groups in it. Maximally, it contains the *prehead* (unstressed syllables preceding the first stressed one), the *head* (or *scale*, or *body* – the first stressed syllable and the following stressed and unstressed syllables up to the last stressed syllable), the *nucleus* (the last stressed syllable marked by the change of the tone direction) and the *tail* (the unstressed and partially stressed syllables following the nucleus). The prehead, head (scale or body) and the tail are *optional* or *facultative* elements of the intonation group. (See **Breath-group, Intonation, Intonational Phrase, Sense-group, Syntagm, Tone group**)

*Further reading:* Kingdon 1966; Christophersen 1970; O'Connor 1984; Crystal 1969; Gimson 1980; Brown 1988; Laver 1995.

**Intonation pattern** /,ɪntə'neɪʃən ˌpætən/ The term refers to a regularly repeated direction of the tone on stressed and unstressed syllables within a

certain intonation contour which helps convey a definite meaning of an utterance.

**Intonation style** /<sub>1</sub>ɪntə'neɪʃ<sup>ə</sup>n 'stɑɪl/ A term used to refer to a system of interrelated intonational means which is used in a social sphere and serves a definite aim of communication. The choice of an intonational style is determined by the purpose of communication as well as by a number of other extralinguistic and social factors. There are the following main intonational styles mentioned in the experimental phonetic study: *informational* (or formal), *academic* (or scientific), *publicistic* (or oratorical), *declamatory* (artistic) and *conversational* (familiar, informal). The intonational markers are restricted to certain kinds of situational contexts.

*Further reading:* Jones 1969; Crystal, Davy 1969; Crystal 1997; Теоретическая... 1991; Щерба 1915; Аванесов 1972; Борисова, Метлюк 1980; Теоретична 2003.

**Intonational contrast** /<sub>1</sub>ɪntə'neɪʃ<sup>ə</sup>nəl 'kɒntrɑːst/ The term is used in phonetics to refer to the linguistically relevant differences in the prosodic structure of some utterances in conveying contrasted meanings. Prosodic contrasts are generally actualized by the following components of intonation: pitch, tone direction and its form, rate, range, interval, rhythm, utterance stress, tempo, timber, etc. E.g.: *He (James) <sup>1</sup>does his <sup>1</sup>homework in <sup>1</sup>five minutes <sup>2</sup>and <sup>1</sup>then <sup>1</sup>rushes <sup>1</sup>out to <sup>1</sup>play <sup>1</sup>tennis* ||. In this utterance James' attitude towards studying and his hobby is conveyed with the help of the following leading contrasted parameters: the descending vs. ascending prenuclear tones, the Low Rising vs. the High Falling nuclear tones.

*Further reading:* Brown, Yule 1988; Kalita et al. 1996; Дубовский 1983; Петрянкина 1988.

**Intonational phrase** /<sub>1</sub>ɪntə'neɪʃ<sup>ə</sup>nəl 'freɪz/ Another term for *intonation group*. (See **Intonation group**).

**Intonatopic** /<sub>1</sub>ɪntənə'tɒpɪk/ A term used to refer to the topological organization of auditory information related to the production and perception of intonation in speech.

*Further reading:* Cook 2002.

**Intonology** /<sub>1</sub>ɪntə'nɒlədʒɪ/ The term refers to the part of phonology or prosodemics, which establishes the system of prosodemes and discovers those prosodic features that have a differential value in a language.

*Further reading:* Ladd 1997.

**Intrinsic** /ɪn'trɪnzɪk/ vocal features. The term refers to those vocal features which, according to J.Laver, derive solely from the invariant, absolutely uncontrollable physical foundation of the speaker's voice apparatus. They contribute only to voice quality, as well as indexical information about physical aspects of the speaker – sex, age, health and the like. (See **Extrinsic features**)

*Further reading:* Laver 1996.

**Intrusive /r/** /ɪn'truːsɪv/ The term refers to the allophone of the English phoneme /r/ in the production of which the tip of the tongue vibrates. This allophone usually occurs when r-sound is at the juncture of two words, one ending in a vowel (i.e. a vowel being in a *coda* position) and the other beginning with a vowel (the so-called *onset* vowel), as in *the idea of it* /ðɪ aɪ'dɪə əv ɪt/, *I saw a dog* /aɪ 'sɔːrə 'dɒg/, *India and Asia* /ɪndiə ənd 'eɪʒə/, etc.

**Invariant** /ɪn'vɛəriənt/ In phonetics the term refers to the abstract element of language system, for instance, a structural intonation pattern of language, contrasted with its definite realizations in spoken language, or variants which are structural intonation patterns of speech.

**IPA** /'aɪ 'piː 'eɪ/ The abbreviation stands for the (1) International Phonetic Alphabet, (2) International Phonetic Association (See **International Phonetic Alphabet, International Phonetic Association**).

**Isochrony** /aɪ'sɒkrəni/ A term refers to the property of being equally spaced out in time, and is usually used in connection with the description of the rhythm of languages. English rhythm is said to exhibit isochrony because it is believed that it tends to preserve equal intervals of time between stressed syllables irrespective of the number of unstressed ones that come between them. This kind of timing is also known as *stress-timed rhythm* and is based on the notion of the *foot*. In languages characterized as stress-timed there is a tendency for unstressed syllables to become weak, and to contain short, centralized vowels. The notion of isochrony does not necessarily have to be restricted to the intervals between stressed syllables. It is possible to claim that some languages tend to preserve a constant quantity for all syllables in an utterance: this results in a *syllable-timed* rhythm. French, Spanish and Japanese belong to this type of rhythm. In syllable-timed languages unstressed vowels usually retain the quality and quantity found in their stressed counterparts. (See **Foot, Stress-timed**)

*Further reading:* Abercrombie 1965, 1967; Laver 1995; Crystal 1997.

**Isolated** /'aɪsəleɪtɪd/ A term used in phonetics to refer to a phoneme or an utterance pronounced separately from any word or context for the sake of practice or analysis.

## J

**Jaw** /dʒɔ:/ In phonetics the term is used in the course of teaching pronunciation and refers to one of the two bones (upper and lower jaws) that one's teeth are in. (See **Organs of Speech**)

**Juncture** /'dʒʌŋktʃə/ A term used to refer to distinctive differences in the position of the syllabic boundary at the junction of words or morphemes, accompanied by differences in length, pitch, rhythm etc. ( *juncture phoneme* – the term has been suggested by the American descriptivists). There are two types of juncture usually distinguished: (1) *open juncture* occurs between sounds which belong to the adjacent syllables, it is marked by /+/, e.g. /blæk + taɪ/, /naɪt + reɪt/; (2) *close juncture* occurs between sounds closely connected with each other within one syllable by a single articulatory effort, e.g. in the word *nitrate* /naɪtreɪt/ the sounds /t/ and /r/ are more closely linked than in *night-rate* /naɪt + reɪt/. Phonetic differences in *cart rack* with *car track* are clearly observable: the vowel in *cart* is shorter in length (being shortened by the voiceless /t/ that follows it) while the same phoneme in *car* is longer, and the /r/ in *track* is devoiced (because it closely follows the voiceless /t/) while /r/ in *rack* is voiced. Close juncture is not marked. When mispronounced the position of juncture (or word boundary) can cause a perceptual difference and therefore lead to misunderstanding, that's why to avoid a strong foreign accent in English speech it is recommended that learners of English should practise making and recognizing such differences, using pairs like *pea stalks – peace talks, great ape – grey tape, an aim – a name, I scream – ice-cream, I saw the meat – I saw them eat, etc.* (See **Close juncture, Open juncture**)

*Further reading:* Vassilyev 1970; Roach 1990; Борисова, Метлюк 1980.

## К

**Key** /ki:/, or *pitch level*. A term generally used in the description of speech to indicate a rough location within the pitch range, while in some investigations of intonation it is used to specify the starting and ending points of pitch patterns whose range extends outside the most commonly used part of the pitch range, whereas in music *key* refers to a specific configuration of notes based on one particular note within the octave. (See **Pitch**)

**Kinakeme** /'kaɪnəkɪ:m/ The term used to refer to the primary phonological unit which linguistically organizes the speaker's neural and muscle activity as well as the corresponding neural and muscle activity of the listener.  
*Further reading:* Plotkin 1978; ПЛОТКИН 1981, 1993; Васько 2006.

**Kinesics** /kaɪ'ni:sɪks/ The term refers to a set of gestures, mimicry, eye contact, body movements, etc. used as additional paralinguistic means of communication.  
*Further reading:* Kendon 2001; Крейдлин 2002.

**Kinetic** /kaɪ'netɪk/ *tone*, or *moving tone*. The term used to refer to the change in the tone direction within the intonation group. Kinetic (or moving) tones may take the form of a rise in pitch, a fall, or a combination of rising and falling tones; they are used to specify the utterance communicative type, to signal about the end of an intonation group, to give expression to an utterance and to intensify the meaning of one or more words in the intonation group. These tones may be differentiated by pitch (high, mid, low), range (wide, mid, narrow), etc. They can also be simple and compound. An intonation group may contain more than one kinetic tone but one of them (which usually occurs on the last fully stressed syllable) is used to form the tonetic nucleus of an intonation group and is called its *Nuclear Tone*. There are five kinetic tones in English (Falling, Rising, Rising-Falling, Falling-Rising, Rising-Falling-Rising), which are realized in speech by their allotones, for example, the Falling Tone is actualized in speech by its High or Low Falling allotones. Each tone as well as its allotone has a definite diacritic mark. For example, the markers /<sub>l</sub>, /<sub>h</sub> stand for the Low and High Falling (F) tones correspondingly, /<sub>h</sub> / represents the

Rising-Falling (R-F) tone, etc. (See the **Table of stress-tone marks**)  
*Further reading:* Kingdon 19..

**Kinesthetic (kinaesthetic)** /ˌkɪniːsˈθetɪk/ The term refers to the feedback received from the movement or position of the muscles, organs, etc. in the process of speech production. The ability to feel the position of the tongue in the mouth, for instance, is an important factor in distinct pronunciation. If kinesthetic feedback is interfered with the loss of, for example, tongue sensation, speech becomes indistinct or slurred. Thus the learner when studying a foreign language sound system must be aware of the work of his/her articulators. That is why practical phonetic training aims at raising the learner's sensitivity to this feedback. The other kind of kinesthetic feedback used to monitor our communication is *auditory*: the learner's speech will not sound normal if he/she is prevented from listening to the process of his/her producing sounds.

**Kymograph** /ˈkɪmɒgrɑːf/ The term used to refer to a device once used for recording information about the movements of speech organs. In 1876 Abbé J.-P. Rousselot together with Charles Rosapelly pioneered and refined the use of the kymograph for studying speech articulations. That gave rise to the instrumental study of the factors causing the sound changes.

# L

**Labial** /'leɪbiəl/ A term refers to the articulations in which one or both of the lips are involved. It is usually necessary to be more specific: if a consonant is made with both lips as in /p, b, m, w/ it is called *bilabial*; if another articulator is brought into contact or near contact with the lips the term *labiodental* (lips and teeth as in production of /f, v/) is used. Another use of the lips is to produce the effect of lip-rounding, and this is called *labialisation*.

**Labialisation** /,leɪbiələɪ'zeɪʃən/ A term used to refer to a secondary articulation in which the lip rounding is added to a sound. The term is more often used in relation to consonants, since the term *rounded* tends to be used for vowels produced with rounded lips.

**Labiality** /,leɪbi'æləti/ A term is used in phonetics to refer to the phenomenon when speech sounds, in the production of which lips are the active organ of speech. Labial consonants such as /p/, /b/, /m/ and /w/, as well as vowels with lip rounding, such as /u:/ and /ɔ:/, are said to possess labiality.

**Labio-dental** /,leɪbiəʊ 'dentəl/ A term refers to the sounds made with the lower lip and upper front teeth (the so-called lip-to-teeth contact), e.g. /f, v/.

**Labio-velar** /,leɪbiəʊ 'vi:lə/ The term used to refer to a speech sound produced at the velum with simultaneous lip rounding.

**Lamino-postalveolar** // The term used to refer to a speech sound produced with the help of the tongue blade and postalveolar region as the English /ʃ/ in *ship*, at the same time it may be regarded both as apico-postalveolar or lamino-postalveolar depending on the speaker.

**Language** /'læŋgwɪdʒ/ A term used to refer to the system of human communication by means of words; it is viewed as a medium of communication, which permits ideas to be conveyed among members of a social community. Language exists in two speech forms: oral and written. Both forms of speech have a material substance: *phonic* in oral speech, or

the sound substance, and *graphic* in written speech. The sound substance gives shape to a spoken message in communication as well as forms units of a certain language phonetic system, which consists of two levels: *segmental* (sounds: vowels and consonants that form the vocalic and consonantal subsystems) and *suprasegmental* (syllables, accentual (rhythmic) units, intonation groups, utterances, that form the subsystems of pitch, stress, tempo, pauses). Both levels (so-called *phonetic level* of a language) serve to form and differentiate units of other subsystems of language (lexical and grammatical). *Grammatical level* defines the rules governing the modifications of words and their combination into sentences. *Lexical level* deals with the vocabulary, the origin of words and their meaning, and with word-building. These three language levels are very closely linked since they constitute one indivisible whole. Language performs in speech several functions, *communicative* being the main one. Besides, some linguists single out the following *functions* of language: *referential* (to carry information), *emotive* (to communicate the addresser's inner states and emotions), *expressive* (to supply information about the speaker, his/her feelings, preferences, prejudices, past experience, etc.), *connotative* (to affect the addressee's behavior), *social* (to establish and maintain social relation between people), *phatic* (to open the channel of communication or to check it up whether it works either for practical reasons or for social ones) and others. In the process of communication all these functions overlap at times.

*Further reading:* Greenberg 1974; Lyons 1981; Bloomfield 1984; Coates 1986; Chaika 1989; Crystal 1997; Simpson 2001*b*; Бодуен де Куртене 1963; Сосюр 1998; Сепир 2002; Кондильяк 2006.

**Language norm** /'læŋgwɪdʒ 'nɔ:m/ The term refers to a set of actual realizations of the language system collectively accepted by educated people as correct and preferable.

*Further reading:* Скребнев 1980; Фрумкина 2001.

**Laryngeal** /lə'rɪndʒəl/, or *laryngal* /lə'rɪŋgəl/. The term used to refer to a speech sound produced in the larynx. For instance, aspirated, voiceless and voiced sounds are said to have laryngeal properties.

**Larynx** /'læɪŋks/ or *the voice box*. The part of the vocal tract between the uvula and the pharynx. The larynx is a major component of our speech-producing organs. There is a complex set of muscles inside the larynx that can open and close the vocal folds (cords) as well as change their length and tension.

**Lateral** /'læt<sup>ə</sup>rəl/ A term used to refer to a consonant in the production of which there is an obstruction to the passage of air in the centre (mid-line) of the airpassage and the air flows to the side of the obstruction. In English the /l/ phoneme is lateral both in its “clear” and “dark” allophones: the blade of the tongue is in contact with the alveolar ridge as for /t/, /d/ or /n/ but the rims of the tongue are lowered to allow the passage of air to escape. When an alveolar plosive precedes a lateral consonant in English it is usual for it to be laterally released or exploded: this means that to go from /t/ or /d/ to /l/ we simply lower the rims of the tongue. These sounds may be continuant and non-fricative, and according to A.C.Gimson vowel-like, e.g. “clear”/l/ and “dark” /ɫ/. (See **Consonant, Continuant**)  
*Further reading:* Christophersen 1970; Gimson 1980; O’Connor 1980; Jassem 1983; Roach 1990; Laver 1995; Crystal 1997; Ladefoged 2003.

**Lateral consonant** /'læt<sup>ə</sup>rəl 'kɒnsənənt/ The term refers to a consonant in the production of which the center of the mouth is blocked by the tongue-tip and the air passes out at the sides of the mouth. There is only one lateral consonant in English – the sound /l/. (See **Consonant, Continuant, Lateral**)  
*Further reading:* Christophersen 1970; Gimson 1980; O’Connor 1980; Jassem 1983; Roach 1990; Laver 1995; Crystal 1997; Ladefoged 2003.

**Lateral explosion** /'læt<sup>ə</sup>rəl ɪk<sup>l</sup>'spləʊz<sup>ə</sup>n/ The term refers to the release of a plosive (p, t, k) when followed by the lateral sound /l/, by lowering only the sides of the tongue, causing the compressed air to burst out over the sides as in *little* /'lɪtl/, *place* /pleɪs/, *close* /kloʊs/.  
*Further reading:* Christophersen 1970; Gimson 1980; O’Connor 1980; Roach 1990; Laver 1995; Crystal 1997; Ladefoged 2003.

**Lax** /læks/ vowel. A term used to refer to a sound produced with relatively little articulatory energy. Since there is no established standard for measuring articulatory energy this concept only has meaning if it is used relative to some other sounds that are articulated with a comparatively greater amount of energy (the term *tense* is used for this). The short vowels are classed as lax, while what are usually referred to as the long vowels and the diphthongs are tense. (Compare the terms used of consonants as equivalent to *fortis* (tense) and *lenis* (lax), though this is not commonly done in present-day description). (See **Consonant, Fortis, Lenis, Tense**)  
*Further reading:* Christophersen 1970; Ladefoged 1975; Laver 1995.

**Lect** /lekt/ The term used to refer to the accent without specific implications for its sociological or idiolectal status. (See **Dialect, Idiolect, Sociolect**)  
*Further reading:* Laver 1995; Honey 1991; Pennington 1996; Yule 2005; Gimson 2001.

**Length** /leŋθ/ The term is used in phonetics in the process of auditory analysis of the speech flow and refers to the physical subjectively measurable amount of time that a sound, a rhythmic group, an intonation group or an utterance lasts. Length is important in many ways in speech: in English and most other languages, stressed syllables tend to be longer than unstressed. Some languages, English in particular, have phonemic differences between long (*tense*, or *free*) and short (*lax*, or *checked*) vowels (the so-called *phonemic length*) as well as allophonic differences between positional variants of a definite vowel phoneme (the so-called *allophonic length*). (See **Duration**)  
*Further reading:* Ladefoged 1975; O'Connor 1984; Roach 1990; Laver 1995.

**Lengthening** /'leŋθəniŋ/ A term used to refer to a process in which a consonant or vowel is produced with greater length than it used to be. In the historical development of Received Pronunciation, the phoneme sequence /əɪ/ underwent lengthening of the vowel in coda position, as in the words *third* and *fir*, now pronounced with the long vowel [ɜ:]. This kind of lengthening is known as *compensatory lengthening*.  
*Further reading:* Bolinger, Dasher 1982.

**Lenis** /'li:nɪs/ A term used to refer to a weakly articulated sound. The word *lenis* comes from Latin, where it means “smooth, gentle”. The opposite term is *fortis*. In general the term is used for voiced consonants, which are less strongly articulated than voiceless ones. (See **Fortis**)  
*Further reading:* Ladefoged 1975; O'Connor 1984; Laver 1995; *Clark et al* 2007..

**Lenition** /lɪ'niʃən/ The term refers to the state of relaxation of muscular tension during articulation.

**Lenition process** /lɪ'niʃən 'prəʊses/ (See **Intervocalic voicing**)

**Lento** /'lentəʊ/ The term refers to the type of carefully articulated speech pronounced in a slow tempo.

**Level tone** /'lev<sup>ə</sup>l 'təʊn/, or *static tone*. A term used to refer to the tones produced with an unchanging pitch level of the tone movement. Level, or static tones (high, mid, low) are ascribed some sort of meaning to them, usually the utterances which take the level tones are said to be pronounced with some feeling of boredom, hesitation, regret or lack of surprise. (See **Kinetic tone, Nuclear tone**)

*Further reading:* Kingdon 1966; Антипова 1979, 1984.

**Liaison** /li'eɪzən/, or *linking*. The term used to refer to the way the end of one word is joined onto the beginning of the following word (e.g., the linking /r/ or /ŋ/ when they are followed by a vowel like in *there is* /ðeəɪz/, *looking at* /lʊkɪŋæt/. Another aspect of liaison in English is the movement of a single consonant at the end of an unstressed word to the beginning of the next if that is strongly stressed, for example *not at all*, where for many speakers the /t/ of *at* becomes initial and therefore strongly aspirated in the final syllable *all*.

*Further reading:* Chomsky, Halle 2002; Парашук 2005.

**Lingual** /'lɪŋgwəl/ phoneme. The term used to refer to any articulation in which the tongue is involved. (See **Consonant**)

**Linguistic competence** /lɪŋgwɪstɪk 'kɒmpɪtəns/ The term, suggested by N.Chomsky in order to oppose linguistic competence to the knowledge speech realization (or performance), is used in phonetics to refer to the native-speakers' or learners' awareness of the formal patterning of the language with the help of phonetic means. (See **Communicative competence**)

*Further reading:* Laver 1995; Chomsky, Halle 2002; Хомський 2000; Багмут 1991; Валігура 2008.

**Linguistic phonetics** /lɪŋgwɪstɪk fə'netɪks/ (/fəʊ'netɪks/) The term refers to the study of speech sounds from a functional point of view. (See **Phonology**)

*Further reading:* Gleason 1956; Chomsky, Halle 1968; Ladefoged 1975; Sommerstein 1977; Бейм 1986; Ohala 1991; Laver 1995; Giegerich 1995; Lass 1996; Crystal 1997; Ladd 1997; Pierrehumbert 2000; Касевич 1981; Шевельов 2002; Сепир 2002; Зубрицкая 2002; Потапова, Потапов 2006.

**Linguistics** /lɪŋ'gwɪstɪks/ The term refers to the science which studies the system, structure, grammar, phonetics and vocabulary of language in

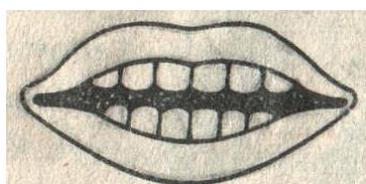
general or of particular languages. Linguistics covers a wide field with different approaches and different areas of investigation. There are different branches of linguistics, such as Applied, Comparative, Contrastive, Diachronic, Descriptive, General, Historical, Theoretical, Traditional, Transformational, Statistical, Structural, Systemic, Synchronic, Text Linguistics, Sociolinguistics, and others. In recent years some new branches of linguistics have developed at the juncture of other disciplines: Anthropological Linguistics, Areal Linguistics or Dialectology, Ecolinguistics, Mathematical Linguistics, Forensic Linguistics, Philosophical Linguistic, Psycholinguistics, Pragmalinguistics, Paralinguistics, Neurolinguistics, Geographical Linguistics, etc.

*Further reading:* Firth 1957; Crystal 1990; Кацнельсон 1986; Сосюр 1998; Калита 2001; Глисон 2008; Сепир 2002.

**Linking** /'lɪŋkɪŋ/ A term used in phonetics to refer to a connecting element, for instance linking /r/ as in /fɑ:ðər ənd mʌðə/ or /ŋ/ as in /lʊkɪŋ æt/ (See **Liaison**)

*Futher reading:* Laver 1995; Chomsky, Halle 2002.

**Lip position** /'lɪp pə'zɪʃən/ A term used in phonetics to refer to the position of lips in the articulation process of definite groups of phonemes; lips are important since they determine the shape of the opening through which the breath passes out of the mouth. There are four main lip positions in the production of English sounds: (a) *spread*, the most typical lip position in the production of English sounds, e.g.: *seed* /si:d/, *meat* /mi:t/, *sit* /sɪt/, *set* /set/, where lips are slightly spread and pinned to the revealed lower and upper teeth; (b) *neutral* (open), i.e. the lips are neither spread nor protruded, though the opening between the teeth is a bit wider than in the spread lip position, e.g.: *frog* /frɒg/; (c) *rounded* (open) as, for instance, in the production of the phoneme /æ/ lips are rounded but they are not protruded, the bulk of the tongue being in its lowest position, e.g.: *cat* /kæt/, *sat* /sæt/, *apple* /'æpəl/, or the bulk of the tongue is at the back of the mouth cavity as in the production of /ɑ:/ though somewhat advanced; (d) *rounded* (close), i.e. the lips are rounded but not protruded, e.g.: *moon* /mu:n/, *look* /lʊk/ (see Fig.).



a)



b)

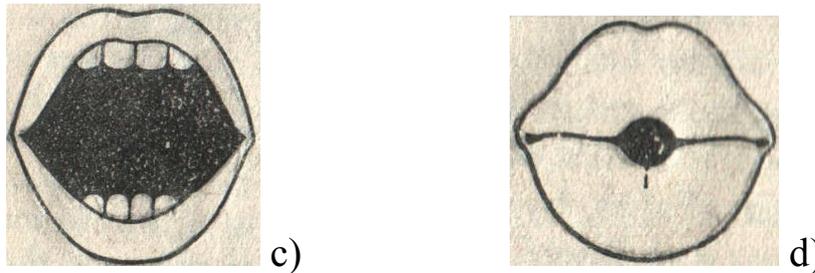


Fig. Four main lip positions in the production of English sounds:  
 a) spread, b) neutral, c) rounded (open), d) rounded (close)

*Further reading:* Jones 1969; Christophersen 1970.

**Lip-rounding** /<sup>l</sup>lɪp raʊndɪŋ/ A term used in phonetics to refer to a secondary articulation in which the lip labialisation is added to a sound, for instance, the English sounds /w/, /ɔ:/, /ɒ/ are pronounced with slightly rounded and protruded lips. The term is more often used in relation to vowels, while the term *labialised* tends to be used for consonants produced with rounded lips. (See **Labialisation**)

**Lip setting** /<sup>l</sup>lɪp setɪŋ/ A term refers to the posture of the speaker's lips that (1) has a profound effect upon the sound of the spoken message and (2) carries very important information about what is said and the speaker's attitude towards what he/she is saying.

*Further reading:* Jones 1969; Christophersen 1970; Brown 1990.

**Lips** /lɪps/ Two soft parts around the mouth where the skin is redder and darker. In phonetics the term is used to refer to the pronunciation of some sounds in the articulation of which lips take part as the main speech organ in their production, e.g. the *bilabial* /p, b, m, w/ or *labio-dental* /f, v/.

**Liquid** /<sup>l</sup>lɪkwɪd/ consonant. The term is used to refer to a consonant in the production of which the tongue tip is raised towards the alveoli blocking one part of the mouth cavity while the airflow escapes through the sides of the mouth as in the articulation of the lateral /l/ and various allophones of the sound /r/. Both are usually voiced *approximants*, i.e. sounds closely similar to vowels. (See **Approximants, Semivowel**)

**Local dialect** /<sup>l</sup>ləʊk<sup>ə</sup>l 'daɪəlekt/ A term used to refer to a variant of the language which is spoken only in one area, with vocabulary, grammar, and pronunciation that are slightly different from other forms of the same language. (See **Cockney, Dialectology, Estuary English**)

*Further reading:* Trudgill 1978, 1983; Trudgill, Hannah 1994; Hughes, Trudgill 1987; Pride 1982; Laver 1995; Parashchuk 2000; Wells 2000; Шахбагова 1982; Парашук 2005.

**London English** /'lʌndən 'ɪŋɡlɪʃ/ The term refers to a variety of English which has its origins in the working-class districts of the East End in the inner city in London.

*Further reading:* Trudgill 1978, 1983; Trudgill, Hannah 1994; Hughes, Trudgill 1987.

**Long** /lɒŋ/ The term used in phonetics to refer to a phoneme that is opposed to the short ones because of its greater duration as, for instance, the phonemes /i:, ɑ:, ɔ:, ɜ:, etc./ which are in contrast with the following short phonemes /ɪ, e, ɒ, ə, etc./

**Loudness** /'laʊdnəs/ A term used to refer to the perceptual dimension primarily related to the intensity, or force, of a perceived sound. Loudness enables a listener to place it on a scale going from soft to loud. It depends on the amplitude of vibrations. Speakers use greater loudness (1) to overcome difficult communication conditions; (2) to give strong emphasis to what they are saying. Loudness conveys a great variety of meaning, for instance increased loudness is usually associated with anger, decreased loudness is used to add conspiratorial meaning to what is said. Loudness is said to play a relatively small role in the stressing of syllables. The range of the loudness perception may vary from 0 dB to 130 dB, regarded as the threshold of audibility; loudness higher than 130 dB is the threshold of pain sensation. The audibility threshold also depends on the pitch of a sound. Modifications of loudness largely depend on the type of information delivered (important/unimportant); the psychological type of a speaker, his/her occupation, age, education, background, locality, means of information delivery, situation, etc. (See **Amplitude, Intensity**)

*Further reading:* Crystal 1997; Ladefoged 1975; Jassem 1983; Brown 1990; Laver 1995; Артемов 1956.

**Low** /ləʊ/ The term is used to refer (1) to low *pitch* (related to low *fundamental frequency*); (2) it is used by some phoneticians as an alternative to *open* as a technical term for describing *vowels* in the production of which the tongue occupies the lowest possible position in the mouth cavity. They are /æ, ɔ:, ɑ:, ɒ/. (See **Fundamental Frequency, Intonation, Vowels**)

**Low mid** /'ləʊ 'mɪd/ Another term for *half-open vowels*. (See **Half-open**)

**Lungs** /lʌŋz/ The term refers to the breathing organs in the chest of man. From the speech point of view, their function is to provide the driving force that

compresses the air used for generating speech sounds. Although lungs hold a considerable amount of air (normally several litres) we use only a small proportion of their capacity when speaking since it is impossible to empty the lungs completely.

# M

**Manner of articulation** /'mænə(r) əv ɑːtɪkju'leɪʃən/ The term refers to the type of obstruction (or constriction) a speech sound makes to the flow of air. There are four kinds of constriction made by the articulators in producing consonants used to provide a further dimension of consonants classification: (1) *total closure* (plosives, nasals, affricates); (2) *intermittent closure* (trilled /r/, flap /d/ as in *ladder*); (3) *partial closure* (lateral /l/); (4) *narrowing* (fricatives). (See **Consonant**)  
*Further reading:* Brown 1990; Crystal 1997; Ladefoged 1975; Yule 2009.

**Margin** /'mɑːdʒɪn/ consonant. The term is used to refer to the sounds that form the boundaries of a syllable, e.g.: *put* /pʊt/, *book* /bʊk/, *come* /kʌm/, etc., where the consonants in initial and final positions, i.e. before and after the syllable forming vowels (in onset and coda positions), form the margins, or boundaries, of syllables, thus being called the marginal sounds. (See **Coda, Onset**)

**Markedness** /'mɑːkɪdnəs/ The term is used to refer to the marked properties of phonological segments and constituents that play an active role in phonological processes as well as the shape of phonological systems and their acquisition. For instance, the unmarked shape of syllables is the shape which contains an onset constituent as in *term* /tɜːm/, where /t/ is the unmarked onset constituent of the syllable. The unmarked onset constituent may contain more than one consonant as in *phrase* /freɪz/, where /fr/ performs the role of unmarked onset constituent consisting of two consonants, or as in *street* /stri:t/, having three consonants in the onset; such onsets are complex, or branching ones. A syllable having an empty onset, as in *ant* /ænt/, is marked in comparison with a syllable which contains a filled onset, as in *tip* /tɪp/. A syllable which contains one or more consonants in the coda are said to be marked with respect to syllables which have no coda consonants as in *say* /seɪ/. The most basic syllable structure in English is CVC, containing an onset consonant and a coda consonant. The notion of markedness was first advanced by the Prague Phonological School. (See **Margin consonants, Coda, Onset**)  
*Further reading:* Трубецкой 2000; Clark et al 2007; Carr 2008.

**Maximal Onset Principle** /'mæksɪm<sup>ə</sup>l 'ɒnsət 'prɪnsəp<sup>əl</sup>/ The term refers to the allowed number of consonants in the onset/coda position in a certain language. (See **Phonotactics**, **Syllable**, **Syllable division**, **Syllabic consonants**, **Phonetic system**)

**Meaning(ful)** /'mi:nɪŋf<sup>əl</sup>/ In phonetics the term is used to refer to the ability of certain segmental and suprasegmental means to take part in the word or utterance meaning creation, or their ability to cause changes in the meaning. Different levels of pitch are used in particular sequences (contours or tunes) to express a wide range of meanings, for example, all languages seem to make use of the difference between a falling and a rising pitch pattern, and this is widely interpreted as expressing a contrast between “stating” and “questioning”. In written language the contrast in meaning is signalled by the use of punctuation marks. In speech, a much wider range of tones is available to express various shades and degrees of emphasis. Another important prosodic feature is loudness used to convey great differences of meaning: the increased volume is usually associated with anger, for instance. Tempo is a third suprasegmental parameter capable of communicating several kinds of meaning. For example, it is possible to speed up or slow down the rate at which syllables, words and sentences are produced to express urgency, deliberation, irritation, greater personal involvement, etc. Variations of rhythm and voice quality are also associated with conveying negativeness/positiveness of meaning.

*Further reading:* Kingdon 1966; Abercrombie 1967; O'Connor 1984; Ohala 1994; Cruttenden 1995; Laver 1996; Brazil 1997; Crystal 1997; Калита 2001, 2003; Cook 2002.

**Melody** /'melədi/, or *speech melody*. A term is used in phonetics to refer to the variations in the pitch of the voice. Acoustically speech melody is the variation of the fundamental frequency, generated by the vibrations of the vocal cords. Speech melody embraces the pitch level, the pitch range, the rate of pitch variations, or the rate of tone movement changes, and the tonal interval. Each of the mentioned above components of speech melody form its own system. For instance, the pitch level is classified as high (<sup>h</sup>*m*), mid (<sub>h</sub>*m*) and low (<sub>h</sub>*m*); the pitch range is differentiated as wide, mid, narrow; the tonal interval is qualified as positive, negative and zero as well as wide, mid, narrow; the rate of tone movement changes can be determined as fast, moderate, slow. The variations in each of the speech melody components are semantically important, e.g. if the rate of the falling tone is fast, the utterance sounds more final, categorical, definite

and businesslike than when the rate of the falling tone is slow. (See **Intonation, Pitch, Pitch range, Tonal interval**)

*Further reading:* Ohala 1983; O'Connor 1984; Brown 1990; Roach 1990; Laver 1995; Crystal 1997; Мурзіна 1972; Борисова, Метлюк 1980.

**Mental lexicon** /<sup>1</sup>ment<sup>ə</sup>l 'leksɪkən/ The term is used to refer to the ability of the mind to contain a vast stock of stored mental representations of sounds, words, intonation patterns linked together in multiple ways. The mental lexicon can be regarded as a network of interconnected representations which vary in the extent to which they resemble each other. (See **Cognitive phonetics, Intonatopic**)

*Further reading:* Chomsky, Halle 1991; Laver 1996; Baum, Pell 1999; Cook 2002; Хомський 2000; Жинкин 1982.

**Mesolect** /<sup>1</sup>mesəʊlekt/ The term refers to the accent identified as intermediate between acrolect (the accent which is associated with the speaker's high level of education as well as with his/her social and economic status) and basilect (the pronunciation of elderly people with little education in rather isolated areas, i.e. the pronunciation of the lowest social prestige). (See **Acrolect, Basilect, Hyperlect, Sexolect, Sociolect**)

*Further reading:* Honye 1991; Laver 1995; Yule 2005; Pennington 1996; Gimson 2001

**Metre** /<sup>1</sup>mi:tə/ A term used to refer to a measure of rhythm indicating the number and kind of feet within a line. Traditional analysis of English meter divides phonetic line into combination of stressed and unstressed syllables known as feet. Four types are prominent in English verse: the iamb, trochee, anapaest, and dactyl. A line is classified on the basis of the number of stressed syllables it contains, such as the *monometer* (one), *dimeter* (two), *trimeter* (three), *tetrameter* (four), *pentameter* (five), *hexameter* (six), *heptameter* (seven), and *octameter* (eight). Combination of foot-type and line-length produce such designations as "iambic pentameter" – the so-called "backbone" of English metre. (See **Foot, Rhythm, Metrical phonology, Isochrony, Stress-timing**)

*Further reading:* Kiparsky 1977; Hayes 1989; Crystal 1997; Dvorzhetskaya, Logvin 1985; Tsur 1992; Сенир 2002.

**Metrical phonology** /<sup>1</sup>metrɪk<sup>ə</sup>l fəʊ'nɒlədʒɪ/ A term refers to a comparatively recent branch of phonological theory emerged in the early 1980s in which great importance is given to larger units than phonemic segments as well as to their relative strength and weakness. Originally introduced as a

hierarchical theory of stress, metrical phonology now covers the whole domain of syllable structure and phonological boundaries. There is considerable interest in the patterns of strong and weak syllables that one finds among neighbouring syllables and among the words to which the syllables belong. Another area of major interest of metrical phonology is the rhythmical nature of speech and the structure of the foot, or phonetic word, where metrical phonology attempts to explain the reasons of the stress shifts in a word, namely due to the context, giving alternations like *thir<sup>1</sup>teen* but *thirteenth<sup>1</sup> place*.

*Further reading:* Kiparsky 1977; Goldsmith 1990; Ladd 1990; Crystal 1992; Tsur 1992; Laver 1995; *Clark et al* 2007; Зубрицкая 2002; Селіванова 2006.

**Metrics** /<sup>1</sup>metrɪks/ The term is used to refer to the study of the metre or rhythm of languages. (See **Metrical phonology**)

*Further reading:* Kiparsky 1977; Goldsmith 1990; Ladd 1990; Crystal 1992; Tsur 1992; Carr 2008.

**Mid** /mɪd/ The term is used to refer (1) to the mid pitch level (related to the mid level of fundamental frequency); (2) it is used by some phoneticians as an alternative to *half open* as a technical term for describing vowels. (See **Fundamental Frequency, Intonation, Vowels**)

**Millisecond** /<sup>1</sup>mɪlɪ,sekənd/ The term (abbreviated as ms), equal to one thousandth of a second, is used to refer to the acoustic measurement of duration. (See **Acoustic phonetics, Fundamental Frequency**)

**Minimal pair** /<sup>1</sup>mɪnɪməl <sup>1</sup>pɛə/, or *minimal set*. The term is used to refer to the pairs of words, which differ in one sound only. For example, the words /bɪt/ and /sɪt/ form a minimal pair and demonstrate the independent, contrastive nature of phonemes /b/ and /s/ since they differentiate the meanings of the words mentioned above. Minimal pairs are used in establishing the set of phonemes of this or that language to prove their separate, contrastive nature by means of the minimal pair test, i.e. a technique used to find out which sound substitutions cause differences in meaning that leads in English to the identification of over forty important units called phonemes. The procedure of finding minimal pairs consists in the application of the so-called *commutation test*, i.e. replacing of one speech sound by another in the same position in order to see whether that substitution will produce a minimal pair or not. E.g. *pen – Ben; ten – den; Ken – gen* (the last pair of words does not make up a member of minimal pair since the

words have no lexical meaning). Commutation test is part of a mere general method of distributional analysis. (See **Functional load**)

*Further reading:* Vassilyev 1970; Ladefoged 1975; Gimson 1980; Laver 1995; Crystal 1997; *Clark et al* 2007; Yule 2009.

**Minimal pair test** /'mɪnɪməl 'pɛə test/ The term refers to a technique used to find out which sound substitutions cause differences in meaning that leads in English to the identification of over forty important units called phonemes. (See **Commutation test**, **Minimal pair**)

*Further reading:* Ladefoged 1975; Gimson 1980; Laver 1995; Crystal 1997; Chomsky, Halle 2002.

**Minimal set** /'mɪnɪməl 'set/ Another term for *minimal pair*. (See **Minimal pair**)

**Modality** /məʊ'dæləti/ The term used to refer to a conceptual category with the meaning of the speaker's attitude towards the utterance content, the attitude of the utterance content towards the reality as well as the speaker's attitude to the hearer. Modality is expressed in speech by different means of all language levels: grammatical, lexical and phonetic (intonational in particular). There are two main types of modality: *objective* (expressing the facts without distortion by personal feelings or prejudices) and *subjective* (expressing the facts according to the person's awareness, prejudices and judgments as well as his/her mental characteristics or states).

*Further reading:* Barsalou et al. 2003; Королева 1989.

**Model** /'mɒdəl/ The term refers to (1) someone or something which is used as a standard or example for a learner, e.g. the pronunciation of an educated native speaker; (2) an intonation pattern which helps to convey a definite meaning of an utterance.

**Modification** /,mɒdɪfɪ'keɪʃən/ A term is used to refer to the changes that happen to individual sounds, words, or phrases under the influence of intonation when they are used in connected speech vs. in isolation. Every phoneme displays a wide range of modifications in connected speech. Phoneticians usually distinguish *idiolectal*, *diaphonic* and *allophonic* variations or modifications. Thus *idiolectal* variation embraces the individual peculiarities of articulating sounds, caused by the shape and form of the speaker's speech organs and by his articulatory habits. Idiolectal variation may cause a lot of difficulties in communication. At the same time it enables people to identify the speech of definite individuals.

*Diaphonic* modification affects the quality and quantity of particular phonemes. It is caused by definite historical tendencies active in certain localities. Diaphonic variations do not affect intelligibility of speech, yet they inform the listener about the speaker's origin and his social status. *Allophonic* modification is conditioned by phonetic position and phonetic environment. Natural pronunciation in conversational English is achieved through blends, overlapping, reduction and omissions of sounds to accommodate its stress-timed rhythmic patterns, i.e. to squeeze syllables between stressed elements and facilitate their articulation so that the regular timing can be maintained. Modifications in the sound articulation comprise the change of consonant and vowel quality, loss of consonants or vowels and even of entire syllables as in *memory* /<sup>1</sup>memrɪ/, *for me* /fmi/, etc. These weakened, shortened or dropped syllables are predictable and can be guessed from the context. (See **Adaptation, Assimilation**)

*Further reading:* Борисова, Метлюк 1980; Бровченко та ін. 2003; Парашук 2005.

**Monometer** /<sup>1</sup>mɒnəmitə/ The term is used in phonetics while analysing prosodic peculiarities of poetic speech and refers to a line of verse consisting of one rhythmic unit. (See **Metre**)

**Monosyllabic** /<sup>1</sup>mɒnəsɪ'læbɪk/ A term used to refer to a word or other language form consisting of one syllable. Monosyllabic words or monosyllables are most frequent in English, especially in telephone conversation.

**Monophthong** /<sup>1</sup>mɒnəfθɒŋ/ A term used to refer to the vowel in the production of which there is no any noticeable change in its quality as in *diphthong*, which literally means a “*double sound*”. (See **Diphthong, Vowel**)

**Monophthongization** /<sup>1</sup>mɒnəfθɒŋgaɪ'zeɪʒn/ The term used to refer to the tendency in the pronunciation of English diphthongs that lies in the disappearance of the glide of a diphthong. (See **Cockney, Diphthongization**)

*Further reading:* Barber 1964.

**Monotone** /<sup>1</sup>mɒnətəʊn/ The term refers to a succession of syllables, words or sentences pronounced on one unvaried pitch.

**Monotonous speech** /mə'nɒtənəs 'spi:tʃ/ The term refers to the speech uttered or sounded in one unvarying tone.

**Mood** /mu:d/ The term is used to refer to the pervasiveness and compelling quality of the speaker's emotion reflected in his speech with the help of intonation means expressing, for example, genial, good, happy, jovial, joyful, mellow, tranquil, angry, bellicose, bilious, melancholy, mercurial, nostalgic, pensive, resentful, sullen mood, mood of anxiety, etc.

**Mora** /'mɔ:rə/ (1) The term used to refer to a linguistic unit of syllable length, which is equal to the duration of a short vowel sound or a syllable. The duration of a long vowel sound or syllable is equal to two moras. (2) The mora is also the unit of quantitative meter in versification. (See **Syllable**)

**Morpheme** /'mɔ:fi:m/ The term used to refer to the minimal distinctive meaningful unit of grammar. Morpheme is also regarded as the smallest functional unit in the structure of a word. In phonetics the phenomenon is very often used in relation to syllable division and word stress.

**Morphophonemics** /,mɔ:fəʊfəʊ'ni:miks/ (See **Morphophonology**)

**Morphophonological** /'mɔ:fəʊfəʊnə'lɒdʒɪkəl/ The term refers to the process of interaction between morphology and phonology.

**Morphophonology** /'mɔ:fəʊfəʊ'nɒlədʒɪ/, or *morphophonemics*. The term refers to a branch of linguistics which studies: (1) the phonological structure of morphemes, (2) the combinatory phonic modifications of morphemes that happen when they are combined, (3) the alternation series which serve a morphological function. Morphophonology was first recognized by I. Baudouin de Courtenay, though N. Trubetskoj is considered the founder of morphophonology.

*Further reading:* Chomsky, Halle 2002; Clark et al 2007; Бодуен де Куртене 1963; Кочерган 2000; Трубецкой 2000; Селіванова 2006.

**Motor cortex** // The term refers to the part of the brain that controls muscle movement.

**Motor theory of speech perception** /'məʊtə θiəri əv 'spi:tʃ pə'sepʃən/ The term refers to the controversial theory of speech perception, according to which speech sounds are perceived by internally synthesising the vocal tract shapes involved in the production of a given speech pattern, and then seek to match these onto the incoming speech signal. (See **Speech perception**)

*Further reading:* Clark et al 2007.

**Moving tone** /'mu:vɪŋ təʊn/ Another term for kinetic tone. (See **Kinetic tone**)

**Murmur** /'mɜ:mə/ The term used to refer to the type of phonation in which the vocal cords are only slightly apart so that they vibrate while allowing a high rate of airflow through the glottis. Murmured sounds are sometimes made with the glottis fairly open at the end. They can also be made with a narrower opening extending over nearly the whole length of the vocal cords, so when they vibrate they do not actually come completely together, but instead appear to be simple flapping in the airstream. Murmured sounds occur in English in the pronunciation of the /h/ in between vowels as in “*ahead, behind*”. The term “voiced h” is sometimes used for this sound, though the term “murmured h” is more preferable. The symbol for this sound is /ɦ/. (See **Breathy voice, Voice quality, Voice setting**)

*Further reading:* Ladefoged 1975; Laver 1968, 1995, 1996; Brown 1990; Clark *et al* 2007.

**Muscles** /'mʌs'ɪlz/ In phonetics the term is used to refer to the pieces of elastic material in the body which make speech organs produce movements in the process of speaking.

**Muscular tension** /'mʌskjʊlə 'tenʃən/, or *the articulatory effort*. The term refers to (1) the theory according to which a syllable is characterized by variations in muscular tension; (2) the state of muscles in the production of sounds both vowels and consonants which requires deliberate, accurate, and maximally distinct articulation that involves considerable muscular effort. (See **Consonant, Syllable**)

*Further reading:* Ladefoged 1975; Laver 1995.

**Muscular tension theory** /'mʌskjʊlə 'tenʃən 'θiəri/ The term refers to the syllable formation theory advanced by L.V.Shcherba, according to which the syllable forming phoneme is the centre of a syllable; sounds, which precede or follow it constitute a chain or an arc, and are viewed as *finally strong* (or initially weak), *initially strong* (or finally weak) and *double peaked* (combination of two similar sounds as in *midday, penknife, that time, good day, etc.*). This theory is also known as *the articulatory energy theory*, or *the arc of loudness theory*, or *the arc of articulatory tension theory*. (See **Syllable**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Laver 1995; Щерба 1963; Торсуев 1975; Плоткин 1981; Потапова 1986; Кочерган 2000; Сепир 2002; Зубрицкая 2002.

**Mutual assimilation** /'mju:tʃuəl ə,sɪmə'leɪʃən/ Another term for *Reciprocal assimilation*. (See **Assimilation**, **Reciprocal assimilation**)

## N

**Narrow** /'nærəʊ/ In phonetics the term is used to refer to (1) the position of the tongue towards the hard palate in the production of vowels. There are two variations (*narrow* and *broad*) characteristic of each of the three main positions of the tongue: *close* or *high*, *mid* or *half open* and *open* or *low*. For instance, the vowels /ɜ:, ə/ are both central and mid (or half open) but in the production of /ɜ:/ the central part of the tongue is raised a little higher than in the production of /ə/; for this reason the vowel /ɜ:/ is defined as central, mid (or half open) and narrow, while the vowel /ə/ is defined as central, mid (or half open) and broad; (2) the term *narrow* is also used to present in transcription the full range of phonetic symbols, which carry a lot of fine detail about the precise phonetic quality of sounds. (3) The term also refers to the *narrow range* between the lowest and highest pitch in the intonation group. (See **Broad, Pitch-range, Transcription**)

*Further reading:* Christophersen 1970; Jassem 1983; Brown 1990; Laver 1995; Ladefoged 2003.

**Narrow transcription** /'nærəʊ<sub>(r)</sub>træn'skripʃ<sup>ə</sup>n/, or *allophonic transcription*. A term refers to the transcription that presents the full range of phonetic symbols if these are required, which carry a lot of fine detail about the precise phonetic quality of sounds. (See **Transcription**)

*Further reading:* Christophersen 1970; Brown 1990; Laver 1995; Аванесов 1956; Сепир 2002; Щерба 2008.

**Nasal** /'neɪz<sup>ə</sup>/ The term refers to (1) a consonant in the production of which the air escapes only through the nose; for this to happen the *soft palate* (or *velum*) must be lowered so that the air could escape past it; besides, a complete closure must be made in some point in the mouth cavity to prevent the stream of air from escaping through it. English has three commonly found nasal consonants: bilabial /m/, alveolar /n/ and velar /ŋ/. These sounds are sometimes known as continuants and have no noise component. A.Gimson calls them the vowel-like sounds. (2) The term also refers to the cavity, made up of the nose and the part of the pharynx above the point of soft palate closure. (See **Consonant**)

*Further reading:* Christophersen 1970; Gimson 1980; Jassem 1983; O'Connor 1984; Roach 1990; Laver 1995; Crystal 1997; Ladefoged 2003.

**Nasal consonant** /'neɪz<sup>ə</sup>l 'kɒnsənənt/ The term refers to a consonant in the production of which the mouth is blocked and the air passes out through the nose. There are three nasal consonants in English, they are: /m, n, ŋ/. (See **Consonant**)

**Nasal explosion** /'neɪz<sup>ə</sup>l ɪk'spləʊz<sup>ə</sup>n/, or *nasal plosion*. The term refers to the release of a plosive (/p, b, t, d, k, g/), when followed by a nasal sound /n, m/, by lowering the soft palate, causing the compressed air to burst out through the nose as in *sudden* /'sʌdn/, *good morning* /'gʊd 'mɔ:nɪŋ/, *kitten* /kɪtn/, *cognition* /kɒg'nɪʃ<sup>ə</sup>n/. (See **Assimilation**)  
*Further reading:* O'Connor 1980; Laver 1995.

**Nasal plosion** /'neɪz<sup>ə</sup>l 'pləʊz<sup>ə</sup>n/ Another term for nasal explosion. (See **Nasal explosion**)

**Nasality** /neɪ'zæləti/ The term refers to the presence of nasal airflow in speech sound production, for instance, nasally exploded plosives, or stops and in some languages nasalized vowels. In English nasality is a property of segments, as in the word *many*. (See **Nasalization**)

**Nasalization** /,neɪzələ'zeɪʃ<sup>ə</sup>n/ The term refers to a coarticulation effect caused by the nasal consonant environment, for example, *thank you* /'θæŋk ju:/, *think* /θɪŋk/, *pink* /pɪŋk/, etc. In these examples as a result of the interaction of /n/ and /k/ there appears the phoneme /ŋ/. Such a modification of the phoneme /n/ is known as intermediate assimilation which results in the back lingual nasal allophone of the sonorant /ŋ/. (See **Assimilation**)

**Nasalized consonant** /'neɪzələɪzd/ The term refers to a consonant in the production of which the position of the soft palate is lowered and the air passes through the nose, as in /m, n, ŋ/. (See **Nasal consonant**)

**Nasalized vowel** /'neɪzələɪzd 'vauəl/ The term is used to refer to a vowel in the production of which the soft palate is lowered and the air passes out through the nose. In English nasalized vowels occur when they are preceded by nasal consonants, e.g.: *thinking of* /'θɪŋkɪŋ əv/, *map* /mæp/, etc.

**National** /'næʃ<sup>ə</sup>nəl/ The term refers to the language spoken by all the members of a definite community. A national language has two material forms: written which is usually a generally accepted standard and is the same

throughout the country, and spoken which may vary from locality to locality forming the so-called dialects.

**Native-speaker** /ˌneɪtɪv 'spi:kə/ The term refers to a person for whom a particular language is native, i.e. acquired from the childhood. In experimental phonetic investigations of a language it is very important to obtain information from *native-speakers informants* or *consultants* since their judgments about the language use and functioning are the most reliable and can be trusted. (See **Informant**)

*Further reading:* Crystal 1992, 1997.

**Neurolinguistics** /ˌnjuərəʊlɪŋ'gwɪstɪks/ The term used to refer to the field of science which studies the neurological basis of language development and the use of brain's control over the processes of speech and understanding. In phonetic theory there appeared a new perspective – the neurolinguistic aspects of speech production, perception and understanding since it is useful to consider the process of speech production from a cybernetic point of view, as an engineering system.

*Further reading:* Baum, Pell 1999; Adams 2001; Cook 2002; Laver 1995, 1996; Crystal 1997; Lamb 1999; Tatham 1987; Tatham, Morton 2004; Yule 2009; Почепцов 2001; Кибрик, Плунгян 2002.

**Neutral** /'nju:trəl/ the term refers to (1) the neutral vowel (or schwa) /ə/ which is the most common weak vowel in English and which never occurs in a stressed syllable. It is generally described as being unrounded, central, mid and lax. The schwa vowel is the most frequently occurring vowel of English which has no regular letter for its spelling; (2) emotionally neutral speech, conveying information which does not demonstrate or cause strong feelings on the part of a speaker or listener; (3) the term also refers to the description of a relaxed position of lips, which have no special configuration in the production of some sounds (/ɜ:/, for instance).

**Neutral position** /'nju:trəl pə'zɪʃən/ of the tongue. The term refers to the position of the tongue when the body of the tongue is in the centre of the vowel space. When the lips are unrounded, the vowel quality produced with this position is that of schwa. The notion of the neutral position is central to the cardinal vowel system of vowel description, since vowels with the tongue raised above the neutral position are said to be high, while vowels with the body of the tongue lower than the neutral position are called low. Similarly, vowels with the body of the tongue in front of the

neutral position are termed front, and vowels with the body of the tongue retracted from the neutral position are said to be back. (See **Vowel**)

**Neutralization** /ˌnju:trəlaɪ'zeɪʃən/ The term refers to the loss of a distinctive (phonologically relevant) feature by one of the phonemes in phonological oppositions in particular contexts, usually intervocalically as, for instance, a contrast between /t/ and /d/ in *bedding* and *betting*, both typically pronounced /'bedɪŋ/, where a /t/ – /d/ contrast is neutralised. Another example of neutralisation can be found in the case of plosives following /s/ in syllable-initial position, e.g., *spill*, *still*, *skill*. It is important to remember that the contrasts between /p/ and /b/, between /t/ and /d/, and between /k/ and /g/ are neutralised in this context since all voiceless plosives when preceded by the phoneme /s/ lose aspiration. (See **Phonemic principle**)

*Further reading:* Jassem 1983; Roach 1990; Laver 1995; Clark *et al* 2007; Трубецкой 2000; Селіванова 2006.

**Noise** /nɔɪz/ The term used in acoustic phonetics to refer to the sound wave with irregular vibrations.

**Noise consonant** /'nɔɪz 'kɒnsənənt/ The term denotes a consonant in the production of which noise prevails over musical tone as in plosives, fricatives and affricates. (See **Consonant**)

**Non-continuants** /'nɒn kən'tɪnjuənt/ A term refers to the sound produced with a complete closure of the vocal tract. The plosive sounds, or stops, which are pronounced with a complete closure of the vocal tract, are called *non-continuants* and are marked as [–continuant]. (See **Continuant**)

*Further reading:* Ladefoged 1975, 2005.

**Non-covered** /'nɒn 'kʌvəd/, or *uncovered*. The refers to the structural syllable type when there is no consonant before the vowel in the onset position as in the following syllables: *it* /ɪt/, *on* /ɒn/, *at* /æt/, *of* /ɒv/, *eight* /eɪt/ etc. (See **Syllable**)

**Non-rounded** /'nɒn 'raʊndɪd/, or *unrounded*. The term used to refer to the vowels in the articulation of which lips are not rounded and have the so-called flat articulation, e.g. the phonemes /i:/, ɪ, e/ and others. The term is more often used in relation to vowels, while the term *non-labialized* tends to be used for consonants produced with unrounded lips as in /f, v/.

**Non-standard** /'nɒn 'stændəd/ The term refers to a variety of a language which has not come to be viewed socially as a standard variety. Examples are North London and East London varieties, New York City English, etc.

**Non-verbal** /'nɒn 'vɜ:bəl/ codes. The term used to refer to the signals that are usually transmitted through particular communication medium or channel (so-called *paralinguistic means*, including (a) **a visual code** (*body language* or *bodily activity* (posture, gestures, facial expression, or mimics, eye contact, appearance), (b) **an auditory code** (*vocalics, or the use of voice, embracing vocal characteristics*: laughing, crying, yelling, moaning, yawning, etc.; *vocal qualifiers*: volume, pitch, tempo, resonance and tone; *vocal rate*; *vocal fillers*: sounds like *un-huh, shh, ohh, uh, mmh*, etc.), (c) **a contact code** (touch, space), (d) **time and place codes** (time, objects). (See **Communication**)

*Further reading*: Yeryomenko, Davidova 1994; Laver 1995, 1996; Yule 2009; Крейдлин 2002; Калита, Тараненко 2008.

**Nuclear tone** /'nju:kliə təʊn/, or *boundary tone*. The term is used to refer to a marked change of pitch movement which occurs on the most prominent syllable in the intonation group. There are the following main nuclear tones in English: *falling, rising, falling-rising, rising-falling, rising-falling-rising, falling-rising-falling* and *level*. Each nuclear tone is represented in speech by its allotones, for instance, the falling tone is presented by its *high falling* and *low falling* allotones, the tonal pitch being the principle of such a classification; the range differences allow to distinguish *high wide* and *high narrow* falling tone; according to the type of descending curve the falling tone can be *convex* and *concave*; the rate of the falling tone movement enables to class the falling tone into *abrupt* (when the rate of the tone movement is high) and *smooth* (when the rate of the tone movement is slow), etc. Each nuclear tone has a definite sphere of use performing in speech a certain *communicative task*: the falling tone is used to *state facts* (positive or negative) and to make utterances sound *categorical* and *final*; the rising tone, being represented in speech by its *high rising* and *low rising* allotones, is used (1) to make the utterance sound *non-final* and *non-categorical*, as well as (2) to *ask for information*. The falling-rising tone, which expresses more information than the verbal context (both divided and undivided allotones), is used to convey implication. The communicative task of the rising-falling tone is to convey cordiality or mockery. The rising-falling-rising and falling-rising-falling tones manifest themselves in a very emotional speech as a means of intensification, or highlighting the utterance meaning, as well as indicate the speaker's emotional state.

*Further reading:* Kingdon 1958; O'Connor 1984; Laver 1995; Антипова 1974; Калита 2001.

**Nucleus** /'nju:kliəs/ The term refers to (1) the most prominent syllable (or *tonic syllable*) of an intonation group, which is the starting point of the major pitch movement (*nuclear tone*) in it; (2) the centre or peak of a syllable; (3) the first element of a diphthong which remains constant and does not glide. (See **Diphthong**, **Syllable**, **Terminal tone**, **Tonic syllable**)

**Numerical system** /nju'merɪk<sup>ə</sup>l 'sɪstəm/ The term is used to refer to the notation system representing intonation contours as sequences of four levels. The numbers which stand for definite levels are placed above or below the words of the text to represent the pitches on which they are pronounced.

## O

**Obstruction** /əb<sup>1</sup>stʌkʃ<sup>ə</sup>n/ The term is used to refer to the condition of organs of speech being clogged or blocked for the production of definite groups of sounds. The organs of speech that form the obstruction produce a kind of explosion on their abrupt separation. In the production of plosive consonants /p, b, t, d, k, g/ there is a complete closure at some point in the vocal tract behind which the air pressure builds up and can be released explosively. (See **Plosive**)

**Obstruent** /<sup>1</sup>ɒbstruənt/ The term is used to refer to the sounds (plosives, fricatives, affricates) made with a constriction. (See **Affricate**, **Consonant**, **Fricative**, **Plosive**)

**Occlusion** /ə<sup>1</sup>klu:ʒ<sup>ə</sup>n/ The term is used to refer to an articulatory posture resulting in the vocal tract being completely closed or blocked during the production of a stop consonant, e.g.: plosive consonants /p, b, t, d, k, g/, nasal sonorants /m, n, ŋ/.

**Occlusive** /ə<sup>1</sup>klu:si<sup>v</sup>/ The term denotes the consonants in the production of which the vocal tract is completely closed. The English plosive consonants /p, b, t, d, k, g/ and nasal sonorants /m, n, ŋ/ belong to the group of occlusive consonants. (See **Consonant**)

**Octameter** /ɒk<sup>1</sup>tæmɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of eight rhythmic units. (See **Metre**)

**Octave** /<sup>1</sup>ɒktɪv/ The term is used in acoustic phonetics to refer to 12 semitones width of a normal human voice range. (See **Semitone**)

**Off-glide** /<sup>1</sup>ɒf glɑɪd/ Another term for *Recursion*. (See **Articulatory gesture**, **Recursion**)

**On-glide** /<sup>1</sup>ɒn glɑɪd/ Another term for *Excursion*. (See **Articulatory gesture**, **Excursion**)

**Onomatopoeia** /ˌɒnəʊmætəˈpiːə/ A term refers to a combination of sounds which imitate the sounds produced in nature, e.g. *bang*, *clap*, *slap*, *smack*, *swift*, *twitter*, etc. Onomatopoeia is regarded as a stylistic device, which can serve as an example of connection between phonetics and stylistics. Onomatopoeia may be seen as a kind of iconicity, though even onomatopoeic sounds have a large degree of arbitrariness. (See **Phonotactics, Sound symbolism**)

*Further reading:* Hrushovski 1980; Ohala 1994; Laver 1995; Jeffries 1998; Magnus 1999; Yule 2009; Воронин 1982, 1990; Міхальов 1995.

**Onset** /ˈɒnset/ A term used to refer to the beginning of a syllable. In English this may be zero when no *consonant* precedes the *vowel* in a syllable, or there can be one, two, or three consonants. There are many restrictions on what clusters of consonants may occur in onsets. For example, if an English syllable has a three-consonant onset, the first consonant must be /s/ and the last one must be one of /r, w, l, j/. (See **Syllable, Phonotactics**)

*Further reading:* Laver 1995; Carr 2008; Yule 2009.

**Open** /ˈəʊpən/ A term refers to (1) the vowels in the production of which the tongue occupies the lowest position in the mouth and the jaw is lowered, e.g. the phoneme /æ/ is characterized as front and open (or low); (2) the syllables which end with a vowel sound (CV syllable type) is called *open* (e.g. /dɔː/, /siː/). (See **Coda, Onset, Syllable**)

*Further reading:* Christophersen 1970; Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Laver 1995.

**Opposition** /ˌɒpəˈziʃən/ A term used to refer to the relationship between different phonemes. Sounds that are in opposition to each other are the ones, which according to the phonological rule can be substituted for each other in a given context (e.g. /pet/ – /bet/), forming different words. The analysis of the whole set of phonemes in a language demonstrates very complex patterns of oppositions among the various groups of sounds. There are three main kinds of oppositions: *single* (when the members of the opposition differ in one feature, e.g., /bɪg/ – /pɪg/: the opposition lies in the presence of voice in the lenis /b/ vs. the absence of voice in the fortis /p/); *double* (if the members of the opposition differ in two features, e.g., /pen/ – /den/: the opposition is presented by the following features: (1) bilabial /p/ vs. apico-alveolar /d/; (2) absence (/p/) vs. presence (/d/) of voice); *triple* (if three distinctive features mark the members of the opposition, e.g., /ten/ – /ðen/: the opposition is marked by the following features: (1) occlusive /t/ vs.

constrictive /ð/; (2) apico-alveolar /t/ vs. interdental /ð/; (3) absence (/t/) vs. presence (/ð/) of voice). (See **Commutation test, Minimal pair**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Crystal 1997; Трубецкой 2000.

**Optimality theory** /ˌɒptɪ'mælətɪ 'θiərəɪ/, or *OT*. The term used to refer to an approach to the study of phonological phenomena which replaces the notion of rule with the notion constraint. In OT constraints are said to be violable, so that a constraint banning voiced obstruents in word-final position would be violated in a language which permits voiced obstruents in that position. Constraints are also said to be capable of clashing with each other, i.e. coming into conflict. A constraint which is said by some to be universal (but violable) is the proposed constraint that the voicing state of a given segment must remain the same in its surface form. In a language which has word-final devoicing, such as German, Russian, etc. this universal constraint comes into conflict with the constraint which bans voiced obstruents in word-final position. In OT, constraints are said to be ranked differently in different languages. In the case of German, the constraint banning voiced obstruents is said to 'outrank', or predominate over the universal constraint. In a language which has voiced obstruents word-finally, the ranking is reversed. In some interpretations of OT, all constraints are said to be universal, given by *Universal Grammar*. Other interpretations reject this view and argue that all constraints are language-specific. There is debate as to whether constraints should be seen as phonetically grounded or not.

*Further reading:* Kager 1997; Hermans, Oostendorp 2000; Optimality 2004; Clark *et al* 2007; Carr 2008; Зубрицкая 2002.

**Oral** /'ɔ:rəl/ The term refers to the so-called non-nasalized sounds in the production of which the soft palate is raised and the air passes through the mouth. In English all consonants (except /m, n, ŋ/) are called oral. (See **Nasal**)

**Oral cavity** /'ɔ:rəl 'kævəti/ The term refers to the part of the vocal tract located above the pharynx, excluding the nasal cavity.

**Oral stop** /'ɔ:rəl 'stɒp/ The term denotes a stop consonant, or a plosive in the production of which the soft palate is in its raised position as in /t/ and /b/. This velic closure prevents the airflow to pass through the nasal cavity. (See **Consonant**)

**Organs of speech** /ˌɔːgənz əv 'spi:tʃ/, or *the vocal organs*. The term refers to a set of organs (lungs, larynx, pharynx, nasal cavity, mouth (or oral) cavity, alveolar ridge, hard palate, velum or soft palate, uvula, vocal cords, tongue, lips, upper and lower jaws, teeth) used for the production of sounds and their chains through which people communicate (See Fig.). There should be distinguished *active speech organs*, which can be moved into contact with other articulators, such as the tongue, and *passive organs of speech*, such as the teeth, the hard palate and the alveolar ridge, which are immovable in producing speech sounds. The branch of phonetics that studies speech organs and their actions is called *articulatory phonetics*. (See **Articulator**, **Articulatory phonetics**)

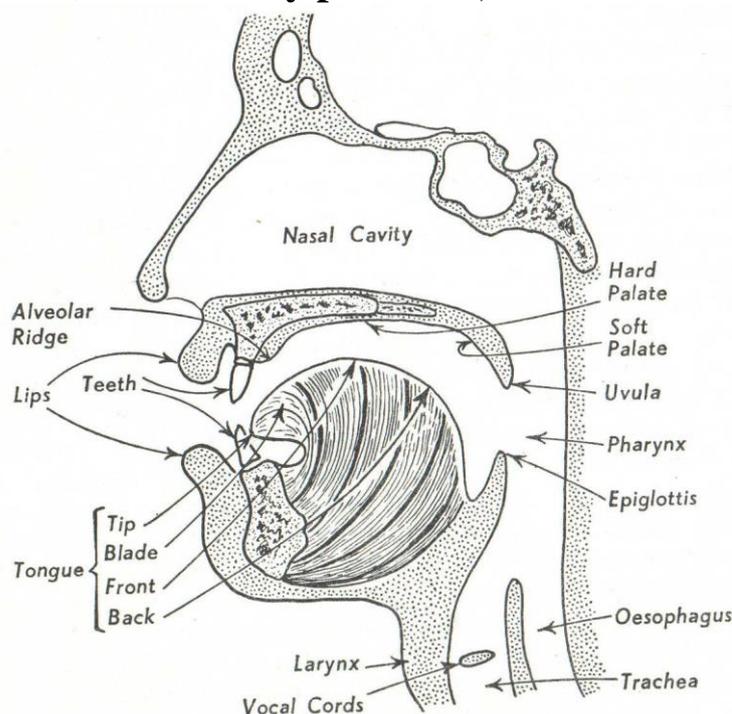


Fig. Organs of speech

*Further reading:* Christophersen 1970; Vassilyev 1970; Ladefoged 1975; Gimson 1980; O'Connor 1980, 1984; Roach 1990; Сепир 2002; Теоретична... 2003.

**Orthoepic norm** /ˌɔːθəʊ'epɪk 'nɔ:m/, or *literary pronunciation*. The term refers to the standard pronunciation adopted by native speakers of a certain language community as the right and proper way of speaking. (See **Standard Pronunciation**, **Received Pronunciation**)

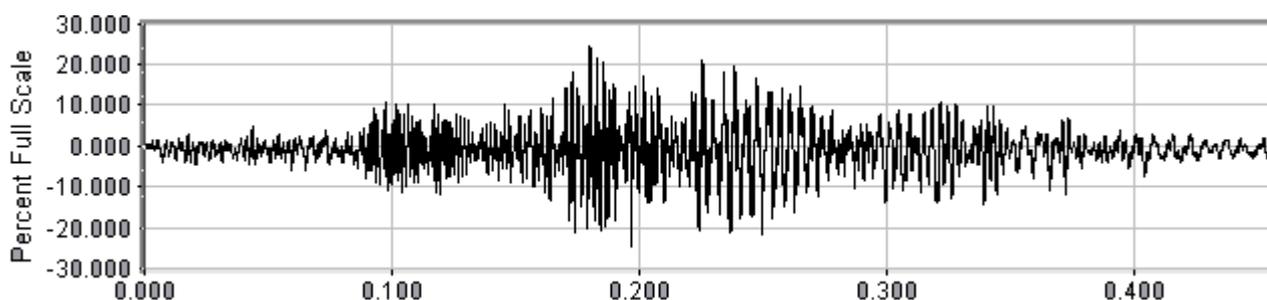
*Further reading:* Jones 1969; Gimson 1980, 2001; Wells 1982; Vassilyev 1970; Parashchuk 2000; Кочерган 2000; Стериополо 2000; Багмут 2001.

**Orthoepy** /'ɔːθəʊepɪ/ The term denotes the branch of linguistics that studies literary pronunciation norm of a language.

**Orthography** /ɔ:'θɒgrəfi/ A term used to refer to the correct or standard spelling. In phonetics it is used in connection with the process of teaching reading (graphical) rules to foreign learners.

*Further reading:* Jones 1969; Roach 1990; Chomsky, Halle 2002; *Clark et al 2007*; Стериополо 2000.

**Oscillogram** /ə'sɪləgræm/ A term is used in acoustic phonetics and refers to the record of a speech sound or a speech flow made by an oscillograph or oscilloscope. (See **Oscilloscope, Oscillograph**)



*Further reading:* Crystal 1997; Ladefoged 1975; Jassem 1983; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**Oscillograph** /ə'sɪləgrɑ:f/ A term used to refer to the instrument for recording alternating current waveforms or other electrical oscillations as well as for their graphic representation. Most oscillographic displays are incorporated within a computer system, given a digital analysis and processed in a wide variety of ways. (See **Oscillogram, Oscilloscope**)

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**Oscilloscope** /ə'sɪləskəʊp/ A term used in acoustic phonetics to refer to an instrument for observing sound waves which displays the frequency and amplitude of a waveform. Some of them provide only a temporary image, others, so-called storage oscilloscopes, are able to hold a wave form on the screen for more detailed study. The storage oscilloscope enables researchers to photograph the sound images directly as well as some kind of chart recorders allow them to obtain its visual trace on paper. (See **Oscillogram, Oscillograph**)

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**OT** /'əʊ 'ti:/ The abbreviation stands for *Optimality Theory*. (See **Optimality Theory**)

**Overtone** /'əʊvətəʊn/, or *harmonic*. A term used to refer to one of the higher tones that with the fundamental frequency comprise a complex musical tone. (See **Fundamental frequency**, **Harmonic**, **Formant**, **Spectrography**, **Spectrum**)

*Further reading:* Fant 1959, 1968; Ladefoged 1975; Jassem 1983; O'Connor 1984; Артемов 1956, 1974; Фант 1964.

**Oxytone** /'ɒksɪtəʊn/ The term refers to the words in which the primary stress is located on the final syllable, as in *rely* /rɪ'laɪ/.

## P

**Palatal** /'pælət<sup>ə</sup>/ A term used to refer to the sounds made with the front of the tongue touching or nearly touching the hard palate at the top of the mouth, e.g. /j/. (See **Consonant**)

**Palatalisation** /,pælətəlaɪ'zeɪz<sup>ən</sup>/ The term refers to (1) the articulation characterized by the raising of the front part of the tongue towards the hard palate occurring when a consonant is followed by a close front vowel; (2) the process in which the primary articulation is changed so that it becomes more palatal. Palatalisation is widespread in most Slavic languages, where there are pairs of palatalised and non-palatalised consonants. Palatalisation is not typical of English and is regarded as a pronunciation error.

**Palate** /'pælət/ A term used to refer to the dome-shaped part of the mouth which is sometimes known as its roof. The function of the palate in speech is to serve as a foil to the tongue in its articulatory movements. The palate can be divided into the *hard palate*, which runs from the alveolar ridge at the front of the mouth to the beginning of the soft palate at the back, and the *soft palate* itself, which extends from the rear end of the hard palate almost to the back of the throat, terminating in the uvula. Consonants in which the tongue makes contact with the highest part of the hard palate are labelled *palatal*. The soft palate (or the velum) can be raised and lowered; it is lowered for normal breathing and for the production of nasal consonants, and is raised for most other speech sounds.

**Palato-alveolar** /'pælətəʊ ,ælvɪ'əʊlə/ A term used to refer to the sounds made with the tongue blade and the back of the alveolar ridge, and there is at the same time a raising of the front of the tongue towards the hard palate, e.g. /ʃ, ʒ, tʃ, dʒ/.

**Palatogram** /'pælətəʊgræm/ A term used to refer to the pictures which demonstrate the tongue contact with the palate. They were obtained with the help of artificial palates, made of vulcanite, cellulose or metal.

**Palatography** /,pælə'tɒgrəfɪ/ A term used in phonetics to refer to one of the

earliest techniques of instrumental study of articulation for obtaining information about the exact location of tongue contact with the palate. (See **Electropalatography**)

**Paradigm** /<sup>1</sup>pærədaɪm/ The term in phonetics is used to refer to a set of related intonation patterns of utterances, varying in pitch level, pitch range, pitch interval, loudness, tempo, etc., which acquire shades in their meaning though preserve the main semantic loading of the utterances common for all the members of the paradigm. For example, the common communicative task of the allotones of the falling tone is to express finality, definiteness, categorical attitude; the paradigm of the falling tone is represented by the low falling tone, high falling tone, high narrow/wide falling tone, convex/concave falling tone, etc. All of them add some specific shades to the meaning of the utterance, at the same time expressing finality, definiteness, and categorical attitude. The conveyance of a certain shade of the utterance meaning largely depends on the type of the prenuclear tone the intonation pattern consists of. For example, the prenuclear tone (represented by the descending stepping scale) in the combination with the low falling tone expresses the statement of the fact. Combined with the high falling tone this intonation pattern expresses interest, concern, personal involvement, etc., making the utterance sound final, definite and categorical. If the prenuclear tone is represented by the ascending stepping scale, combined with the high falling tone, along with finality, definiteness and categorical attitude such an intonation pattern will express objection and protest. These intonation patterns are said to stand in a paradigmatic relationship.

*Further reading:* Laver 1995; Jeffries 1998; Калита 2001.

**Paradigmatic** /<sub>1</sub>pærədɪg<sup>1</sup>mætɪk/ The term refers to at least two items standing in a paradigmatic relation if they belong to the same paradigm.

**Paralanguage** /<sup>1</sup>pærə<sub>1</sub>læŋgwɪdʒ/ The term is used to refer to a set of extralinguistic non-verbal factors due to which in the process of communication an utterance acquires a definite meaning. In phonetics some suprasegmental means are regarded as both linguistic and paralinguistic. Such effects as specific timbre or voice quality produced by pharyngeal, laryngeal, oral and nasal cavities add implicatory or hidden meaning to what is said. For example, whispered speech as a sample of paralinguistic features is used to convey conspiratorial or secret meaning of the utterance. Falsetto accompanied with the corresponding mimics and high voice pitch is the means of mockery, teasing or parody of the

interlocutor's utterance with the purpose to express disapproval of the mail's weakness or effeminacy. Besides, decrease of loudness communicates brevity, rage, furiosity, impatience, anger, etc.; its increase expresses determination, firmness, confidence, stubbornness, obstinacy, etc.; decrease followed by the increase of the loudness degree conveys irony, hint, mockery, humiliation, duplicity, etc.; the contrary process (increase followed by decrease of loudness) is associated with tenderness, softness, kindness, dignity, self-respect, etc.; the unchangeable level of loudness suggests strength and dryness; tremolo enhances the meaning of the utterance or expresses the burst of feelings. Lip-rounding marks a tone of voice when adults talk to babies or animals; breathy or husky tones of voice convey deep emotion or sexual desire; a creaky or gravelly tone of voice is often used in English to express unimportance, disparagement, disgrace, indignity, hypocrisy, etc.

*Further reading:* Laver 1968, 1996, 2009; Цеплитис 1974; Колшанский 1974; Фонетика 2005.

**Paralect** /'pærələkt/ The term is used to refer to the pronunciation of people sharing much of the prestige of the acrolect and retaining enough traces of the accent of their region of birth or upbringing.

*Further reading:* Honey 1991; Yule 2005.

**Paralinguistics** /,pærəlɪŋ'gwɪstɪks/ The term is used to refer to the study or use of non-verbal phenomena such as facial expressions, head or eye movements, and gestures, which may add support, emphasis, or particular shades of meaning to what people are saying, helping to convey semantic information. These phenomena are known as paralinguistic features and are grouped into *audible* (tone of voice, considered as the most powerful means of expressing emotions, voice quality, etc.), *visible* (proximity, spatial orientation), *kinesic* (posture, body movements, gestures), *eye contact*, *facial expression*, *unusual ways of speaking* (laughing, coughing, sneezing, crying, etc.). Whispered speech, for instance, is regarded by D. Crystal as one of the clearest examples of paralinguistic features, used in many languages to add "conspiratorial" meaning to what is said. Another is the marked lip-rounding which is widely used as a tone of voice when adults talk to babies or animals. Many of paralinguistic features are truly universal. For example, breathy or husky voice conveys deep emotion or sexual desire in many languages; though in Japanese it is used to convey respect and submission. A creaky or gravelly tone of voice is used in English to convey unimportance or offence; though in Finnish it is a normal feature of many voice qualities which does not communicate this connotation. (See **Communication, Paralanguage**)

*Further reading:* Abercrombie 1967; Crystal 1969, 1971; Palmer 1982; Jassem 1983; Brown 1990; Laver 1996; Ladd 1997; Крейдлин 2002; Seryakova 1997, 1998; Потапова, Потапов 2006; Селіванова 2006.

**Parameter** /pə'ræmɪtə/ In phonetics the term refers to the characteristic elements or constant factors. For instance, the articulatory parameters of fricative production are the sound pressure, flow velocity and the vocal tract constriction areas.

**Parametric phonetics** /,pærə'metrɪk fə'netɪks/ (/fəʊ'netɪks/) The term refers to the field of phonetics which studies speech as a single physiological system, in which the range of articulatory variables, or parameters in the vocal tract is seen as being continually in action, interacting in various ways along the time dimension to produce a continuum of sounds which listeners segment according to the rules of their language.

*Further reading:* Crystal 1992; ELL 1994; Laver 1995; Trask 1996.

**Paratone** /'pærətəʊn/ Another term for *speech paragraph*. (See **Speech paragraph**)

**Parenthesis** /pə'renθə'sɪs/ The term is used to refer to the inclusion of a grammatical unit at the beginning, in the middle or at the end of a sentence to express an additional idea. By definition, the parenthesis interrupts the prosodic flow of the utterance, and this has some peculiar and predictable effects on intonation. When inserted at the beginning or in middle of the sentence, a parenthetical phrase usually makes up a separate intonation group pronounced with lower loudness and pitch, quicker tempo and narrower range, e.g.: *The 'whole 'thing, | as I have al'ready 'said, | was 'rather a'musing*, where *as I have al'ready 'said* functions as the parenthesis. When used in a sentence final position the parenthesis does not as a rule form a separate intonation group and continuous the melody on the last stressed syllable, e.g.: *The 'whole 'thing was 'rather a'musing, as I have al'ready 'said*. In case it does form a separate sense-group in the sentence final position, it performs the function of a specifier, e.g. *He 'leaves 'Kyiv for 'Moscow | 'usually* where *'usually* specifies the person's decision to leave somewhere else, not for Moscow.

*Further reading:* Ziv 1985; Bolinger 1989.

**Paroxytone** /pə'rɒksɪtəʊn/ In phonetics the term refers to a word with an acute stress on the penultimate syllable as in *adventure* /əd'ventʃə/, *advantage* /əd'vɑ:ntɪdʒ/, *euthanasia* /ju:θə'neɪzɪə/, *evangelistic* /ɪ,vændʒə'lɪstɪk/.

**Passive organs of speech** /'pæsɪv ɔ:gənz əv 'spi:tʃ/ A term used to refer to the articulators or organs of speech which are fixed in the production of speech sounds (e.g. the hard palate, the upper jaw, the teeth, etc.). The function of fixed or immovable speech organs is to act as the place of an articulatory stricture. (See **Articulator, Organs of speech**)

**Pausation** /pɔ:'zeɪʃən/ The term refers to the act of delimiting an utterance into pauses. (See **Pause**)

**Pause** /pɔ:z/ The term used to refer to the component of the language temporal prosodic system which segments the speech flow into utterances and intonation groups and delimits one utterance or intonation group from the other. Pauses are used in speech for many reasons, and they have been studied intensively by not only phoneticians, but by psycholinguists as well. Some pauses are *intentional*, either to create an effect or to signal a major syntactic or semantic boundary; *hesitation* pauses are generally understood as involuntary, and often occur when the speaker needs some time to plan what to say next. They are sometimes the result of difficulty in recalling a word or expression. Pauses can also be used for dramatic effect at significant points in speech. Thus there are three main types of pauses: a) *silent pauses* (a stop in phonation) which are classified into: short pauses marked by one vertical bar //, occurring at the juncture of intonation groups; long pauses, or inter-utterance silent pauses, marked by two vertical bars ||/, that occur between sentences; extra long pauses marked by three vertical bars |||/ usually occurring at the juncture of phonetic paragraphs; b) *pauses of perception* (perceived due to a sharp change of the pitch direction, or by variations in duration or by both, and is marked by a wavy vertical bar / ⚡ /); c) *voiced, or filled, or hesitation pauses* (sounds like *Er, Hmm*, words and intonation groups may serve as pause fillers). (See **Filled pause, Fillers**)

*Further reading:* Jassem 1983; Bolinger 1989; Brown 1990; Laver 1995; Yule 2009; Станиславский 1951; Гвоздев 1957; Кочерган 2000; Бровченко, Корольова 2006.

**Pause of perception** /'pɔ:z əv pə'sepʃən/ Another term for *perceptual pause*. (See **Pause, Perceptual pause**)

**Peak** /pi:k/ A term used in the phonological study of syllable and refers to its centre, forming its *peak*. This is normally a vowel, but it is possible for a consonant to act as a peak instead of a vowel. (See **Syllabic consonant**)

**Pentameter** /pen'tæmɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of five rhythmic units. (See **Metre**)

**Penultimate syllable** /pə'nʌltɪmət 'sɪləbəl/ The term used to refer to the last but one syllable in a word.

**Perception** /pə'sepʃən/ A term is used in phonetics to refer to the recognition, understanding or comprehension of speech. Auditory perception makes a listener detect different kinds of acoustic signals and state differences between them according to such acoustic characteristics as frequency, intensity and duration so important in the study of pronunciation. The assumption can be made that future research in the sphere of speech perception will facilitate the identification of the most important aspects for successful understanding of speech as well as will define the learner's errors which hamper the comprehensibility of speech perception.

*Further reading:* Laver 1995; Chomsky, Halle 2002; Cook 2002; Артемов 1956.

**Perceptual** /pə'septʃuəl/ pause, or a *pause of perception*. The term is used to refer to a pause of perception which has no break of phonation. (See **Pause**)

**Perceptual phonetics** /pə'septʃuəl fə'netɪks (/fəʊ'netɪks/)/ A term denotes the branch of phonetics which studies the peculiarities of man's perception of segmental and suprasegmental phenomena. (See **Auditory phonetics**)

**Performance** /pə'fɔ:məns/ A term is used to refer to the actual usage of phonetic phenomena in specific communicative situations.

*Further reading:* Chomsky, Halle 2002.

**Periodic sound** /ˌpɪəri'ɒdɪk 'saʊnd/ The term is used in acoustic phonetics to refer to the sound whose cycle periods remain the same for cycle after cycle, as in the production of vowels. Periodic sounds give rise to a clear sensation of pitch whose height is related to the frequency of vibration, thus the higher the frequency, the higher the pitch. (See **Aperiodic sound**)

*Further reading:* Jassem 1983; O'Connor 1984.

**Perturbation theory** /ˌpɜ:tə'beɪʃən 'θɪəri/ The term refers to the sphere of experimental phonetic studies based on vocal tract energy functions, which enables a calculation of the sensitivity of formants to local perturbations of

cavity dimensions, in particular, when studying special problems of male-female vocal tract scaling.

*Further reading:* Fant 2004.

**Pharyngeal** /ˌfærən'dʒi:əl/, or *pharyngel* /fə'riŋgəl/ A term used to refer to the consonants produced by pushing the root of the tongue towards the back of the throat (the *pharynx*). The airstream from the lungs can be either completely blocked and then released (e.g. in some dialects of Arabic) or allowed to escape with friction (a pharyngeal fricative /h/). (See **Consonant**)

**Pharyngealization** /ˌfærən,dʒi:lai'zeɪʒən/ A term is used in segmental phonetics and refers to the superimposition or a narrowing of the pharynx in the production of another sound. Pharyngealization is found, for example, in Arabic.

*Further reading:* Christal 1997; Clark *et al* 2007.

**Pharynx** /'færiŋks/ A term used to refer to the tube which connects the *larynx* to the *oral cavity*. It is about 7 cm long in women and about 8 cm in men. At its top end the pharynx is divided into two parts, one part being the beginning of the back of the mouth and the other being the beginning of the way through the nasal cavity. It is usually classed as an *articulator*.

*Further reading:* Roach 1990; Clark *et al* 2007.

**Philologist** /fɪ'lɒlədʒɪst/ A term is used to denote a specialist in the field of philology.

**Philology** /fɪ'lɒlədʒɪ/ A term refers to the field of science which focuses on the general study of culture of a certain community embodied and represented in its language, literature and history.

**Phon** /fɒn/ The term used in acoustic phonetics to refer to the unit of measurement for the loudness level of sound.

**Phonation** /fəʊ'neɪʃən/ The term indicates a type of the vocal cords (folds) vibration; the term is more commonly known as *voicing*.

*Further reading:* Catford 1964; Laver 1995, 1996; Cociop 1998.

**Phonation type** /fəʊ'neɪʃən 'taɪp/ The term refers to the type of vocal cords vibration that can vary in many ways, resulting in differences in *pitch*, *loudness* and *voice quality*, specifying the type of voice, e.g. *breathy*,

*creaky, harsh, neutral (or modal, or normal), falsetto, ventricular* and so on. The different major phonation types are: *voicelessness, whisper* and *voicing*. Voicelessness is divided into *nil phonation* and *breath phonation*. Voicing is divided into *normal voicing, creak* and *falsetto*. (See **Articulatory setting, Voice, Voice quality**)

*Further reading:* Abercrombie 1967; Catford 1964; Celce-Murcia et al 1996; Crystal 1969, 1997; Wells 1982; Laver 1968, 1995, 1996; Brown 1990; Pennington 1996; Сепир 2002.

**Phon(a)esthetic** /ˌfəʊni:s'θetɪk/ A term, introduced by J.R. Firth in 1930, is used to refer to the claim or study of inherent pleasantness or beauty (*euphony*) or unpleasantness (*cacophony*) of the sound of certain linguistic utterances. Important phonaesthetic devices of poetry are rhyme, assonance and alliteration. Closely related to euphony and cacophony is the concept of consonance and dissonance. (See **Euphony, Cacophony**)

**Phone** /fəʊn/ At the phonetic level the term *phone* has been used for a speech sound or gesture considered as a physical event without regard to its place in the phonology of a language; a speech segment that possesses distinct physical or perceptual properties; a particular occurrence of a speech segment; the basic unit revealed via phonetic speech analysis. The word originates from Greek *φωνή*, meaning *sound* and also *voice*. For many if not most linguists, terms such as *phone* and *pronunciation* apply equally to oral and sign language. The term *phone* is not as common as its phonological equivalent, the *phoneme*. Depending on the author, terms such as *allophone* and *speech sound* may be used instead. The term *phone* is not widely used at present.

*Further reading:* Jassem 1983; Laver 1995; Yule 2009.

**Phoneme** /'fəʊni:m/ A term used to refer to the smallest indivisible language unit capable of distinguishing one word from another word of the same language or one grammatical form of the same word, and which exists in the speech of all the members of a definite language community. Phonemes are the ultimate constituents of language, the smallest elements that it could be broken down into. Phoneme is the fundamental unit of phonology, which has been defined and used in many different ways during this century. All theories of phonology hold that spoken language can be broken down into a string of sound units (phonemes), and that each language has a certain, relatively fixed set of these phonemes. In the phonemic system of English, for instance, they traditionally distinguish 44 phonemes (20 vowels and 24 consonants). Every phoneme is represented

in speech by its several variants or allophones. Most phonemes can be put into groups, for example a group of plosives, or a group of fricatives. An important question in phoneme theory is to establish the inventory of phonemes in a certain language. The most widely accepted view is that phonemes form contrastive pairs or *oppositions*. And one must find cases where the difference between two words is dependent on the difference between two phonemes: for example, “*sit*” and “*sat*” where we can prove that the difference between the meanings of the words depends on the vowel, and that /ɪ/ and /æ/ are different phonemes. Pairs of words that differ in just one phoneme are known as *minimal pairs*. The procedure of finding minimal pairs, known as *commutation test (minimal pair test)*, consists in replacing one speech sound by another in the same word position in order to see whether that substitution will produce a minimal pair. Other fundamental concepts used in phonemic analysis are *complementary distribution, free phonemic variation, distinctive feature* and *allophone*. Phonemes are transcribed using a set of phonetic symbols within slant lines which show that the units are being seen as part of a language, while square brackets signal that the symbols written within them are physical sounds. (See **Commutation test, Minimal pair, Transcription**)

*Further reading:* Jones 1976; Brown 1990; Laver 1995; Crystal 1997; Yule 2009; Аванесов 1956; Сепир 2002; Бодуен де Куртене 1963; Касевич 1971; Плоткин 1981.

**Phoneme inventory** /'fəʊni:m 'ɪnvəntəri/ The term refers to the number of phonemes in a definite accent. For instance, the RP comprises 20 vowels among which there are 12 *monophthongs* (i:, ɪ, e, æ, ʌ, ɑ:, ɒ, ɔ:, ʊ, u:, ɜ:, ə) and 8 *diphthongs* (eɪ, aɪ, ɔɪ, əʊ, aʊ, ɪə, eə, ʊə). The consonantal system of RP consists of 24 phonemes represented by the following two groups of sounds: *noise consonants* (p, b, t, d, k, g, f, v, θ, ð, s, z, ʃ, ʒ, h, tʃ, dʒ) and *sonorants* (m, n, ŋ, l, r, j, w). All these sounds have their own frequency of occurrence in the text. (See **Consonant, Vowel, Ukrainian Phoneme System**)

*Further reading:* Gimson 2001; Сепир 2002.

**Phonemic principle** /fəʊ'ni:mɪk 'prɪnsəpəl/ The term is used to refer to a cluster of notions on the phonemes existence (the range of environments in which it can occur, for instance, in a syllable onset, or word-initial position, or intervocalic position), their status and the types of their distribution, that constitute the Phonemic Principle. For example, the sound /l/ in RP has the following distributions: clear /l/ which usually occurs only in the onset, as in the word *let* /let/, or in the word-final position when it is

followed by a word beginning with /j/ as in *will you* /<sup>h</sup>wɪl ju:/. The dark /ɫ/ has a different distribution in RP, occurring only in a word-final position or when followed by a consonant *feel* /fi:l/, *filled* /fɪld/, where it occurs in coda position. These two allophones of the sound /l/ are said to occur in complementary distribution. It means that the clear /l/ and dark /ɫ/ are both laterals, voiced and both have an alveolar articulation. Having established complementary distribution and phonetic similarity of these two sounds we may state that they are allophones of the same phoneme /l/, which are usually rule-governed and predictable in their realizations. Thus the features mentioned above form the phonemic principle of the phoneme /l/ existence, its status and types of its distribution. (See **Allophone, Complementary distribution, Consonant, Minimal pair**)

**Phonemic transcription** /fəʊn'i:mɪk ˌtræn'skrɪpʃən/ The term is used to designate a transcription that uses a simple set of phonemes representing one of the phonemes of the language without any of the details of the pronunciation that are predictable by phonological rule thus giving a limited amount of phonetic information. In phonemic transcription we use the slant brackets to indicate phonemic symbols, e.g. /r/. (See **Transcription, Broad transcription**)

*Further reading:* Christophersen 1970; Brown 1990; Laver 1995; Аванесов 1956; Сепир 2002; Щерба 2008.

**Phonemics** /fəʊ'nɪ:mɪks/ The term refers to the part of phonology which studies segmental units of the language. (See **Phonology**)

*Further reading:* Jassem 1983.

**Phonestheme** /'fəʊnəsti:m/ The term refers to a phoneme or cluster of phonemes linked with a definite associative and symbolic meaning and shared by a group of words which may be etymologically unrelated. Phonesthemes are very similar to word senses. Phonesthemes are not generally defined as a set of words, which have a common element of phonological form and semantics. Rather they are defined as a phonological form and its corresponding semantics. A single consonant has multiple phonesthemic combinations. Phonesthemes are the result of classifying the one underlying phoneme semantics into the various contexts within which it can appear. The term was introduced by J.R. Firth in 1930 who viewed phonesthemes also as epiphenomena. According to R.W. Wescott phonesthemes are the consonantal units, which convey specific sensory effects, especially sound effects. Phonosthemes are sometimes termed as *affective morphemes* (Bolinger D.), *semes* (Nida E.),

*sound combinations* viewed as morphemes (Ахманова О.С.), *symbols of expressiveness* (Marchand H.), which in different languages perform symbolic functions, i.e. have phonetic meaning.

*Further reading:* Firth 1957; Bolinger 1950, 1991; Wescott 1987; Magnus 1999; Marchand 1966; Nida 1951; Tsur 1992; Ахманова 1969; Михалев 1995; Калита 2003; Львова 2005; Кушнерик .Левицкий

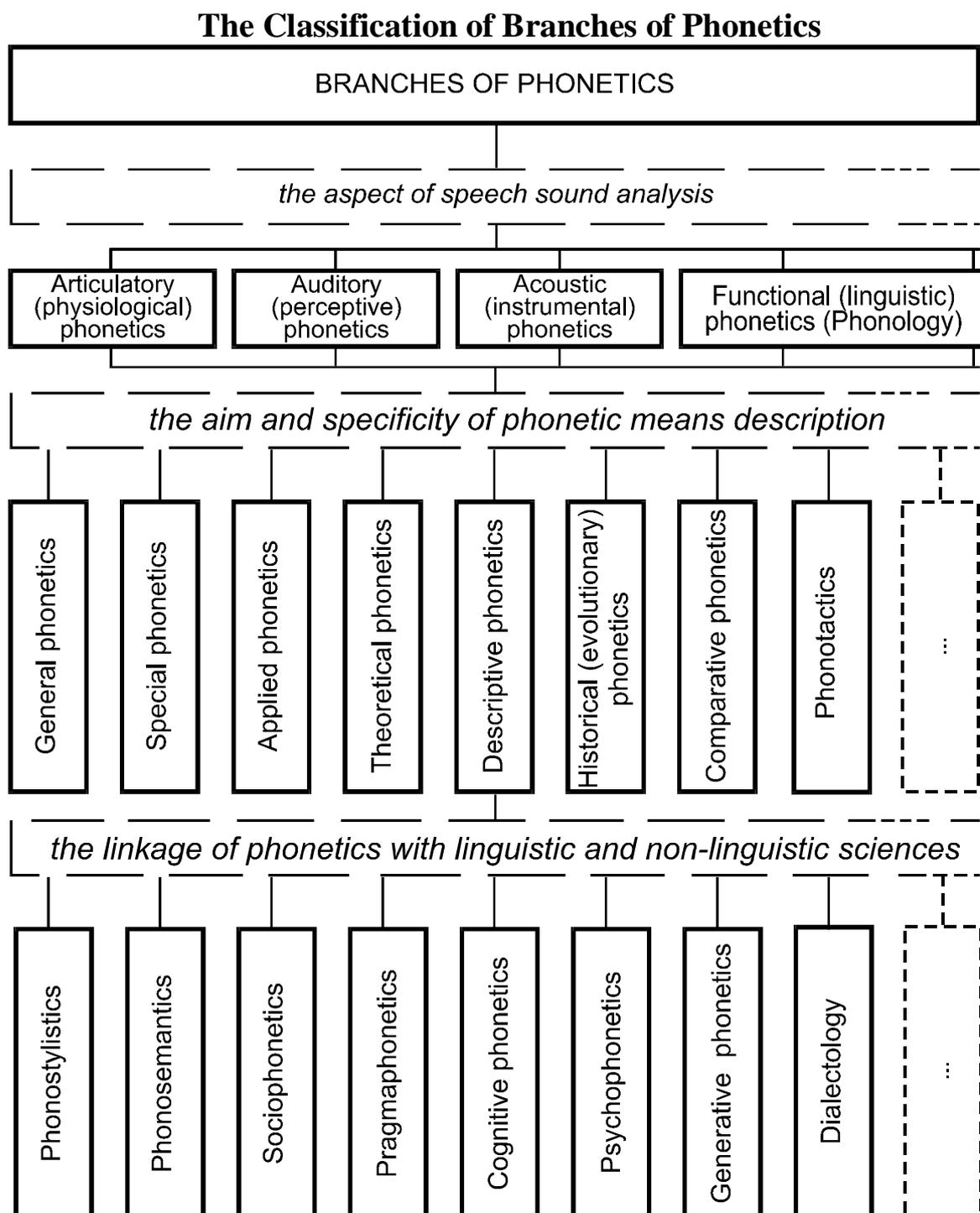
**Phonetician** /ˌfəʊnɪˈtɪʃən/ The term refers to a specialist in the field of phonetics.

**Phonetics** /fəˈnetɪks (/fəʊˈnetɪks/)/ The term refers to the branch of linguistics which studies the sound means of language as articulatory and acoustic units. It has a long history, going back to well over two thousand years ago long before there were either grammar or linguistics. It was known to the ancient Greeks and Hindus. But as a science it began to develop in Europe only in the second half of the 19<sup>th</sup> century due to the names of I.A.Baudouin de Courtenay, D.Jones, K.Pike, L.V.Scherba, E.Sapir, L.Bloomfield and others. The central concerns of phonetics are the discovery of how speech sounds are produced (*articulatory* aspect of speech sounds; *articulatory* and *kinaesthetic* observation), how speech sounds are used in spoken language (*functional* aspect of speech sounds; *linguistic phonetics*), how we can record speech sounds with written symbols (the International Phonetic Association (the IPA) has played a very important role in this), how we hear and recognize different sounds (the *auditory* aspect of speech), and how the sounds are transmitted from the speaker's mouth to the listener's ear (the *acoustic* aspect of speech sounds). The horizons of phonetics are expanding, however. There appeared a new perspective in phonetic theory – the neurolinguistic aspects of speech production, perception and understanding, since, according to J.Laver (1996), it is useful to consider the process of speech production from a cybernetic point of view, as an engineering system. The main methods of investigation in phonetic research are: (1) the *direct observation method* is the oldest, simplest and most readily available method of investigation (visual or auditory) consisting in (a) observing the movements and positions of one's own or other people's organs of speech in pronouncing various speech sounds; (b) analyzing the kinaesthetic sensations during speech sounds articulation; (c) in comparing speech sounds with the resultant auditory impressions; (2) the *linguistic method* based on the collected linguistic data through direct observation; (3) the *experimental method* (acoustic and X-rays analysis) used in experimental phonetics to refer to the acoustic or radiographic study of the dimensions and movements of the vocal tract in producing speech sounds etc. It is used

to check the results obtained by the researcher's direct observation of a definite phonetic phenomenon and its linguistic interpretation. At present this method implies the work with electronic equipment, computer techniques.

All branches of phonetics can be represented in the table according to the following principles:

**Table 1**



(See **Acoustic phonetics, Articulatory phonetics, Auditory phonetics, Cognitive phonetics, Neurolinguistics, Phonetic system, Phonology**)

*Further reading:* Ohala 1991; Laver 1995; Pierrehumbert 2000; Аванесов 1956; Зиндер 1979; Златоустова и др. 1986; Бондарко та ін. 1991; Сосюр 1998; Кодзасов, Кривнова 2001; Сепир 2002; Щерба 2008.

Phonetics was studied as early as 500 BC in [ancient India](#), with [Pāṇini](#)'s account of the [place](#) and [manner of articulation](#) of consonants in his 5th century BC treatise on [Sanskrit](#). The major [Indic alphabets](#) today order their consonants according to Pāṇini's classification. The [Ancient Greeks](#) are credited as the first to base a writing system on a phonetic alphabet. Modern phonetics began with [Alexander Melville Bell](#), whose [Visible Speech](#) (1867) introduced a system of precise notation for writing down speech sounds.<sup>[21]</sup>

Phonetics as a research discipline has three main branches: 1) [articulatory phonetics](#) is concerned with the articulation of speech: The position, shape, and movement of *articulators* or [speech organs](#), such as the lips, tongue, and [vocal folds](#); 2) [acoustic phonetics](#) is concerned with [acoustics](#) of speech: The spectro-temporal properties of the [sound waves](#) produced by speech, such as their [frequency](#), [amplitude](#), and [harmonic structure](#); 3) [auditory phonetics](#) is concerned with [speech perception](#): the [perception](#), [categorization](#), and [recognition](#) of speech sounds and the role of the [auditory system](#) and the [brain](#) in the same;

**Phonetic alphabet** /fə'netɪk 'ælfəbet/ A term used to refer to a set of symbols, each one representing a distinct sound segment.

**Phonetic notation** /fə'netɪk nəʊ'teɪʃən/ A term used to refer to a set of written symbols used for (1) transcribing the phones of actual pronunciation; (2) graphical representation of intonation: a) the musical notation (J.Fonagy, K.Magdics); b) interlinear staves with dots, dashes and arrows (L.Armstrong, I.Ward, D.Jones); c) the head and nucleus system (H.Palmer); d) the tonetic stress-mark system (R.Kingdon); e) the intonation contour system (K.Pike); f) the numerical or number system (G.Trager, H.Smith, M.Halliday); g) prosodic features noted in the text and in the margins (D.Crystal); h) the prosodic transcription (Moscow Phonological School); i) configurations of pitches notation (D.Bolinger).

*Further reading:* Palmer 1924; Armstrong, Ward 1926; Pike 1947; Trager, Smith 1956; Bolinger 1958; Jones 1969; Fonagy, Magdics 1963; Halliday 1967; Crystal 1969; Laver 1995; Борисова, Метлюк 1980.

**Phonetic style** /fə'netɪk 'stɑɪl/ A term used to refer to different ways of pronunciation, caused by extralinguistic factors and characterized by definite phonetic features. Although phonetics was known to the ancient Greeks and Hindus and in Russia the notion of styles of pronunciation was introduced by M.Lomonosov in the 18<sup>th</sup> century, there is no generally

accepted classification of styles of pronunciation as yet. The main factors that cause phonetic modifications in speech are as follows: (1) the aim of speech (to inform, to instruct, to explain, etc.); (2) the extent of spontaneity of speech (prepared/unprepared); (3) the nature of interchange (a lecture, a discussion, a conversation, etc.); (4) social and psychological factors, i.e. the extent of formality of speech and the attitudes expressed (an official conversation, a quarrel, etc.). These factors are called extralinguistic factors. The study of phonetic styles originated a new branch of phonetics – phonostylistics. (See **Intonational style, Phonostylistics**)

*Further reading:* Jones 1969; Crystal, Davy 1973; Теоретическая... 1991; Дикушина 1965; Мурзіна 1972; Борисова, Метлюк 1980; Щерба 2008.

**Phonetic system** /fə'netɪk 'sɪstəm/ of a language. The term refers to a set of phonetic units arranged in an orderly way to replace each other in a given framework. The language phonetic system constitutes the material, or phonic, forms of morphemes, words, phrases and sentences in the language and serves a speaker to express adequately his/her thoughts, ideas, volition, feelings, emotions and attitudes towards his/her interlocutor, reality, the contents of his/her utterance, etc. The system of phonetic means consists of two levels: *segmental* (elementary sounds, vowels and consonants that form the vocalic and consonantal subsystems) and *suprasegmental* (syllables, accentual (rhythmic) units, intonation groups, utterances, which form the subsystems of pitch, stress, tempo, pauses). Both levels serve to form and differentiate the units of other subsystems of a language (lexical and grammatical). Thus each component of the phonetic system is, in its turn, systemic in character, and in the process of its use as a means of communication is closely connected with other components of the sound matter of the language as well as with its vocabulary and grammar. The four components of the language phonetic system (phonemic, syllabic, accentual and intonational) constitute its pronunciation. Each of these components should be studied from the following viewpoints: articulatory, auditory, acoustic and functional.

*The first and basic component* of the language phonetic system is the system of its segmental phonemes existing in speech in the material form of the speech sounds, or allophones. The systemic character of this component is reflected in various classifications of phonemes into two fundamental classes – vowels and consonants – with their further subdivisions according to certain principles. The phonemic structure of any language is more or less symmetric, i.e. the phonemes in classifications are grouped in more or less symmetrically arranged classes. The phonemic component of the language phonetic structure manifests itself not only in the system of phonemes as discrete isolated units, but also in combinations

of their allophones, the occurrence of which in different positions in a word is called their *distribution*.

*The second component* of the language phonetic system is the syllabic structure of words, which has two inseparable from each other aspects: (1) *syllable formation* and (2) *syllable division*. Both aspects are sometimes designated by the term *syllabification*, or *syllabication*. Languages differ both in syllable formation and in syllable division. Differences in syllable formation involve differences in the capacity of speech sounds to form syllables, i.e. to be syllabic, e.g. English sonorants may be syllabic. Differences in syllable division involve differences in the syllabic boundary. In English, differences in syllable division may perform a distinctive function.

*The third component* of a language phonetic system is the accentual structure of its words as vocabulary items. The accentual structure of words has three aspects: (1) the physical (acoustic) nature of word accent, which involves the use of this or that component of the sound matter of the language or a combination of them, to effect word accent in a definite language; (2) the position of the accent in disyllabic and polysyllabic words, which is very important especially in languages with the free word accent; (3) the degrees of word accent, or word stress. Languages may differ in all these aspects of word accent.

*The fourth component* is the intonational structure of utterances. (See **Consonant, Intonation, Sound matter, Syllable, Vowel, Word accent**)  
*Further reading:* Vassilyev 1970; Теоретическая... 1991; Дикушина 1965; Бондарко 1977; Борисова, Метлюк 1980; Поплавская 1993; Кочерган 2000; Сепир 2002; Бровченко та ін. 2003.

**Phonetic transcription** /fə'netɪk (,)træ'n'skrɪpʃən/, or *allophonic*, or *narrow*.  
(See **Transcription**)

**Phonetic word** /fə'netɪk 'wɜ:d/ Another term for *rhythm unit*. (See **Rhythm unit**)

**Phonic substance** /'fəʊnɪk 'sʌbstəns/ of a language. The term refers to the combination of (1) the segmental (or phonemic) component, (2) the words syllabic structure, (3) the words accentual structure and (4) intonation. (See **Phonetic system, Sound matter**)

**Phono-acoustics** /,fəʊnəʊ'ku:stɪks/ Another term for *acoustic phonetics*. (See **Acoustic phonetics**)

**Phonoconcept** /,fəʊnəʊ'kɒnsept/ A term is used in cognitive phonetics to refer

to a specific mental entity, formed as a result of definite communicative experience, that contains a content minimum of knowledge able to be stored in an individual's long-term memory in the form of a perceptive sound image, or symbol. (See **Cognitive phonetics**)

*Further reading:* Калита 2008; Калита, Тараненко 2009.

**Phonogram** /<sup>1</sup>fəʊnəgræm/ The term refers to the character or symbol used to represent a word, syllable, or phoneme.

**Phonograph** /<sup>1</sup>fəʊnəgrɑ:f/ The term is used to refer to an instrument for reproducing sounds by means of vibration of a stylus or needle following a spiral groove on a revolving circular disc or cylinder.

**Phonography** /fəʊ'nɒgrɑ:fi/ The term indicates the techniques of reproducing sounds by means of vibration of a stylus, or needle following a spiral groove on a revolving circular disc or cylinder for obtaining information about sound properties.

**Phonological opposition** /<sup>1</sup>fəʊnə'lɒdʒɪk<sup>ə</sup>l ɒpə'zɪʃ<sup>ə</sup>n/ A term used to refer to the opposition of one phoneme to another phoneme (or to no sound) in the same position. The phonologically relevant features are normally identified by opposing one phoneme to every other phoneme in the language. (See **Distinctive features, Opposition**)

*Further reading:* Трубецкой 2000; Ladefoged 1975; Gimson 1980; Crystal 1997.

**Phonological rules** /<sup>1</sup>fəʊnə'lɒdʒɪk<sup>ə</sup>l 'ru:lz/ A term used to refer to a set of rules which explain how phonemes combine and vary when they are used in connected speech being simply descriptions of language behavior. The rules can be stated conveniently in terms of the classes of sounds to which they apply. The classes of sounds can be described in terms of features of which they are composed. For example, the class of stops /p, t, k, b, d, g/ can be specified as [+stop]; the voiceless stops /p, t, k/ require a statement about two features: [-voiced, +stop]; /b, d, g/ can be represented as [+voiced, +stop], etc. The two most important rules that should be remembered by learners are as follows: (1) different phonemes can freely occur in one and the same position, while allophones of one and the same phoneme occur in different positions and, therefore, cannot be phonologically opposed to each other. This phonological rule is in the basis of distributional method used for the identification of the phoneme inventory of a language; (2) a phoneme can distinguish words when

opposed to another phoneme in identical phonetic context. This phonological rule is in the basis of semantic method and it is used in establishing the sets of phonemes of a language. (See **Phonology**)

*Further reading:* Ladefoged 1975; Chomsky, Halle 1991; Vassilyev 1970; Борисова, Метлюк 1980.

**Phonologist** /fəʊ'nɒlədʒɪst/ The term is used to refer to a person specializing in the study of phonology.

**Phonology** /fəʊ'nɒlədʒi/, or *functional*, or *linguistic phonetics* is a linguistic branch of phonetics. It studies sounds as units, which serve people for communicative purposes, the way they function in speech continuum. The primary aim of phonology is to discover the principles that govern the way sounds are organized in languages. Phonology discovers those segmental and prosodic features that have a differential value as well as establishes the system of phonemes and prosodemes. The basis of phonology is the *phoneme theory*, created by I. Baudouin de Courtenay, later developed by L. Shcherba, N. Krushevsky and others. Phonology as a linguistic discipline was founded in Prague by N. Trubetzkoy. Phonology of segmental units is known as *phonemics* or *segmental* phonology; phonology of suprasegmental units is called *suprasegmental* phonology, or *prosodemics*, or *intonology*, which has led in recent years to new approaches to phonology such as *metrical* and *autosegmental* theory; one can go beyond the phoneme and look into the detailed characteristics of each unit in terms of *distinctive features*; the way in which sounds can combine in a language is studied by *phonotactics*. One of the important areas of phonological studies is the relationships between different phonemes (how they form groups, the nature of the *oppositions* between them and how those oppositions may be neutralized).

Until the second half of this century phonology had been treated as a separate “level” that had little to do with other “higher” areas of language such as morphology and grammar. Since 1960s the subject has been greatly influenced by *generative phonology*, in which phonology becomes bound up with these areas. This has made contemporary phonology much harder to understand, but it has the advantage that it no longer appears to be an isolated and self-contained field.

The most basic activity in phonology is *phonemic analysis*, in which the objective is to establish what the phonemes are and arrive at the *phonemic inventory* of the language. Very few phonologists have ever believed that this would be an adequate analysis of the sound system of a language: it is necessary to go beyond this area. Methods employed by phonology are linguistic.

The distinction between *phonetics* and *phonology* lies in the following: *phonetics* studies the range and variety of all possible speech sounds used in languages of the world; *phonology* focuses on (1) the way in which speakers of a certain language systemically use a selection of these sounds in order to express meaning; (2) establishing order within the apparent chaos of speech sounds. It is continually looking beneath the surface of speech to determine its underlying regularities and to prove how these relate to other areas of language, notably syntax and morphology.

*Further reading:* Gleason 1956; Chomsky, Halle 1968; Ladefoged 1975; Sommerstein 1977; Gimson 1980; O'Connor 1984; Beym 1986; Ohala 1991; Laver 1995; Giegerich 1995; Lass 1996; Crystal 1997; Ladd 1997; Pierrehumbert 2000; Касевич 1981; Сосюр 1998; Трубецкой 2000; Шевельов 2002; Сепир 2002; Зубрицкая 2002; Потапова, Потапов 2006.

**Phonosemantics** /<sub>1</sub>fəʊnəʊsə'mæntɪks/ A term used to refer to the branch of phonetics which studies the role of 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 and, consequently, its meaning. In every language of the world, every word containing a given phoneme has some specific element of meaning, which is lacking in words not containing that phoneme. In this sense, every phoneme can be regarded as meaning bearing. The meaning that the phoneme bears is rooted in its articulation. In the same way changes in any component of intonation may cause the change in the meaning of the utterance.

*Further reading:* Marchand 1966; Wescott 1980; Bloomfield 1984; Voronin 1987; Ohala 1994; Lu 1998; Bolinger 1991; Matisoff 1994; 1995 Magnus 1999; Левицкий 1973, 1998; Журавлев 1974, 1981; Воронин 1982, 1990; Михалев 1995.

**Phonostylistics** /<sub>1</sub>fəʊnəʊstɑɪ'lɪstɪks/ A term used to refer to the branch of phonetics which studies the expressive or aesthetic function of sounds or intonation patterns in speech. The variations of sounds and intonation patterns, conditioned by different styles of speech, are usually intentional and they have to suit to the aim and the content of the utterance, the circumstances of communication, the character of audience, etc. The phonetic modifications in speech are caused by (1) the aim of speech (to inform, to instruct, to persuade, to narrate, to advise, etc.); (2) the extent of spontaneity (prepared/unprepared speech, etc.); (3) the nature of interchange, i.e. the use of a form of speech which may suggest either only listening or both listening and an exchange of remarks (a lecture, a discussion, a conversation, etc); (4) social and psychological factors, which determine the extent of speech formality and the attitudes expressed (a

friendly conversation with close friends, a quarrel, an official conversation, etc.). These factors are called *extralinguistic factors*. All people use more than one style of pronunciation in order to adjust their speech to overcome difficult conditions of communication. Phonostylistics is also concerned with the establishment of phonetic style-forming means on segmental and suprasegmental levels that enable the speaker to adequately express his/her ideas, thoughts, feelings, emotions, etc. in different communicative situations as well as to distinguish different styles of pronunciation. Phonostylistics is connected with a number of linguistic and non-linguistic disciplines, such as: paralinguistics, psychology, psycholinguistics, sociology, sociolinguistics, dialectology, literary criticism, aesthetics, information theory, etc. It attempts to establish principles capable of explaining the particular choices made by individuals and social groups in their use of language, such as, socialization, the production and reception of meaning, literary criticism, and critical discourse analysis.

*Further reading:* Crystal, Davy 1975; Теоретическая... 1991; Crystal 1997; Борисова, Метлюк 1980; Фонетика ... 2005.

**Phonotactic constraints** /<sub>1</sub>fəʊnəʊ'tæktɪk kən'streɪnts/ The term is used to refer to sequences of segments which may occur in specific parts of a syllable in a given language (for instance, the onset sequences /pn/, /kn/ /tl/ violate English phonotactic constraints). (See **Phonotactics**)

**Phonotactics** /<sub>1</sub>fəʊnəʊ'tæktɪks/ A term is used to refer to the branch of phonetics which studies the rules according to which the sounds are combined in connected speech in a particular language. As is known languages do not allow phonemes to appear in any order. In English the vowel of the syllable may be preceded by up to three consonants as in *stress* (CCCVC) and followed by up to four as in *texts* (CVCCCC); this is the most general statement of the possibilities of phoneme sequences in the English language. English does not exploit all the possible clusters of phonemes in the word and in the syllable. For instance, long vowels and diphthongs do not precede final /ŋ/, sounds /e, æ, ɒ, ʌ/ never occur finally; the types of consonant clusters permitted are subject to constraints. It is the feature of English that in initial position, i.e. before the vowel, there can be any consonant except /ŋ/; the sound /ʒ/ is rare in a word initial position, but it does appear in rather recent borrowings like *gigolo*, *jabot*; no consonant combinations are possible with /ð, z, tʃ, dʒ/; such consonant clusters as /pw, bw, tl, dl, mh, sr, sʃ, spw, fs, hr, stl/ never occur initially. Clusters of two consonants before the vowel have one of two forms: /s/ + C as in *stay*, *swim*, *sleep*, etc. or C + /w, j, r, l/ as in *twin*, *beauty*, *creame*, *plain*, etc.

J.D.O'Connor noted that final clusters are more complex in English than initial ones since they express grammatical meanings of plurality, tense, ordinal number, e.g. /-ksts/ as in *texts*, /-kst/ as in *mixed*, /-mpst/ as in *glimpsed*, /-ksθ/ as in *sixth*, /-ŋθs/ as in *strengths*. According to their position in the phonetic structure of a word clusters can be divided into: (1) *prevocalic*, (2) *postvocalic* and (3) *intervocalic*. In English the largest number of consonants in prevocalic clusters is *three*:

/spl/ – splash	/str/ – straw	/skl/ – sklent
/spr/ – spray		/skr/ – scream
/spj/ – spume	/stj/ – student	/skj/ – skua
		/skw/ – square

The three-term initial clusters /spl-/, /spr-/, /str-/, /skw-/ as in *splash*, *stew*, *square*, etc. are used most frequently, the others less so. There are only nine four-term final clusters, for instance in *twelfths* /-lfθs/, *exempts* /-mpts/, *sixths* /-ksθs/, *glimpsed* /-mpst/, *texts* /-ksts/, etc. Most phonotactic analyses are based on the syllable since phonotactic possibilities of English phonemes for instance predetermine the rules of syllable division. Certain sequences are sometimes associated with particular feelings or human characteristics, e.g. *bump*, *lump*, *hump*, *rump*, *mump(s)*, *clump* and others are associated with large blunt shapes; a whole family of such words *muddle*, *fumble*, *straddle*, *cuddle*, *fiddle*, *buckle* (vb.), *struggle*, *wriggle* are associated with clumsy, awkward or difficult action because they all end with a plosive and a syllabic /l/. (See **Consonant cluster**, **Cluster**, **Phonestheme**, **Rules of syllable division**)

*Further reading*: O'Connor 1984; Laver 1995; Clark et al 2007; Yule 2009; Дворжецька, Пилипенко 1981; Зубрицкая 2002.

**Physiological phonetics** /ˌfɪziəˈlɒlədʒɪkəl fəˈnetɪks/ A term used to refer to articulatory and auditory (or perceptual) phonetics or *anthropophonics* (the term was suggested by Prof. I.O.Baudouin de Courtenay) since sound production and sound perception are physiological processes. Physiological phonetics is connected with physiology, anatomy, and anthropology. (See **Articulatory phonetics**, **Anthropophonics**)

*Further reading*: Laver 1995; Crystal 1997; Бодуен де Куртене 1963.

**Piano** /ˈpjɑːnəʊ/ The term is used in auditory phonetics and refers to soft loudness.

**Pitch** /pɪtʃ/ The term used to refer to a subjective psychological sensation, or auditory property that enables the listener to place it on a scale going from

low to high, without considering its acoustic properties. Pitch can be viewed both on (1) *segmental* and (2) *suprasegmental* levels. When a speech sound goes up in frequency, it also goes up in pitch. Every vowel and sonorant sound in isolation is produced by vibrations whose frequencies constitute its pitch, which should be taken into account in the course of experimental phonetic analysis of speech. At the same time, voiceless sounds do not give rise to a sensation of pitch in this way. The pitch height received from a voiced sound corresponds quite closely to the frequency of the vocal cords vibration. Differently perceived pitches are used in all languages to produce a wide range of contrasts in utterance meaning. The changes of pitch within an utterance, i.e. the patterns of pitch variations and the rules of pitch change, are highly organized. In each language the use of pitch fluctuation tends to become semi-standardized, or formalized, so that all speakers of the language use basic pitch sequences in similar ways under similar circumstances. These abstracted characteristic utterance melodies may be called *intonation contours*. Pitch is used in *tone languages* as an essential component of the pronunciation of a syllable, word or utterance, so that a change of pitch may cause a change in meaning. In most languages pitch plays a central role in intonation.

*Further reading:* Jassem 1983; Ohala 1983; O'Connor 1984; Brown 1990; Roach 1990; Laver 1995; Crystal 1997; Cook 2002.

**Pitch range** /<sup>1</sup>pɪtʃ reɪndʒ/, or *pitch-span*. The term used in phonetics to refer to the interval between the lowest and highest pitch within the intonation group. Speakers have their own natural tessitura (the range between the lowest and highest pitch they normally use), but they also may extend or shift this for special purposes. The speech of sports commentators, for instance, provides a lot of suitable research material for this.

*Further reading:* O'Connor 1984; Brown 1990; Roach 1990; Laver 1995.

**Pitch-span** /<sup>1</sup>pɪtʃ spæn/ Another term for pitch range. (See **Pitch range**)

**Place of articulation** /<sup>1</sup>pleɪs əv ɑːtɪkjuˈleɪʃən/ The term refers to the point in the vocal tract at which the main closure or narrowing is made, such as at the lips (*bilabial* /p, b, m, w/), lower lip and upper teeth (*labio-dental* /f, v/), teeth (*interdental* /θ, ð/), alveoli (*alveolar* /t, d, s, z, n, l/), etc. Thus in conventional phonetic classification each place of articulation has an adjective that can be applied to a definite consonant (e.g., post-alveolar, palato-alveolar, palatal, velar, glottal, etc.). (See **Consonant**)

*Further reading:* Christophersen 1970; Vassilyev 1970; O'Connor 1984; Brown 1990; Roach 1990; Laver 1995.

**Plethysmograph** /plə'θɪzməʊgrɑ:f/ The term used in experimental phonetics to denote an instrument that records changes of the air volume in the process of speaking.

**Plosive** /'pləʊsɪv/ consonant. The term used to indicate voiced and voiceless occlusive consonants made by a closure in the vocal tract as a result of which the airflow is completely blocked as in /p, b, t, d, k, g/. The closure forms a complete stoppage of the airstream and bars the flow of air sent from the lungs through the mouth or nasal cavities. The organs of speech that form the obstruction produce a kind of explosion on their abrupt separation. The characteristic feature of the spectrum of plosives is the presence of a noise formant. Plosives have a formant of noise only in that part of the spectra which corresponds to plosion, while there is no noise in that part of the spectra relating to the articulatory stop. Plosives are regarded as the most basic type of consonants as they are among the first sounds used by children when they start to speak. The plosive consonants may have any *place of articulation*, may be *voiced* or *voiceless* and may have an *egressive* or *ingressive* airflow. The airflow may be *pulmonic* (i.e. coming out from the lungs), *glottalic* (i.e. coming out from the *larynx*) or *velaric* (i.e. generated in the mouth). The release of plosives may vary. Thus when a plosive is released while air is still compressed within the vocal tract, the air rushes out with some force; as a result, the sound is usually referred to as plosion in general phonetic terminology, but in acoustic phonetics it is more common to refer to this as a *burst*. The burst is usually very brief lasting somewhere around a hundredth of a second. Ukrainian learners are advised to pay particular attention to the aspiration of /p, t, k/ when these phonemes occur initially in a stressed syllable since in this position they have the strongest degree of aspiration. The aspiration distinction between /p, t, k/ and /b, d, g/ should also be retained when /p, t, k/ are followed by /l, r, j, w/ by devoicing of the latter, e.g. compare: *plight – blight, try – dry, crate – grate, tune – dune, twelve – dwell*, etc. (See **Consonant, Release**)  
*Further reading:* Jones 1969; Christophersen 1970; Vassilyev 1970; Ladefoged 1975; Gimson 1980; Борисова, Метлюк 1980.

**Pneumograph** /'nju:məʊgrɑ:f/ The term used in experimental phonetics to refer to an instrument that measures chest movements during breathing.

**Pneumography** /'nju:'mɒgrɑ:fi/ The term used in experimental phonetics to indicate the techniques for recording chest movements or volume change during respiration, or breathing.

**Pneumotachograph** /ˌnju:məʊ'tækəgrɑ:f/ The term used in experimental phonetics to refer to an instrument for measuring airflow from nose and mouth.

**Polysyllabic** /ˌpɒlɪsɪ'læbɪk/ A term used to determine a linguistic unit such as a word, morpheme or phrase if it contains more than one syllable. (See **Syllable**)

**Positional allophone** /pə'zɪʃ<sup>ə</sup>nəl 'æləfəʊn/ A term is used to refer to the allophones which occur in definite positions traditionally, rather than because of the influence of neighboring sounds, e.g., clear and dark /l/, positional allophones of vowels, when they occur in final position or when they are followed by voiced or voiceless consonants: *bee* – *bead* – *beat*. (See **Allophone, Consonant, Length**)

**Post-alveolar** /'pəʊst ˌælvɪ'əʊlə/ A term refers to the sounds articulated by the tip (and rims) of the tongue and the rear part of the alveolar ridge, e.g. /r/.

**Postvocalic** /ˌpəʊstvəʊ'kæɪk/ consonant. The term indicates the consonant sound preceded by a vowel, e.g. *book*, where /k/ is a postvocalic consonant.

**Posttonic stress** /'pəʊst'təʊnɪk 'stres/ Another term for *tertiary stress*. (See **Tertiary stress**)

**Pragmaphonetics** /ˌprægməfəʊ'netɪks/ The term refers to a fairly new branch of phonetics which studies countless number of speech-events (or acts) created for bringing out the basic features of phonetic means of a definite language and examining their role in conveying meaning. Thus pragmaphonetics studies the relations between messages and their phonetic form in combination with non-linguistic factors (the degree of formality of speech, i.e. whether the speaker is being casual or formal).

**Pragmatics** /præg'mætɪks/ A term is used to refer to a field of study concerned with the social, communicative and practical use of language; it bridges the explanatory gap between sentence/utterance meaning and speaker's meaning. Pragmatics examines the relations between messages and their linguistic and non-linguistic contexts. In other words, it studies how *situation (context)* influences the interpretation of what has been said or heard as it may include any imaginable extralinguistic factor, including discourse, social, environmental and psychological factors. It also

considers the impact of context on sentence/utterance meaning. Pragmatics has become recognized as an inseparable part of linguistic studies, a central problem of which is the purpose of speech acts. Work in this field looks at such things as the presuppositions and background knowledge that language users need to have in order to communicate, the objective of the speaker of a particular utterance, the strategies the speakers adopt in order to make a point convincingly and the kinds of function that language is used for. Pragmatics inspects predominantly larger than utterances units made up of sentences, including texts and conversations. A distinction is made in pragmatics between *sentence meaning* and *speaker's meaning*. Sentence meaning is the literal meaning of the sentence, while the speaker's meaning is the concept that the speaker is trying to convey. The ability to understand another speaker's intended meaning is called *pragmatic competence*. According to Charles W. Morris, pragmatics aims at understanding the relationship between signs and interpretations, while semantics tends to focus on the actual objects or ideas that a word refers to, and syntax (or syntactics) examines the relationship between signs. In phonetics the term "pragmatics" is used in connection with the influence of the speaker's pragmatic aim upon the utterance prosodic organization.

*Further reading:* Morris 1946; Ogden, Richards 1960; Austin 1962; O'Hair 1969; Levinson 1983; Leech 1985; Wierzbicka 1991; Mey 2001; Optimality 2004; Hatch 1992; Thomas 1995; Tanaka 1997; Kalita 1999; Yule 2009; Арутюнова, Падучева 1985; Потапова, Потапов 2006.

**Prehead** /'pri:hed/ The term refers to the unstressed or partially stressed syllables preceding the head, or scale. These unstressed syllables constitute a *pre-head*. For example, *So 'you're the •new \secretary, §,are you? ||*  
, where the unstressed word *So* in the first intonation group forms the low level pre-head.

**Pressure theory** /'preʃə 'θiəri/ Another term for *Chest pulse theory*. (See **Chest pulse**, **Syllable**)

**Prevocalic** /'pri:vəʊ'kæli:k/ consonant. A term refers to the consonant sound followed a vowel, e.g. *took*, where /t/ is a prevocalic consonant.

**Primary articulation** /'praɪməri ɑ:tɪkjʊ'leɪʃən/ The term refers to the main articulation produced in sounds which have both a primary and secondary articulation. For instance, the primary articulation of the English dark /ɫ/ is alveolar, but this sound also has a secondary articulation, i.e. the

velarisation in which the back of the tongue articulates with the velum. (See **Secondary articulation**)

**Primary stress** /'praɪməri 'stres/ The term denotes the most prominent stress of a syllable in the word with more than one stress. Primary stress is more prominent than the syllable with secondary stress, e.g. *dialectological* /,daɪəlektə'lɒdʒɪk<sup>ə</sup>l/. The syllables between the stressed syllables are called unstressed and thus are less prominent than the stressed ones. Some languages have more than one linguistically relevant degrees of word stress. Many varieties of English are said to have both *primary stress* and *secondary stress*, as in the word *university* /,ju:nɪ'vɜ:səti/, which contains both a secondary stress on /,ju:/ and a primary stress on /'vɜ:/, where the diacritic /,/ marks secondary stress, and the diacritic /'/ stands for primary stress. (See **Word accent**)

**Principle of conserving the utterance pragmatic potential** /'prɪnsəp<sup>ə</sup>l əv kən'sɜ:vɪŋ ðə 'ʌt<sup>ə</sup>rəns prə'gmætɪk pə'tenʃ<sup>ə</sup>l/ The term is used to refer to the principle that reflects the ability of an utterance, realized by the speaker in a definite emotional state, to conserve its emotional-and-pragmatic potential at the expense of its inner redistribution between phonetic and other meaning-forming elements. According to this principle the speaker's emotional state is regarded as the motive power of communication process that evokes the individual's intention. The intention, in its turn, generates a complex interaction of the logical and emotional elements in the speaker's mind giving the utterance its constant communicative-and-pragmatic potential. The stated emotional-and-pragmatic potential, being invariable throughout the utterance meaning actualization, is redistributed and, depending on the conditions of communication, changes the degree of the utterance emotional loading or the intensity of its concrete pragmatic aim realization. Thus the intention conditioned by the speaker's emotional reaction is materialized in the form of communicative potential of a definite pragmatic aim as the logical beginning of speech. In their turn, the speaker's emotions, expressed in the utterance, are the reflection of his/her feelings as the emotional beginning. The suggested principle enables us to regard intention as the general pragmatic aim of communication in relation to which the emotions, conveyed by the utterance, function under definite conditions of communication as the elements of its direct concretization. This allows us to consider the integration of the factors, generating the utterance meaning, within a certain space of speech interaction of pragmatics, emotions and the utterance meaning within the co-ordinates "communicative function – emotion – meaning."

*Further reading:* Калита 2007.

**Principle of politeness** /'prɪnsəp<sup>əl</sup> əv pə'laɪtnəs/ A term is used to refer to a set of social skills to ensure harmony and affirmation in social interactions. (See **Communication**, **Conversational maxims**, **Cooperative principles**)

*Further reading:* Leech 1985; Грайс 1985; Brown, Levinson 1987; Sternin 2002.

**Proclitics** /,prəʊ'klɪtɪks/ A term used to refer to the unstressed syllables that precede the stressed syllable of the rhythmic unit. For instance, in the word *progressive* /prəʊ'ɡresɪv/ the first unstressed syllable /prəʊ-/ is called a proclitic. (See **Syllable**)

*Further reading:* Кочерган 2000.

**Progressive** /prəʊ'ɡresɪv/ The term used to refer to the type of assimilation when the articulation of a sound is changed under the influence of the preceding sound. For instance, in the word *progressive* the sound /r/ becomes partially devoiced under the influence of the preceding voiceless /p/. Progressive assimilation is usually marked with the help of diacritic /→/. This type of assimilation is not very frequent in Ukrainian. (See **Assimilation**)

**Prolongation of length** /,prəʊlɒŋ'geɪʃ<sup>ən</sup> əv 'leŋθ/, or *sound length prolongation*. The term is used to refer to the increase of a sound length under the influence of the speaker's emotional states and feelings (both positive and negative). It is also known as *emotional length*. (See **Emotional length**, **Lengthening**)

**Prominence (prominent)** /'prɒmɪnəns/ The term refers to the syllables, which are more noticeable in a word or utterance than others, so-called *prominent* syllables. There are many ways in which a syllable can be made prominent. Prominence is sometimes associated with greater *length*, greater *loudness*, *pitch prominence* (i.e. having a pitch level or movement that makes a syllable stand out from its context as when pronounced with special rise). In speech all these factors interact and are interrelated.

**Pronunciation** /prə'naʊnsi'eɪʃ<sup>ən</sup>/ The term refers to (1) the act of producing the sounds of a language; (2) the manner of speaking; (3) the standard pronunciation in a certain community accepted as the orthoepic norm. Intelligible pronunciation is an essential component of communicative

competence. By teaching rhythm, stress, intonation, teachers place pronunciation teaching in a more communicative setting. (See **Accent, Pronunciation norm, Received pronunciation, Orthoepic norm**)

*Further reading:* Jones 1969; Vassilyev 1970; Gimson 1980; O'Connor 1980; Abercrombie 1991; Setter 2006.

**Pronunciation norm** /prəˈnʌnsi'eɪʃn 'nɔ:m/ The term refers to a set of pronunciation forms and rules of their use adopted by educated speakers of a definite social community as correct and prestigious variety which has the greatest social advantage. Pronunciation norm is dynamic in its nature. It is codified in pronunciation dictionaries. The most authoritative English pronunciation dictionaries are *The English Pronouncing Dictionary* by D.Jones (later edited and revised by A.C.Gimson) and *The Longman English Pronunciation Dictionary* by J.Well. (See **Orthoepic norm, Standard Pronunciation, Received Pronunciation**)

*Further reading:* Gimson 1980; Abercrombie 1991; Pennington 1996; Setter 2006; Паращук 2005; Шахбагова 1982; Сепир 2002.

**Pronouncing dictionary** /prəˈnaʊnsɪŋ 'dɪkʃənəri/ The term refers to a special kind of dictionary, which in the form of phonetic or phonemic transcription indicates the pronunciation of words. Normally, several alternative pronunciations are offered in the dictionary, the first of which is the commonest. The English Pronouncing Dictionaries also give one American pronunciation of a word. The most authoritative English pronunciation dictionaries such as *The English Pronouncing Dictionary* by D.Jones (later edited and revised by A.C.Gimson) and *The Longman English Pronunciation Dictionary* by J.Wells cover the two prestigious accents of English: RP/BBC English and GenAm. (See **Codification**)

*Further reading:* Jones 1963; Wells 2000; Kenyon, Knott 1987; Cambridge English Pronouncing Dictionary 2003.

**Proparoxytone** /ˌprəʊpə'rɒksɪtəʊn/ The term refers to a word which has primary stress on the antepenultimate syllable, as in the English word *America* /ə'merɪkə/.

**Prosodeme** /'prɒsədi:m/ A term refers to the minimal prosodic unit of a certain language. In syllable-timed languages syllable is regarded as prosodeme.

*Further reading:* Трубецкой 2000.

**Prosodemics** /ˌprɒsə'demɪks/ A term used to refer to the branch of phonology which studies suprasegmental units. It is often called *prosodic phonology* or *intonology*. (See **Phonology**)

**Prosodic features** /prə'sɒdɪk ˌfi:tʃəz/ The term denotes the non-segmental phenomena which do not belong to the system of segmental phonemes. Prosodic features are superimposed on speech sounds they are often called suprasegmental. Prosodic or suprasegmental features are length, pitch and a degree of stress; such features may extend in time beyond the limits of the phoneme and embrace much higher units of the utterance. All these features may be measured, according to A.C.Gimson, physiologically or acoustically: length as duration, pitch as the fundamental frequency, stress as a measure of intensity, muscular activity or air pressure.

*Further reading:* Gimson 1980; Crystal 1971, 1997; Борисова, Метлюк 1980; Паращук 2005.

**Prosody** /'prɒsədi/ The term refers to the *non-segmental phenomena*, or to the “vocal effects constituted by variations along the parameters of pitch, loudness, duration and silence” (as D.Crystal defines them), which do not belong to the system of segmental phonemes although in speech they can be added to the speech sounds. At the same time some aspects of prosody are closely connected with the rest of speech. Since *prosodic features* are superimposed on speech sounds they are often termed *suprasegmental*. Some phoneticians use the term “prosody” only to the features that have reference to the syllable and phonetic word, or rhythmic group, considered as meaningless prosodic units. Such an approach opposes prosody to intonation that is a meaningful phenomenon, and makes the notion “prosody” narrower than intonation referring prosody to the metrical patterns found in lines of poetry. According to another approach the terms “prosody” and “prosodic features” refer not only to the syllable and phonetic word, or rhythmic group, but also to the intonation group and utterance as hierarchically higher linguistic units constituted by syllables and phonetic words, or rhythmic groups. This approach makes the notion “prosody” broader than “intonation”. Irrespective of the approach to the definition of “prosody” it is regarded by all phoneticians as the modification of the fundamental frequency, intensity (loudness), duration and voice quality. W.Kreidler connects prosody with (1) the ways in which an utterance is broken into chunks or tone units; (2) the placement of nuclear tone; (3) the melody, or the direction of the tone of the communicative and semantic centre of the utterance. Some phonologists treat other phenomena, such as *nasality*, as a potentially prosodic property. In *Firthian Phonology* the term is used to denote phonological elements which correspond to what were later called autosegments. Prosody performs the following functions: (1) it serves to highlight or to focus one particular word in an utterance making it the most significant one

comparing with the others; (2) it emphasizes the role of an utterance within a discourse; (3) it helps to differentiate the interpretation of different elements within an utterance as well as the relationship between them. One of the basic problems in the study of prosody is the establishment of units within which the prosodic units are actualized. The prosodic units are: (1) the syllable, prosodic features of which (tone, stress, duration) fully depend on its position in the rhythmic group and in the utterance, and the function it fulfils; (2) the rhythmic group or phonetic word, consisting of either one stressed syllable or a stressed syllable with partially stressed or unstressed ones (proclitics, enclitics) grouped around it; the rhythmic group is characterized by pitch and duration which enable the listener to perceive it as an actual discrete unit of prosody; (3) the intonation group, which is hierarchically higher than the rhythmic group having some obligatory formal characteristics: the nuclear stress and the terminal tone, the boundary between the intonation groups are marked by tonal junctures and pauses. All these features shape the intonation group, delimit one from another since the intonation group is regarded as the meaningful unit. The structure of the intonation group consists of the pre-head, scale, nuclear tone and tail, the nuclear tone being obligatory and its most important functional element; (4) the utterance, which is the higher meaningful unit of prosodic features' actualization as well as the main communicative unit, characterized by semantic entity that is expressed by all language means. The utterance may contain one or more intonation groups; (5) the hyperutterance or phonetic paragraph, represented by a number of utterances connected by sense; (6) the text or discourse. The mentioned above prosodic units form a taxonomical scale: each hierarchically higher unit is built up of one or more hierarchically lower prosodic unit or units. (See **Autosegmental phonology, Intonation**)

*Further reading:* Gimson 1980; Nushikyan 1987; Kreidler 1989; Kalita, Yancheva 1994, 1994a; Laver 1995; Crystal 1997; Борисова, Метлюк 1980; Калита 2001; Зубрицкая 2002.

**Proto-Indo-European** // The term refers to the hypothesized original form of a language that was the source of many languages in India and Europe.

**Proxemics** /prɒk<sup>1</sup>si:miks/ The term refers to the study of the physical distance between people when they are talking to each other, as well as their postures and physical contact during their conversation. In other words, proxemics involves the ways in which people in various cultures use time, space, body, positions and other factors for the purposes of communication. Thus when people are good friends they usually express their relations by standing or sitting closer to each other than they would

with strangers or new acquaintances. Besides closeness can also be regarded as a speaker's desire to discuss personal matters or confident information with his/her co-conversers. R.J.O'Conner classifies the space differences into the following types: up to 46 cm is the signal that the conversation takes place with close friends or family members; from 46 to 120 cm is the adequate space for the communication with friends or business associates; from 1,5 to 3,6 m is the right distance for discussing impersonal or business matters with someone in authority or small group discussions; from 3,6 to 7,6 and more meters is the distance for public speaking, class teaching, etc. Every culture has its own conception of distances between people communicating with each other.

*Further reading:* Sommer 1969; O'Conner 1988; Почепцов 2001; Крейдлин 2002; Фонетика... 2005.

**Pulmonic** /pʌl'mɒnɪk/ The term denotes the air movement realized by compression of the lungs so that the air is expelled through the vocal tract. Such a mechanism of the air movement out of the lungs is known as an *egressive pulmonic* airstream. (See **Egressive**, **Ingressive**, **Plosive consonant**)

*Further reading:* Crystal 1992; Ladefoged 1975.

**Punctuation** /ˌpʌŋktʃu'eɪʃn/ The term refers to the system of the hierarchically standardized marks or signs in written matter to separate structural units of grammar (sentences, clauses, phrases, filler phrases or parentheses, words, etc.) from each other and clarify their meaning as well as to enable stretches of written language to be read in a coherent way. In reading punctuation marks are very helpful since they specify the meaning of the sentence. For instance, a question mark and commas signal about the use of rising intonation; an exclamation mark or underlining may increase loudness; parentheses used between commas may lower loudness, tempo, pitch and range; full stop is generally associated with finality, completeness, the speaker's categorical attitude, usually expressed with the help of the falling intonation. Thus modifications of speech melody influence the hearer making him/her react in a corresponding way. For example, intonation of a question makes him answer; the exclamatory mark communicates sympathy, approval or protest; semicolon makes the hearer attentively perceive what is being said, etc. Besides, in reading aloud punctuation marks, italics, underlines, and capital letters are connected with different prosodic features such as, for instance, pitch and loudness.

*Further reading:* Станиславский 1951; Гвоздев 1957; Николаева 1969; Виноградов 1975; Орехова 2000; Паращук 2005; Carrell, Tiffany 1960; Hatch 1992.

**Pure tone** /'pjʊə 'təʊn/ The term used in acoustic phonetics to refer to a sound wave of a single frequency.

**Pure vowel** /'pjʊə 'vaʊəl/ The term used in phonetics to denote a vowel whose quality does not change within a syllable.

*Further reading:* Jones 1969.

## Q

**Qualitative** /'kwɒlɪtətɪv/ The term is used in phonetics to refer to the qualitative changes in the pronunciation of vowels in unstressed position. Such a modification of unstressed vowels is called qualitative reduction. There are two types of qualitative reduction: *soft* and *hard*. Most vowels in unaccented syllables are reduced to the neutral vowel /ə/, e.g.: *ago* /ə'gəʊ/, *anew* /ə'nju:/, *together* /tə'geðə/, *chillness* /'tʃɪlnəs/, *children* /'tʃɪldrən/, *homeless* /'həʊmləs/ and the like; this type of reduction is known as *hard*. When an unstressed vowel is changed into /ɪ/ as in *exam* /ɪg'zæm/, *example* /ɪg'zɑ:mpəl/, *begin* /bɪ'gɪn/, *distract* /dɪs'trʌkt/, *guarded* /'gɑ:dɪd/, etc.; the type of such a vowel reduction is called *soft*. Qualitative reduction is generally opposed to quantitative reduction, which deals with the changes of the length of vowels in unstressed position. (See **Reduction, Unstressed vocalism**)

*Further reading:* Vassilyev 1970; Roach 1990; Борисова, Метлюк 1980.

**Quality** /'kwɒlɪtɪ/ The term used in phonetics to refer to the specific resonance, or timbre of a sound.

*Further reading:* Laver 1995.

**Quantitative** /'kwɒntɪtətɪv/ The term is used in phonetics to refer to the quantitative changes in the pronunciation of unstressed vowels known as reduced ones. There are two types of quantitative vowel reduction: *half long* and *short*, e.g.: *You ought to go to the hospital*, where the unstressed vowel /u:/ in the word *you* undergoes quantitative short reduction since it is immediately followed by the stressed syllable *ought* and is marked by the following symbol /u/. The vowel /u:/ in the pronoun *you* as in *You will never do it again*, *ξ will you?* undergoes half-long reduction for it is accompanied by the unstressed syllable *will* and is marked by the symbol /u/. (See **Reduction, Unstressed vocalism**)

*Further reading:* Vassilyev 1970; Roach 1990; Борисова, Метлюк 1980.

**Quantitative data** /'kwɒntɪtətɪv 'deɪtə/ The term is used in experimental phonetics research to refer to the numerical form, obtained through counting and measurement of different phonetic phenomena (the so-called quantitative research).

**Quantitative linguistics** /'kwɒntɪtətɪv 'lɪŋgwɪstɪks/, or *mathematical linguistics*. The term refers to the branch of linguistics, experimental phonetics in particular, which uses statistical methods while studying the frequency and distribution of linguistic units. Quantitative or statistic methods are usually used in instrumental phonetics to elucidate linguistic problems such as functional, stylistic and semantic loading of phonetic units.

**Quantity** /'kwɒntɪtɪ/ The term is used in phonetics to refer to the relative duration of contrastive sounds and syllables, e.g.: long phoneme /i:/ is opposed to a short phoneme /ɪ/; the monosyllabic words *seed* /si:d/ and *seat* /si:t/ differ in quantity due to the quality of postvocalic consonants (voiced/voiceless) in them.

*Further reading:* Laver 1995.

**Question** /'kwɛstʃən/ The term is used in phonetics to refer to the utterances asking for information or a response. Questions may be formed by the use of (1) a question word (in special questions), e.g.: *what, why, where, which, how, etc.*: *What good are you?*, usually pronounced with the falling tone in emotionally neutral speech; in friendly conversations or when talking to a kid the falling tone is very often substituted by the low-rising tone, e.g.: *What's your name, sunny?*; (2) an auxiliary verb (in general questions), e.g.: *Did you see Othello on television last night?*; such questions usually require the use of the rising tone in emotionally uncolored speech; in conversations general questions expressing interest, or used for encouraging further conversation the rising tone is replaced by the high falling tone, e.g.: *Did you see Othello on television last night?*; The alternative questions consisting of two intonation groups are actualized with the rising tone in the first intonation group and the falling tone in the second, e.g.: *Are you a student § or a teacher?* (3) intonation, e.g.: *Well 'done?!*, *There's nothing you want me to listen to § on the 'radio?*; (4) a question tag, e.g.: *Is it? Can he? Can't she? Won't they?* etc.: *They started to chop down the fir tree, § didn't they?* The second intonation group of such questions may be realized either with the rising tone when the answer is required, or with the falling tone when the answer is not expected. Semantically questions express non-finality, non categorical attitude, doubt, uncertainty, as well as asking for information, asking for additional information or repetition, requesting a reply from a listener; sometimes they are used to gain the time before giving the proper answer or to convey a strong degree of surprise, etc.

## R

**Radiography** /ˌreɪdɪ'ɒgrəfi/ The term refers to the device used for the analysis of articulatory activities. (See **X-ray**)

**Range** /reɪndʒ/ A term used in phonetics to denote the interval between the lowest and highest *pitch* within the intonation group. (See **Pitch range**)

**Rate of speech** /'reɪt əv 'spi:tʃ/ The term used to refer to the speed at which people speak. In experimental studies it is usual to speak about the rate of speech in terms of sounds/syllables per second, or in words per minute. (See **Articulation rate, Speaking rate, Intonation, Tempo**)  
*Further reading:* Jones 1969; O'Connor 1984; Roach 1990; Laver 1995.

**Realization** /ˌrɪələɪ'zeɪʃən/ The term is used to refer to the act of pronouncing a sound, a syllable, a rhythmic group, or a phonetic word, an intonation group, a word or an utterance. The alternative terms are actualization, phonetic representation or physical expression, phonetic manifestation, implementation and phonetic exponence. (**Actualization**)  
*Further reading:* Lyons 1968; Crystal 1992, 1997; Laver 1995.

**Realization difference** /ˌrɪələɪ'zeɪʃənəl 'dɪfrəns/ The term is used to mark a difference between two varieties of a language if there is a difference in the way the phonemes of those varieties are realized. For example, in British English the phoneme /l/ has two realizational variants: a dark /ɫ/ and a clear /l/. This kind of difference is realizational, or positional, not systemic; the difference does not lie in the set of phonemic oppositions found in the two varieties, but in the way a specific phoneme is realized. (See **Accommodation, Allophone, Clear /l/, Dark /ɫ/, Positional allophone, Systemic differences**)

**Received pronunciation** /rɪˌsiːvd prəˌnʌnsi'eɪʃən/, *RP* or *BBC pronunciation*. A term refers to the type of English pronunciation adopted in 1920 by the British Broadcasting Corporation (the BBC) for its announcers as the best model accent and most heard among the privately educated people in Southern England. It is used by the majority of Londoners who have had a university education, and is commonly heard in Oxford and Cambridge.

Very much the same pronunciation is used by many people outside the south of England; educated speech in the whole of Britain approximates to RP. This type of pronunciation is chosen in many places as the model to be followed for several reasons: (1) it is the only accent whose segmental and suprasegmental means are very well described by the following famous phoneticians: A.C. Gimson (1962), D. Jones (1969), J.D. O'Connor and G.F. Arnold (1961), K.H. Albrow (1968), D. Abercrombie (1967), M.A.K. Halliday (1968), D. Crystal (1969) and others; (2) it is the accent which is usually taken as a model for foreign students; and (3) it is the accent towards which many educated speakers of other accents tend. RP is also known as the “*public school*” accent, and as the “*BBC pronunciation*”. It is important to know that not all English people use RP. Some scholars restrict the term “*RP*”, saying that it is only spoken by a small minority of the population. G.Brown, on the contrary, thinks that it is more meaningful today to expand the term “*RP*” to include what might be called “*educated southern English*”. This type of accent is recognized as a social standard pronunciation of English often referred to as the “*prestige accent*”. The first description and codification of RP was made by D.Jones, then by A.C.Gimson and later by A.Cruttenden and J.Wells. It is possible to identify different varieties within RP. Thus A.C.Gimson distinguishes three main types of RP today: the *conservative* RP registered in the pronunciation of older generation and, traditionally, of certain professional and social groups; the *general* RP is the pronunciation adopted by the BBC; and the *advanced* RP heard in the speech of young people from the upper class families and used for prestige value in certain professional circles. Later A.C.Gimson and A. Cruttenden distinguish the following main types of RP: (1) *General RP*; (2) *Refined RP* – upper-class, or aristocratic RP; (3) *Regional RP* – the general RP though it has a few regional features. J.C.Wells’s classification of RP embraces several types within RP/BBC English. This classification is based on the speaker’s education and his/her social status: (1) *mainstream RP* – the accent of middle class educated speakers; (2) *U-RP* – upper-class, or aristocratic RP; (3) *adoptive RP* – the pronunciation of the adults who did not speak RP when children; (4) *Near RP* – the accent of some speakers who preserve strong regional features. The phoneme inventory of RP consists of 20 vowels (12 monophthongs /i:, ɪ, e, æ, ʌ, ɑ:, ɒ, ɔ:, ʊ, u:, ɜ:, ə/ and 8 diphthongs /eɪ, aɪ, ɔɪ, əʊ, aʊ, ɪə, εə, ʊə) and 24 consonants (17 noise consonants: /p, b, t, d, k, g, f, v, θ, ð, s, z, ʃ, ʒ, h, tʃ, dʒ/ and 7 sonorants /m, n, ŋ, l, r, j, w/). RP is known as the best investigated pronunciation since it is socially the most important, prestigious pronunciation in the UK. At the same time S.Ramsaran states that when addressing the problem of RP/BBC pronunciation today it is no

longer possible to talk about a straightforward correlation between social background, profession or education in present-day society, thus it is problematic to identify RP in social terms.

*Further reading:* Jones 1969; Christophersen 1970; Gimson 1980, 2001; O'Connor 1984; Brown 1990; Wells 1982; Vassilyev 1970; Laver 1995; Parashchuk 2000; Ramsaran 1990; *Clark et al* 2007; Шахбагова 1982.

**Recessive tendency** /rɪ'sesɪv 'tendənsɪ/ The term denotes the tendency characteristic of all Germanic languages to place the word accent on the initial syllable of nouns, adjectives, and verbs derived from them and on the root syllable of words which belonged to other parts of speech and had a prefix of no special meaning. The recessive word stress in Modern English is of two types: (1) unrestricted recessive accent in Modern English falls on the initial syllable provided if it is not a prefix which has no referential meaning now. It is this accent which is observed in the words of Anglo-Saxon origin and in the great majority of native English words of this type (*'wonder, 'husband, etc.*): 74% of *disyllabic words* have the stress on the first syllable (| – –) and 26% of disyllabic words have the stress on the second syllable (– | –); *three-syllable words*: | – – – (55%), – | – – (39%), – – | – (6%); *four syllable words*: | – – – – (36%), – | – – – (33%), – – | – – (29%), – – – | – (2%). (2) Restricted recessive stress falls on the root of native English words with a prefix which has no referential meaning now (*a'mong, be'fore, be'tween, with'stand, for'get, for'give, etc.*). (See **Syllable, Word accent**)

*Further reading:* Vassilyev 1970; O'Connor 1980; Halle, Vergnaud 1990; Борисова, Метлюк 1980.

**Recipient** /rɪ'sɪpɪənt/ In phonetics the term is used to refer to the person who receives information.

**Reciprocal assimilation** /rɪ'sɪprəkʰl ə,sɪmə'leɪʃən/, or *doubled, coalescent, mutual*. The term refers to the type of assimilation when two adjacent consonants influence each other. For instance, in the word *twenty* /'twentɪ/ the sonorant /w/ is assimilated by the voiceless plosive consonant /t/; in its turn, /t/ under the influence of the rounded /w/ is represented in speech by its labialized variant. In Ukrainian reciprocal assimilation occurs more often than in English. (See **Assimilation**)

*Further reading:* Vassilyev 1970; Roach 1990; Brown 1990; Crystal 1997, 2000; Ohala 2001; Сепир 2002; Бровченко та ін. 2003; Парашук 2005; Бровченко, Корольова 2006.

**Recursion** /rɪ'kɜ:ʃən/, or *off-glide, release*. The term is used to refer to the third stage of the articulatory gesture during which the speech organs move away to the neutral position. (See **Articulatory gesture**).

*Further reading:* Vassilyev 1970; Jassem 1983; Кочерган 2000.

**Reduced** /rɪ'dju:st/ A term refers to a vowel whose articulation is weakened in an unstressed syllable; as a result the vowel undergoes either qualitative or quantitative changes. (See **Qualitative, Quantitative, Reduction, Unstressed vocalism**)

**Reduction** /rɪ'dʌkʃən/ The term denotes qualitative or quantitative changes in the production of a vowel when unstressed. The process of weakening in vowel production is observed. As a result the unstressed vowels tend to be either *schwa*-like (i.e. they are centralized) as in *complain* /kəm'pleɪn/ or *ɪ*-like as in *expose* /ɪk'spəʊz/. Reduction is considered as an important characteristic feature of English pronunciation, which is not common for all languages. There are three degrees of vowel reduction: (1) *quantitative*, associated with the reduction of vowel length; there are two types of *quantitative* vowel reduction: *half long* and *short*. Thus in the sentence *You are* <sup>1</sup>*asked to the* <sub>1</sub>*Dean's office* the unstressed vowel /ɑ:/ in the word *are* undergoes quantitative short reduction since it is followed by the stressed syllable *asked* and is presented by its reduced allophone /ɑ/ without the diacritic mark /:/ symbolizing its length in a stressed syllable. In the sentence *Are you a* <sub>1</sub>*doctor?* the unstressed vowel /ɑ:/ undergoes half-long reduction and is marked by /ɑ:/ in which the absence of one dot stands for the half-long length of this vowel as compared to the length of this vowel under stress; (2) *qualitative reduction*, related to the changes in the vowel quality; there are two types of qualitative reduction in English: *soft* and *hard*. Most vowels in unaccented syllables are reduced to the schwa vowel /ə/, e.g.: *ashore* /ə'ʃɔ:/, *enforceable* /ɪn'fɔ:səbl/, *encyclopaedist* /ɪn,saɪklə'pi:dɪst/, *cloudless* /'klaʊdləs/ and the like; this type of reduction is known as *hard* one. When an unstressed vowel is changed into /ɪ/ as in *enforceable* /ɪn'fɔ:səbl/, *interested* /'ɪnrəstɪd/, *guided* /'gaɪdɪd/, etc. the type of such a vowel reduction is called *soft*; (3) *zero* or *complete* reduction connected with the omission of a vowel, e.g.: *national* /'næʃənl/, *education* /,edju:'keɪʃn/, *reduction* /rɪ'dʌkʃn/, etc.

In English there are certain words which have two forms of pronunciation: (1) *full*, or *strong* form used when there is stress on the

word; (2) *reduced*, or *weak* form used when the words are unstressed. This group of words embraces form words, i.e. most personal and relative pronouns, auxiliary and modal verbs, prepositions, conjunctions, articles, etc. For example, the personal pronoun *me* /mi:/ (strong form), /mi/ (reduced, half-long), /mi/ (reduced, short); the demonstrative pronoun *that*, being always stressed is always pronounced /ðæt/, the conjunction *that*, being generally unstressed is usually pronounced like a relative pronoun /ðət/. It is necessary to remember that the interrogative pronouns *who*, *whom*, *whose* always have their strong form since they are always stressed. The prepositions *in* and *on* have no weak forms. The commonest words with strong and weak forms should be studied carefully and committed to the memory. (See **Qualitative, Quantitative, Unstressed vocalism**)

*Further reading:* Jones 1969; Christophersen 1970; Vassilyev 1970; Brown 1990; Roach 1990; Аванесов 1956; Борисова, Метлюк 1980; Сепир 2002; Кочерган 2006; Щерба 2008.

**Regional accent** /'ri:dʒənəl 'æksənt/ The term relates to any local, including both rural and urban communities within a country as well as national groups speaking the same language.

*Further reading:* Jassem 1983; Laver 1995; Паращук 2005.

**Register** /'redʒɪstə/ In phonetics the term is used to refer to (1) the voice quality produced by a specific physiology of vocal organs (e.g., the length, thickness, tension of the vocal cords, etc.); (2) types of phonation (e.g., head register or chest register), which the speaker varies in a controlled manner in a particular situation (formal or informal); (3) the pitch range differences of speakers' voices. Six main types of register are known in phonetic literature: three narrow (high, mid, low); two wide registers, formed by two narrow (high wide and mid wide); and the full register, constituted out of three narrow register types; (4) all tone languages categorized either as *contour* languages or *register* languages, in which the most important characteristic of a tone is its pitch level relative to the speaker's pitch range, rather than the shape of any pitch movement. (See **Voice quality**)

*Further reading:* Abercrombie 1967; Catford 1977; Crystal 1992, 1997; Roach (internet); Дубовский 1975.

**Regressive assimilation** /rɪ'ɡresɪv ə,sɪmə'leɪʃən/ The term used in phonetics to refer to the type of assimilation when the articulation of a sound is changed under the influence of the following sound as in the word *treatment*, where the sound /t/ becomes postalveolar under the influence of the preceding postalveolar /r/. Regressive assimilation is usually marked

with the help of the following diacritic /←/. (See **Assimilation**)

*Further reading:* Vassilyev 1970; Roach 1990; Brown 1990; Laver 1995; Crystal 1997, 2000; Ohala 2001; Сепир 2002; Бровченко та ін. 2003; Паращук 2005; Бровченко, Корольова 2006.

**Relative sonority theory** /'relətɪv sə'nɒrɪtɪ 'θɪəri/ The term refers to the syllable formation theory advanced by O.Jespersen according to which sounds tend to group themselves within the scale of sonority. This theory is also known as the prominence theory. The most sonorous sounds according to this theory are vowels (open vowels /æ, ɒ, aɪ, ɔ:/, mid-open vowels /e, ɜ:, ə, ʌ/, close vowels /i:, ɪ, u, u:/); less sonorous are sonorants (w, j, r, m, n, ŋ, l); and the least sonorous are noise consonants (voiced fricatives /v, z, ð, ʒ/, voiced plosives /b, d, g/, voiceless fricatives /f, s, θ, ʃ/, voiceless plosives /p, t, k/). Sounds are grouped around the most sonorous ones, i.e. vowels and sometimes sonorants, which form the peak of sonority in a syllable. One peak of sonority is separated from the other by sounds of lower sonority, i.e. consonants. The number of syllables in a word is determined by the number of peaks of sonority. The shortcoming of the relative sonority theory lies in its inconsistency to explain the mechanism of syllable formation and syllable division. It only makes an attempt to explain the way the syllable is perceived. (See **Syllable**)

*Further reading:* Jespersen 1922; Jones 1969; Vassilyev 1970; Gimson 1980, O'Connor 1984; Ladefoged 1975; Laver 1995; Топсцев 1975; Борисова, Метлюк 1980.

**Relevant features** /'reləvənt 'fi:tʃəz/ The term used to refer to the combination of phonetic features significant for the phoneme identification within the system of phonemes. Therefore, an inventory of phonemes in any language is no more than a set of relationships or oppositions. Thus, /p/ from a phonetic point of view is characteristically *fortis* and *voiceless* (compared with such lenis voiced sounds as /b/ or /d/); *bilabial* (compared with the place of articulation of such sounds as /t/ or /k/); *oral* (as compared with /m/ or /n/); *plosive* or *stop* (compared with /l/, /r/, /f/); *aspirated* (since when initial it is pronounced with a strong expel of breath between its release stage and the onset as in words *pin* /p<sup>h</sup>ɪn/, *pipe* /p<sup>h</sup>aɪp/, *pet* /p<sup>h</sup>et/, *pat* /p<sup>h</sup>æt/). The phoneme /p/ may be identified by a set of relevant features, which are significant within the English system of consonants: fortis, voiceless, bilabial, oral, plosive, aspirated. This is a label which will be applicable to the phoneme in most of its realizations. (See **Distinctive Features**)

*Further reading:* Chomsky, Halle 1968; Fant 1972; Halle 1983; O'Connor 1984; Ladefoged 1975; Фант 1964; Трубецкой 2000.

**Release** /rɪ'li:s/ The term used in phonetics to refer to the vocal organ movement away from a point of articulation as in plosives.

*Further reading:* Vassilyev 1970; Jassem 1983; Кочерган 2000.

**Resonance** /'rezənəns/ A term used in phonetics and speech acoustics to refer to the process of transmitting vibrations from one body to another; in *auditory phonetics* it is sometimes used to refer to particular speech sound qualities. In speech acoustics, the vocal tract is regarded as a continuous tube with different dimensions at different places along its length. As with all tubes and chambers, it is possible to identify particular frequencies at which there are resonances observable as peaks of energy. The acoustic energy of voiced speech sounds generated in the larynx passes through the vocal tract and at most frequencies much of the energy is lost; however, at the few frequencies where the sound wave resonates, most of the energy passes through, creating peaks of energy at those frequencies. In the case of voiceless sounds, resonance is more difficult to explain. The body to which the vibrations are transmitted is called a *resonator*. (See **Formants**)

*Further reading:* Ladefoged 1975, 2003; Gimson 1980; O'Connor 1984; Crystal 1997; Laver 1995.

**Resonance chamber** /'rezənəns 'tʃeɪmbə/ The term refers to any of the three chambers in the vocal tract in which resonance may take place: the *oral cavity*, the *nasal cavity* and the *pharynx*.

**Resonator** /'rezəneɪtə/ A term denotes the body to which the vibrations are transmitted. Every resonator has a natural resonant frequency, i.e. a particular frequency to which it will most readily respond.

*Further reading:* Ladefoged 1975, 2003; Gimson 1980; O'Connor 1984; Crystal 1997; Артемов 1956.

**Respiratory cycle** /rɪ'spɪrətəri 'saɪkəl/ The term refers in phonetics to the sequence of nearly equal in duration processes of breathing in (inspiration) and breathing out (expiration). When the speaker is silent and at rest, the average rate of breathing is 12 breaths a minute. The time necessary for inhalation and exhalation is about 2,5 seconds each. During speech the pattern changes: a quarter of a second for inhaling, and from 5 to 20 seconds for exhaling, depending on the speaker's voice control, emotional state, his/her psychological type, age and other such factors. In everyday conversation, it is quite normal to produce from 250 to 300 syllables a minute.

*Further reading:* Ladefoged 1975, 2003; O'Connor 1984; Laver 1995; Crystal 1997.

**Retentive tendency** /rɪ'tentɪv 'tendənsɪ/ A term used to refer to the tendency of all derivatives to retain the accent on the same syllable on which it falls in the original, or parent word, i.e. the word from which the derivative is formed, e.g. <sup>1</sup>wonder, <sup>1</sup>wonderful, <sup>1</sup>wonderfully; <sup>1</sup>person, <sup>1</sup>personal, <sup>1</sup>personally, etc. (See **Word accent**)

*Further reading:* Vassilyev 1970; O'Connor 1980; Борисова, Метлюк 1980.

**Retention** /rɪ'tenʃən/, or *stop-stage*. The term is used to refer to the second stage of the articulatory gesture during which the speech organs are kept for some time in the position necessary for the sound pronunciation. (See **Articulatory gesture**)

*Further reading:* Vassilyev 1970; Кочерган 2000.

**Retracted** /rɪ'træktɪd/ The term used in phonetics to refer to the backward movements of an articulator, for instance, the apex of the tongue as in the production of /ɪ/ in the British and American English pronunciation.

**Retroflex** /'retrəʊfleks/ A term refers to the sounds articulated by the tip of the tongue curled back towards the hard palate immediately behind the alveolar ridge, e.g. a retroflexed /ɻ/ such as is found in the South-West British and American English.

**Rhetoric** /'retərɪk/ The term is used to refer to (1) the discipline that focuses on a set of rules (as structure or style) to be observed by a speaker or writer in order to express himself with eloquence in relation to the *topic* of speech or writing, the *audience* and the *purpose* of communication; (2) the art or technique of the persuasive use of language.

*Further reading:* Kingdon 1980; Mann et al. 1992; Sproule 1991; Античные 1978; Пирс 2000, Сагач 2000; Фонетика 2005.

**Rhotic** /'rəʊtɪk/ A term is used in varieties of English pronunciation in which the phoneme /r/ is found in all phonological contexts. For instance, most speakers of General American pronunciation use the rhotic /r/ that may occur after a vowel (as in *part*, *cord*, *bird*) and before a pause. (See **Epenthesis**)

**Rhoticization** /,rəʊtəsaɪ'zeɪʃən/ The term denotes the feature that describes an auditory property, the so-called r-coloring, of a vowel that results from the lowering of the third formant (F<sub>3</sub>).

*Further reading:* Ladefoged 1975; Laver 1995.

**Rhyme** /raɪm/ A term used in phonetics (mostly in poetic texts analysis) to refer to the repetition of identical or similar terminal sounds, sound combinations or words. The concept of rhyme has become useful in the phonological analysis of the syllable as a way of referring to the vowel peak of the syllable plus any sounds following the peak within the syllable (the *coda*). For example:

*Loveliest of trees, the cherry now  
Is hung with bloom along the bough,  
And stands about the woodland ride  
Wearing white for Eastertide* (A.E. Housman).

*Further reading:* Tsur 1992.

**Rhythm** /'rɪðəm/ A term is used to refer to the perceived regularity or periodicity of stressed syllables that segment the speech continuum. Languages differ in their rhythm mainly because of this phenomenon. In some languages the recurring phenomena are stresses, in others – syllables, thus they may be characterized either by stress-timed or syllable-timed rhythm. The term *stress-timed rhythm* refers to the tendency for stressed syllables to occur in connected speech at approximately equal intervals of time. This means that if there are any unstressed syllables between stresses, these have to be fitted in without delaying the regular beat of the stress pulses. The more unstressed syllables there are after a stress, the quicker they must be said to catch the next stress pulse. English is a stress-timed language since it is based on the contrast of stressed and unstressed syllables. The *unit of rhythm* is a rhythmic group, or *foot*, which consists of a stressed syllable and unstressed syllables preceding it (enclitics) or following it (proclitics). These units follow one another in such a way that the lapse of time between the stressed syllables is more or less isochronous, though there is no direct relation between perceptible and acoustic isochrony. The term *syllable-timed rhythm* associates with the languages in which all syllables have an equal time value. Spanish and French are known as syllable-timed languages. In conversational speech the rhythmic patterns are rather complicated, and the timing of speech is not random. Maximally regular patterns, such as are encountered in poetry, are referred to as *metrical*.

According to some psychological research in the sphere of speech rhythm the listeners' brains tend to hear timing regularities even where there is little or no physical regularity. Medical research shows that listening starts in the womb, and the mother's voice is not only important to the child from an affective point of view but that, among other linguistic features, it also provides the child with the rhythm of its mother tongue. The rhythm

perception begins during pregnancy and newborns do remember melodies and rhythm heard prenatally.

*Further reading:* Pike 1945; Abercrombie 1967; Jones 1969; Uldall 1978; Ladd, Monaghan 1987; Hayes 1989; Brown 1990; Monaghan 1990; Roach 1990; Hepper 1991; Tsur 1992; Papousek 1994; Laver 1995; Crystal 1997; Fonseca 1998; Jeffries 1998; Cook 2002; Setter 2006; Антипова 1984; Сепир 2002.

**Rhythm unit** /'rɪðəm ju:nɪt/, or *rhythmic group*, or *phonetic word*. The term used to refer to the unit of rhythm represented by a stressed syllable and unstressed syllables before and/or after it. Rhythmic units give form to sequences of syllables. (See **Rhythm**)

*Further reading:* O'Connor 1980; Jassem 1983; Антипова 1984.

**Rhythmic group** /'rɪðmɪk ˌgru:p/ Another term for the *rhythm unit* (See **Rhythm unit**)

**Rhythmic phrase** /'rɪðmɪk ˌfreɪz/ Another term for the *intonation group*. (See **Intonation group**)

**Rhythmic tendency** /'rɪðmɪk ˈtendənsɪ/ A term used to refer to the tendency of avoiding a succession of weak syllables. As a result there appears a stress shift with rhythmic alteration of stressed and unstressed syllables, e.g., 'exquisite or ex'quisite, 'sonorous or so'norous, 'hospitable or ho'spitable. This tendency is usually observed in polysyllabic words. The accent determined by this tendency is called *rhythmical*. (See **Word Accent**)

*Further reading:* Vassilyev 1970; Laver 1995.

**Rising (rise)** /'raɪzɪŋ/ The term refers to the nuclear tone used to ask for information, to express non-finality, to lead on to something else. The rising tone is realized in speech by its allotones: *the low rising tone* which begins at or near the bottom and rises to about the middle of the normal voice range; *the high rising tone* which starts on a pitch slightly below the middle of the normal voice range and rises to its top. In the tonetic stress-mark system the rising tone is represented by a rising stress-mark (ˌm, ˈm correspondingly). Both allotones of the rising tone have their own spheres of functioning. It is important to distinguish between the *high rising tone* (known as a question tone used to ask for repetition or additional information, to gain the time, to express astonishment or a shocked reaction) and the *low rising tone* (used in different communicative types of

sentences making them sound non-categorical, non-final, perfunctory, detached, leading to something else).

*Further reading:* Jones 1969; Crystal 1969; Kindon 1980; Jassem 1983; Cruttenden 1981; O'Connor 1984, Bolinger 1989; Laver 1995; Brazil 1997; Антипова 1979.

**Rising diphthong** /'raɪzɪŋ 'dɪfθɒŋ/ The term refers to a diphthong in which the second element is stronger than its head, or the nucleus. In some cases the choice between a falling and a rising diphthong may depend upon the accentual pattern placed upon the word. It means that in the unstressed position the falling diphthong may become a rising one. (See **Diphthong**, **Falling diphthong**)

*Further reading:* Jones 1969; Gimson 1980; Кочерган 2000; Теоретична 2003.

**Rising meter** /'raɪzɪŋ 'mi:tə/ The term is used in metrical phonology to refer to iambic and anapaestic meters. (See **Iamb**)

**Root (tongue)** /ru:t/ A term used to refer to the place where the tongue is attached to the rear end of the lower jaw.

**Rounded** /'raʊndɪd/ vowels. The term denotes the vowels in the production of which the lips are rounded and slightly protruded, e.g. [ɒ], [ɔ:], [ʊ], [u:] etc.

*Further reading:* Laver 1995.

**Rounding** /'raʊndɪŋ/ The term used to denote the process of bringing the edges of the lips towards each other. Lip-rounding results also in a protrusion or pushing forward of the lips. The rounded vowel phonemes are [ɒ], [ɔ:], [ʊ], [u:], the nucleus of the diphthong [ɔɪ] and the glide of the diphthong [əʊ]. Consonants, too, may have rounded lips (e.g., [w], the basic articulation of which consists in lip-rounding). Lip-rounding in consonants is regarded as a *secondary articulation*, and it is usual to refer to it as *labialisation*. (See **Labialisation**)

**RP** /'ɑ: 'pi:/ The abbreviation stands for the term Received Pronunciation. (See **Received Pronunciation (RP)**, **Pronunciation norm**, **Dialect**)

*Further reading:* Jones 1969; Gimson 1980; Brown 1990, 2001; Wells 1982; Vassilyev 1970; Ramsaran 1990; Parashchuk 2000; Шахбагова 1982.

## S

**Salience** /'seɪliəns/ The term used to refer to the perceptual prominence of a sound, syllable, word. The primary focus marker by a certain nuclear tone or emphatic stress in an intonation group or an utterance is always on what is the most salient as, for instance, a verbal reaction to the co-converser's remark or stimulus.

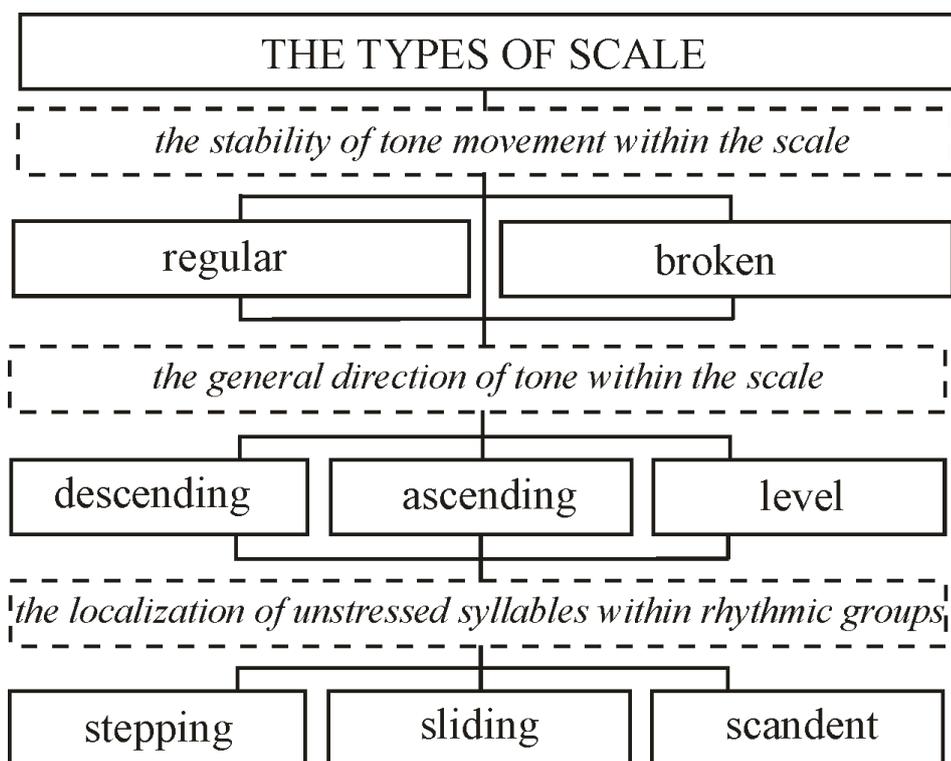
*Further reading:* Bolinger 1989.

**Scale** /skeɪl/, or *head*. The term used to refer to the optional part of an intonation group, or intonation contour which begins with the first stressed syllable and together with the intervening unstressed syllables stretches up to the nuclear tone, e.g.: *She's 'coming 'home for ˌChristmas.*||

/ʃiz 'kʌmɪŋ 'həʊm fə ˌkrɪsməs || /



where the fragment of the sentence *'coming 'home for* which begins with the first stressed syllable (*'coming*) and extends up to the nuclear tone (*ˌChristmas*) forms the scale. Schematically the intonation structure of this sentence may be presented in the following way: *Low Pre-Head + the Regular Descending Stepping Scale + Low Fall + Tail*. The function of this fragment of the intonation contour is to convey the speaker's attitudes, emotions and feelings. The types of scale are classified according to the following principles: (1) the stability of tone movement within the scale – *regular* and *broken*; (2) the general direction of the tone within the scale – *descending*, *ascending* and *level*; (3) the localization of unstressed syllables within the rhythmic groups – *Stepping*, *Sliding* and *Scandent*. Thus the most frequent types of scale are: **the Regular Descending Stepping Scale**, e.g. *Now 'breathe in 'deeply through the ˌnose.*; **the Regular Descending Sliding Scale**, **the Regular Descending Scandent Scale**, e.g. *ˆI ˆhate ˆdoing ˌnothing*. All these scales can also be ascending: **the Regular Ascending Stepping Scale**, **the Regular Ascending Sliding Scale**, **the Regular Ascending Scandent Scale**, e.g.: *ˌIt's ˆwisest to ˆdecide in ˆgood ˆtime*. Besides all of them can be broken: **the Broken Descending Stepping Scale**, e.g.: *The 'road 'winds through a ˆsmall ˌvillage*, **the Broken Descending Sliding Scale**, **the Broken Descending Scandent Scale**. The table below presents the types of scale.



*Further reading:* Armstrong, Ward 1926; Crystal 1969; Christophersen 1970; O'Connor, Arnold 1976; Фонетика... 1980; Калита 2001.

**Scale of sonority** /<sup>1</sup>skɛɪl əv sə'nɒrɪtɪ/, or *sonority hierarchy*. The term refers to the scale according to which all speech sounds are classed depending on their degree of prominence. Two main factors determine how sonorous a sound is: (1) the degree of obstruction of the vocal tract during the production of the sound, and (2) whether the sound is voiced or not. Thus all voiced sounds are more sonorous than their voiceless counterparts. The class of sonorant consonants are all considered more sonorous than the class of obstruents (affricates, fricatives, plosives). The most sonorous of all classes are vowels. Among the vowels, the more open a vowel, the more sonorous it is, since openness equates with less obstruction in the vocal tract. A general depiction of the sonority hierarchy would be: (1) *vowels* (open vowels /æ, ɒ, ɑː, ɔː/, mid-open vowels /e, ɜː, ə, ʌ/, close vowels /iː, ɪ, ʊ, uː/) → (2) *sonorants* (w, j, r, m, n, ŋ, l) → (3) *obstruents* (voiced fricatives /v, z, ð, ʒ/, voiceless affricate /dʒ/, voiceless plosives /b, d, g/, voiceless fricatives /f, s, θ, ʃ/, voiceless affricate /tʃ/, voiceless plosives /p, t, k/). The sonority scale underlies the syllable formation theory, which states that there are as many syllables in a word as there are sonority peaks, or peaks of prominence. (See **Relative Sonority Theory, Syllable**)

*Further reading:* Jespersen 1922; Jones 1969; Vassilyev 1970; Gimson 1980, O'Connor 1984; Ladefoged 1975; Laver 1995; Торсуев 1975; Борисова, Метлюк 1980.

**Schwa** /ʃwa:/, or *schwa vowel*. The term denotes the neutral vowel /ə/ which is the most common weak vowel in English and which never occurs in a stressed syllable, e.g. in the word *about* /ə'baʊt/ the first syllable is represented by a schwa vowel. It is generally described as being unrounded, central, mid and lax. The schwa vowel is the most frequently occurring vowel of English which has no regular letter for its spelling. The schwa phoneme occurs in speech in its four allophones: (1) sound /ə/ articulated with the shade of /ɜ/ is pronounced in initial unstressed syllables as in the words *anew* /ə'nju:/, *ashore* /ə'ʃɔ:/ and in the indefinite article *a*, e.g.: *a book* /ə buk/; this allophone is marked as /ə<sup>3</sup>/, e.g.: *aback* /ə<sup>3</sup> bæk/, *a look* /ə<sup>3</sup> lʊk/; (2) when the sound /ə/ occurs in a final unstressed syllable it acquires the coloring of the phoneme /ʌ/ and can be marked in allophonic transcription as /ə<sup>ʌ</sup>/, e.g.: *other* /ʌðə<sup>ʌ</sup>/; (3) before the suffixes *-s*, *-es*, *-ed*, *-er/-or*, etc. the schwa vowel /ə/ as in the words *bettered* /'betəd/, *teachers* /'ti:tʃəz/ is characterized by a bit longer duration; this allophone of /ə/ is marked with the help of the symbol /ə˘/, e.g.: *classifiers* /'klæsɪfaɪə˘z/, *delivered* /dɪlɪvəd˘/; (4) the sound /ə/ occurs in its shortest in duration allophone when it is used in initial unstressed syllables that have the CVC structure as in *contain* /kən'teɪn/, *compose* /kəm'pəʊz/ or in the suffixes *-tion*, *-sion* and the like as in the words *construction*, *disillusion*, *function*, *table*; this allophone of the schwa vowel is marked either by the symbol /ə̆/ or as /<sup>ə̆</sup>/, e.g.: /k(ə̆)n'strʌkʃən/, /dɪsɪlu:ʒən/, /'fʌŋkʃən/, /'teɪb<sup>ə̆</sup>l/. Sometimes one can come across several allophones of the /ə/ phoneme within one word, e.g.: *assumption* /ə<sup>3</sup>ˈsʌmpʃən/, *container* /k(ə̆)n'teɪnə<sup>ʌ</sup>/, etc.

*Further reading:* O'Connor 1984; Roach 1990; Laver 1995; Wells 2000.

**Scientific phonetics** // The term refers to the form of phonetics which seeks to understand how speech works at all levels from the brain of the speaker to the brain of the hearer. This is where theories are formulated, statistical analysis of results performed as well as controlled observations, calibrations and all other characteristics of traditional scientific procedures. (See **Taxonomic phonetics**)

*Further reading:* Ohala 1991.

**Secondary articulation** /'sekəndəri ɑːtɪkjʊ'leɪʃən/ The term refers to an articulation made by two of the organs of speech that are not involved in the primary articulation. For instance, the alveolar lateral sonorant /l/ when syllable final is often made with the back of the tongue raised, and thus has the secondary articulation of velarization. (See **Articulation**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Laver 1995.

**Segment** /'segmənt/ (segmental) The term refers to the phonological sound units or segments that constitute the language phonemic system. The segments combine to produce syllables, words, and sentences, known as the verbal aspect of speech. (See **Phonology**)

*Further reading:* Laver 1995; Yule 2009.

**Segmental phonology** /seg'ment<sup>ə</sup>l fəʊ'nɒlədʒi/ The term refers to the part of phonology which focuses on the study of segmental units or phonemes. It is also known as *phonemics*. (See **Phonology**)

*Further reading:* Трубейцкой 2000; Crystal 1997; Laver 1995; Ladefoged 1975; Gimson 1980; O'Connor 1984.

**Segmentation** /,segmen'teɪʃən/ The term refers to the process of dividing a speech flow into sense-groups, or intonation groups, e.g.: *One day*  *a cicada*  *sat chirping*  *on a tall tree*, where the wavy bar shows the boundary between the neighboring sense-groups.

**Semantic centre** /sə'mæntɪk 'sentə/ The term refers to the most essential for the listener information conveyed in an utterance or intonation group, singled out by a certain nuclear tone. For example, the utterance *'Spring has*  *come* states the fact with the semantic center on the word *come*. If the sentence is pronounced with the nuclear stress on the word *'Spring* (*'Spring has*  *come*) as the semantic center of the utterance that conveys a semantic contrast. In phonetic literature one can come across the synonymous terms: *a communicative centre* or *an utterance information focus*. (See **Communicative centre**)

**Semantic information** /sə'mæntɪk ɪnfə'meɪʃən/ The term refers to the direct meaning of a spoken utterance. It is the propositional content of the communicative acts of conversation, and the more complex the proposition, the more likely it is to rely on being communicated by spoken words. Simple semantic information can often be exchanged by other means, however (non-verbal means of communication, like eye-contact, gestures, etc.).

**Semantic method** /sə'mæntɪk 'meθəd/ The term refers to the method used in phonology to establish a set of phonemes of a language, and is based on the *phonological rule* that a phoneme can distinguish words when opposed

to another phoneme in identical phonetic context. The semantic method of identification of phonemes attaches great significance to meaning; the phonemes form a *phonological opposition* and are realizations of two different phonemes. If not, they are allophones of one and the same phoneme. Such an analysis sometimes is referred to as *minimal pair test*. The pairs of words, which differ in one sound only are called *minimal pairs*.

*Further reading:* Ladefoged 1975; Gimson 1980; Crystal 1997; Vassilyev 1970; Бровченко 2003.

**Semantic tendency** /sə'mæntɪk 'tendəns/ A term used to refer to the process of highlighting the most important elements in words. Some meaningful prominence, or its greater degree, is given to negative prefixes, e.g., *un-* (unknown), *in-* (inadequate), *mis-* (misbehave) etc., or semantically important elements of compound words in certain contexts, e.g. <sup>l</sup>*well-known* (when used attributively) – *well-known* (when used predicatively). (See **Word stress**)

*Further reading:* Gimson 1980; Halle, Vergnaud 1990; Vassilyev 1970; Бровченко 2003; Борисова, Метлюк 1980.

**Semantics** /sə'mæntɪks/ The term refers to the field of linguistics which studies the meanings of language units (words, phrases, sentences, and texts). Semantics can be approached from a theoretical as well as empirical (for example, psycholinguistics and neuroscientific) points of view. Linguists investigate the way in which meaning in a language is structured; they distinguish between different types of meaning. Semantics includes the study of thematic roles, argument structure and its linking to syntax, i.e. the semantic structure of sentences. Semantics is often opposed to syntax: the former pertains to what something *means* while the latter has reference to the formal structure or patterns in which something is *expressed* (written or spoken). Besides, semantics deals with sense and reference, truth conditions, and discourse analysis. Some scholars consider pragmatics as a part of semantics; otherwise it is treated as a branch of its own. Semantics is distinguished from ontology (study of existence) in being about the use of a word more than the nature of the entity referenced by the word. In phonetics the term semantics is used in connection with meanings expressed by different sounds and their sequences, intonation patterns, nuclear tones, stress patterns (e.g., semantic tendency of the word stress), etc. (See **Intonation, Onomatopoeia, Sound symbolism, Word accent**)

*Further reading:* Ullmann 1964; Lakoff 1971; Lewis 1972; O'Connor, Arnold 1976; Lyons 1977; Leech 1981; Palmer 1982; Wierzbicka 1991; Allan 2001; Yule 2009; Багмут 1991; Павиленис 1983; Кронгауз 2001;

Изворска 2002; Рахилина 2002; Ченки 2002; Потапова, Потапов 2006.

**Semiotics** /,semi'ɒtiks/ The term refers to the subject that concerns the study of all aspects of sign systems used for communication. The semiotic analysis of speech can involve a consideration not only of the communicative signs themselves, but also of the mechanisms by which the signs are produced by the speaker and perceived by the listener, using the auditory and visual channels of communication as well as the ways in which the manufacture and use of particular signs can carry information about the characteristics of their producers.

*Further reading:* Laver 1995; Jeffries 1998; Sonneson 1998; Крейдлин 2002; Шейгал 2004; Калита, Тараненко 2009.

**Semitone** /'semi'təʊn/, or a *half step*, or a *half tone*. The term is used to denote the smallest tonal interval commonly used in acoustic phonetics. In twelve-tone equal temperament all semitones are equal in size. Any equal-tempered interval can be defined in terms of an appropriate number of semitones, e.g. an octave is 12 semitones wide.

**Semivowel** /'semi,vauəl/ A term used to refer to the class of sounds, such as /j, w/ that function in a way similar to consonants but phonetically are similar to vowels and in phonetic description they are more properly treated as vowel glides. This term is almost out of use nowadays; the term *approximant* is more often used in present-day phonetics. (See **Approximants, Liquid consonants**)

**Sense-group** /'sens gru:p/ The term is employed in phonetics to denote a word or a group of words that form the shortest unit in a sentence (or an utterance) and make sense from the point of view of meaning, grammatical and phonetic structure, though it doesn't indicate its intonational character. In extended sentences the string of words are usually broken into sense-groups (or separate tone units or intonation groups). For example: *How ever much he gets on your nerves, | try to be polite to him.* || This sentence consists of two sense-groups, which are organized grammatically, phonetically and semantically. (See **Breath group, Intonation group, Syntagm, Tone group**)

**Sentence perspective theory** /'sentəns pə'spektɪv 'θiəri/ (See **Actual division of the sentence**)

*Further reading:* Mathesius 1975; Esser 1983; Firbas 1992; Фаулер 2002; Мартине 2004.

**Sentence stress** /<sup>1</sup>sentəns stres/, or *utterance stress*. The term refers to the special prominence given to one or more words in a sentence (utterance). The means with the help of which the special prominence is achieved and the effect of stress is produced are the variations of pitch, loudness, length and quality. *Acoustically*, sentence stress is determined by variations of fundamental frequency, intensity, duration and formant structure. Sentence stress is an essential part of a sentence. The subsystem of utterance stress in English includes the following basic types: *nuclear stress* (marked by a kinetic tone), *non-nuclear full stress* (often marked by static tones), *partial stress* (marked either by a dot (when a partially stressed word is pronounced after a rising tone in the rising tail) or a vertical bar (when the word that takes it follows a falling nuclear tone) and weak stress (syllables are not marked as a rule as they are not stressed). The principle question in studying *sentence stress* is which word or words should be stressed (or accented). It is widely accepted that nouns, verbs, adjectives, adverbs, numerals, some pronouns are usually strongly stressed. The most likely place for nuclear stress to fall is on the appropriate syllable of the last lexical word of the sentence, which is as a rule the most important word for the meaning of the sentence. Besides, the distribution of stresses in a sentence is determined by *semantic*, *grammatical* and *rhythmical* factors. All these factors are closely linked, the semantic factor being most important. (See **Utterance stress**)

*Further reading:* Vassilyev 1970; Laver 1995; Jeffries 1998; Борисова, Метлюк 1980; Бровченко 2003.

**Sequence** /<sup>1</sup>si:kwəns/ The term is used in phonetics to relate to a series of phonological units, such as sounds (sound sequences), tones (sequence of tones), etc.

**Sexolect** /<sup>1</sup>seksəulekt/ The term refers to the pronunciation attributed to the speaker on the basis of his/her gender. According to J.D.O'Connor and G.Yule the pronunciation of men and women differ within the same accent and the same social group. J.D.O'Connor considers that the reason is that women are more sensitive to "correctness" in speech and that is why their pronunciation differs from that of men's in the directions of what they take to be more desirable; men usually orient their speech to localized norms than women do. (See **Basilect**, **Sociolect**, **Hyperlect**, **Mesolect**)

*Further reading:* Wells 1982; O'Connor 1984; Ramsaran 1990; Yule 2005; Pennington 1996.

**Sibilant** /<sup>1</sup>sibilənt/ The term denotes fricative sounds in the production of which one can perceive a sharp or strong hissing noise. In English there are

four sibilant phonemes: /s, z, ʃ, ʒ/.

**Sign** /sain/ A term used to denote the arbitrary coupling of an acoustic image and a concept. The term was advanced by Saussure who described the acoustic image as a *signifier*, and described the concept as the *signified*. Many scholars use the term *sign* to denote actual sequences of speech sounds, such as the *utterance* rather than the *concept*. This is undoubtedly not what Saussure meant. (See **Semiotics**)

*Further reading:* Jeffries 1998; Sonneson 1998; Соссюр 1977; Сосюр 1998; Крейдлин 2002; Шейгал 2004.

**Silent pause** /'saɪlənt 'pəʊz/ A term used to denote any silence which is of 200 msec or more in duration. (See **Pause**)

*Further reading:* Jassem 1983; Bolinger 1989; Brown 1990; Laver 1995; Станиславский 1951; Гвоздев 1957; Кочерган 2000; Бровченко, Корольова 2006.

**Simple tune** /'sɪmpəl 'tju:n/ The term stands for an intonation group containing only one kinetic tone.

**Slip of the tongue** /'slɪp əv ðə 'tʌŋ/, or *speech error*. A term used to refer to the errors we make in speaking either because of the rapid tempo of speech or because the language we speak is not our native tongue. Much has been discovered about the control of speech production in the brain as a result of studying the errors we make in speech. Many slips involve phonemes occurring in the wrong place. Some researchers have made large collections of recorded pronunciation errors, and there are many discoveries still to be made in this field as well as in the sphere of language interference. (See **Bilingualism, Interference**)

*Further reading:* Boomer, Laver 1968; Nooteboom 1980; Butterworth 1981; Ferber 1991; Crystal 1992, 1997; Валігура 2008.

**Slanted brackets** /'slɑ:ntɪd 'brækɪts/, or *slanting brackets*. The term refers to the brackets used to represent phonemes. (See **Square brackets, Phonemic transcription, Transcription**)

**Social accent** /'səʊʃəl ,æksənt/ The term used to relate to the speaker's accent reflecting his/her cultural and educational background. (See **Basilect, Dialect, Dialectology, Hyperlect, Mesolect, Sociolect, Sociophonetics**)

*Further reading:* Chambers, Trudgill 1998; Crystal 1997; Simpson 2001a; Romaine 2001.

**Sociolect** /'səʊʃiəʊlekt/ The term refers to the accent of a certain social group of people. There are several types of sociolect: (1) *annolect* – the pronunciation attributed to the speaker on the basis of his/her age; (2) *acrolect* – the accent which is associated with the speaker's high level of education as well as with his/her social and economic status; (3) *basilect* – the pronunciation of elderly people with little education in rather isolated areas, i.e. the pronunciation of the lowest social prestige; (4) *mesolect* – the accent between acrolect and basilect; (5) *hyperlect* – the pronunciation typical of a small minority of RP/BBC English speakers; it is spoken in a number of famous British schools and Oxbridge colleges by a minority of teachers and academia; (6) *paralect* – the pronunciation of people sharing much of the prestige of the acrolect and retaining enough traces of the accent of their region of birth or upbringing; (7) *sexolect* – the pronunciation attributed to the speaker on the basis of his/her gender. (See **Dialect, Dialectology, Lect, Social accent, Sociophonetics**)

*Further reading:* Trudgill 1983, 1995; Chambers, Trudgill 1998; Honey 1991; Laver 1995; Yule 2005; Pennington 1996; Gimson 2001.

**Sociophonetic variation** /,səʊʃiəʊfə'netɪk ˌvɛəri'eɪʃən/ The term relates to variations in people's pronunciation (manner of speech) caused by sociolinguistic factors such as age, gender, occupation, locality, ethnicity, social class, the speaker's social status and the like. (See **Social accent, Sociolect, Sociophonetics**)

*Further reading:* Trudgill 1983, 1995; Chambers, Trudgill 1998; Honey 1991; Laver 1995; Yule 2005; Pennington 1996; Gimson 2001.

**Sociophonetics** /,səʊʃiəʊfə'netɪks (/fəʊ'netɪks)/ The term used to refer to the branch of phonetics which studies the way the speaker's social background, education, occupation, social status and roles, sex and age, physical and psychological states, public or private speech as well as the purposes for which one is using language, influence his/her pronunciation. The data obtained, as a result of sociophonetic investigations, enable scholars to give a coherent account of the relation between differences of pronunciation and differences of social grouping and social attitudes.

*Further reading:* Halliday 1973; O'Connor 1984; Milroy, Milroy 1990; Roach 1990, Панов 1979; Белл 1980; Петренко 1998; Федорів 2000; Trudgill 1983; Wardhaugh 1992; Trudgill, Hannah 1995; Wright 2001.

**Soft palate** /'sɒft 'pælət/ The term used to refer to a muscular flap at the back of the mouth that can be raised to press against the back wall of the pharynx and shut off the nasal track, preventing air from going out through

the nose. One can feel the difference in texture between the hard and the soft palates quite easily with a finger, pressing it against the roof of the mouth behind the teeth and letting it slide backwards. One can notice that there is a hard bone underneath the skin, but after that the palate becomes soft and fleshy. For most speech sounds the soft palate is raised and pressed against the upper back wall of the throat so that no air can escape through the nose. Such an articulation is typical of all oral sounds. However, for nasal consonants articulation (e.g. /m, n, ŋ/) the soft palate is lowered so that the air can pass only through the nose. The term *soft palate* can be substituted by the word *velum*; the two terms can be used interchangeably in most contexts.

**Sonant** /'səʊnənt/ Another term for *sonorant*. (See **Consonant**, **Sonorant**).

**Sone** /səʊn/ The term is used in acoustic phonetics to refer to a unit that measures loudness.

**Sonogram** /'səʊnəgræm/ A term used in acoustic phonetics to refer to the pictures which display the sound spectrum.

**Sonograph** /'səʊnəgrɑ:f/ The term denotes the apparatus which displays the sound spectrogram. Sometimes these visual displays are referred to as sonograms.

**Sonorant** /'sɒnərənt/, or *sonant* /'səʊnənt/. A term refers to the sounds which are voiced and do not cause enough obstruction to the airflow to prevent normal voicing from continuing. Thus vowels, nasals /m, n, ŋ/, laterals /l/ and approximants /j, w, r/ are sonorants.

**Sonority** /sə'nɒrəti/ The term refers to the quality of sounds pronounced with the greater degree of prominence, audibility and carrying power. Vowels are said to have the greatest degree of sonority, less sonorous are sonorants, and the least sonorous are noise consonants. O.Jespersen claims that there is a sonority hierarchy among classes of sounds that governs the way they combine with other sounds, and suggests the relative sonority scale of speech sounds. (See **Relative sonority theory**)

*Further reading:* Jespersen 1922; Jones 1969; Vassilyev 1970; Gimson 1980, O'Connor 1984; Ladefoged 1975; Laver 1995; Topcyев 1975; Борисова, Метлюк 1980.

**Sonority hierarchy** /sə'nɒrɪti 'haɪərə:ki/ Another term for *scale of sonority*.

(See **Relative sonority theory, Scale of sonority**)

**Sonority scale** /sə'nɒrəti skeɪl/ Another term for *scale of sonority, sonority hierarchy* (See **Relative sonority theory, Scale of Sonority**)

**Sound** /saʊnd/ The term refers to the material actualisation of a phoneme in the speech flow. Sounds function in speech contrastively, being responsible for the meaningful differences between the words, e.g., *seat, sit, set, sat*, where the vowels distinguish the meanings of the words. In order to classify sounds from the point of view of their production it is necessary to take into account (a) the source of air movement (*lung-, pharynx-, or mouth-air mechanism*); (b) the direction of air movement (*ingressive / egressive*); (c) the amount of air pressure (*fortis / lenis*); (d) the work of the vocal cords (*voiced / voiceless, etc.*); (e) the state of soft palate (*velic closure / opening*); (f) the place of obstruction (*bilabial, glottal, etc.*); (g) the manner of noise production (*plosive, lateral, etc.*). Sound has four main aspects: articulatory, acoustic, auditory and functional. (See **Speech sound, Allophone, Phonetic system**)

*Further reading:* O'Connar 1984; Laver 1995; Crystal 1997; Pierrehumbert 2000a; Артемов 1956; Скалозуб 1979; Сосяр 1998; Сепир 2002.

**Sound imitation** /'saʊnd ɪmɪ'teɪʃən/ The term refers to (1) the manner of articulating sounds which copy the sounds produced in nature (e.g.: *flip, plop, splash, murmur, bump, etc.*). There are the following types of sound imitation: complete, partial, reduplicated and combined, or mixed; (2) copying a sound or an intonation pattern, previously heard in the native speaker's pronunciation. (See **Onomatopoeia, Phonosemantics, Sound-symbolism**)

*Further reading:* Воронин 1982, 1990; Marchand 1966; Wescott 1980; Bloomfield 1984; Ohala 1994; Lu 1998; Bolinger 1989, 1991; Matisoff 1994; Magnus 1999; Левицкий 1973, 1998; Журавлев 1974, 1981.

**Sound law** /'saʊnd 'lɔ:/ The term refers to a law describing the regular, predictable changes of sounds in the historical development of the language phonetic system. Phoneticians have to know the traditionally recognized Grimm's Law and Verner's Law. *Grimm's Law* describes the regular changes undergone by Indo-European stop consonants represented in Germanic, essentially stating that Indo-European *p, t, k* became Germanic *f, th, h*; Indo-European *b, d, g* became Germanic *p, t, k*; and Indo-European *bh, dh, gh* became Germanic *b, d, g*. According to *Verner's*

*Law* Proto-Germanic non-initial voiceless fricatives in voiced environments became voiced when the previous syllable was unstressed in Proto-Indo-European. For example, both the *th-* and the *-d* of English *third* are descended from Proto-Germanic voiceless *\*th*, but the second was voiced by Verner's Law. *The Great Vowel Shift* describes the changes of all ME (Middle English) monophthongs and some of the diphthongs. According to the great vowel shift all the vowels became closer and some of the vowels occupied the place of the next vowel in the vowel chart, e.g.: more open [ɛ:] took the place of [e:], and later moved one step further in the same direction and merged with the former [e:] in [i:]; the long [o:] shifted one step to become [u:], while ME [u:] changed to [aʊ]. The long vowels [u:], [i:], [ɑ:] broke into diphthongs [aʊ], [aɪ], [eɪ] respectively. The diphthong [əʊ] did not undergo any modification.

*Further reading:* Page 1998; Ohala 2001; Chomsky, Halle 2002; Ильиш 1972; Расторгуева 1983.

**Sound matter** /'saʊnd 'mætə/ of a language. The term refers to the combination of (1) the segmental (or phonemic) component, (2) the words syllabic structure, (3) the words accentual structure and (4) intonation. (See **Phonetic system, Phonic substance**)

**Sound spectrograph** /'saʊnd 'spektrəʊgrɑ:f/ The term denotes a device that translates a sound into a visual representation of its component frequencies. Present-day spectrographs represent three dimensions on a spectrogram: (1) real time of a continuous spectral display; (2) frequency; (3) intensity.

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984.

**Sound-symbolism** /'saʊnd 'sɪmbəlɪzəm/ The term refers to the ability of individual sounds to reflect, or symbolize, properties of the word and thus to "have meaning". Though it is universally acknowledged that individual sounds do not have meaning, certain English phonemes are sometimes associated with particular feelings or human characteristics, reflecting close relationship to objects or states in the outside world. For example, /sl-/: *sly, slick, slothly, slothful, sluggard, sluggish, sloppy, slipshod, slime, slither, slug*, etc, /sn-/: *sniff, sneer, snigger, snitch, sneak, snivel, snob, snotty, snide, sniffle*, /kr-/: *crash, crack* evoke, as a rule, unpleasant associations; /fl-/ associates with quick and light movement: *fly, flash, flame, flap, flip, flee, flit*; /gl-/ associates with: (1) static (unmovable) light, e.g.: *glow, glimmer, glare, gloat*; (2) obscure light, e.g.: *gleam, glitter, glisten*, (3) dusky light, e.g.: *gloaming*; /br-, fr-, gr-, pr-, r-/ are typical of minor texts, while

phonostemes /bl-, fl-, gl-, pl-/ characterize major texts; /br-/ is associated with noise and mess. Final consonantal clusters, for instance, (1) /-mp/ associates with awkwardness and clumsiness as well as with large blunt shapes, e.g.: *bump, lump, hump, rump, mump(s), clump*; (2) a whole family of such words *muddle, fumble, straddle, cuddle, fiddle, buckle (vb.), struggle, wriggle* are associated with clumsy, awkward or difficult actions because they all end with a plosive and a syllabic /l/. The assumption has been made that the type of a vowel under stress (i.e. its acoustic characteristics) is capable of differentiating the shades in the meaning of synonyms: *gleam, glister, glitter, glare, glow, glance*. That is why individual phonemes and phonetic features are considered to be meaning-bearing in definite contexts. Phonosemantists think that every phoneme has a unique semantics. Thus every word, which contains a given phoneme, bears an element of meaning, which is absent in words not containing this phoneme. Besides, the effect of the phoneme meaning varies with the position that the phoneme occupies within the syllable. In addition, one finds that all phonemes, which have a common phonetic feature, also have a common element of meaning. In literary contexts sound symbolism is more commonly referred to as onomatopoeia. (See **Onomatopoeia, Phonosemantics**)

*Further reading:* Fonagy 1961, 1965; Marchand 1966; Wescott 1980; Bloomfield 1984; Ohala 1994; Lu 1998; Bolinger 1989, 1991; Matisoff 1994; Mahir 1995; Magnus 1999; Gordon, Heath 1998; Левицкий 1973, 1998; Журавлев 1974, 1981; Воронин 1982, 1990; Сепир 2002.

**Sound system** /'saʊnd ,sɪstəm/ of a language. The term refers to the basic component of the language phonetic system, i.e. the system of its segmental phonemes existing in speech in the material form of speech sounds, or allophones. The systemic character of this component is reflected in various classifications of phonemes into two fundamental classes – vowels and consonants – with their further subdivisions according to certain principles. The phonemes are grouped in more or less symmetrically arranged classes. The phonemic component of the language phonetic structure manifests itself not only in the system of phonemes as discrete isolated units, but also in combinations of their allophones. The English sound system consists of 44 phonemes: 20 vowels and 24 consonants. In some manuals on phonetics they mention 46 phonemes in the English sound system, including two more facultative phonemes: the diphthong /ɔə/ like in the words *poor* /pɔə/, *sure* /ʃɔə/ and the consonant /ʌ/ as in *which* /wɪtʃ/, *what* /wʌt/, *overwhelming* /'əʊvə'wɛlmɪŋ/, etc. (See **Consonant, Vowel, Phoneme inventory, Phonetic system, Ukrainian**)

## **Phoneme System)**

*Further reading:* Vassilyev 1970; Теоретическая... 1991; Gimson 2001; Дикушина 1965; Бондарко 1977; Борисова, Метлюк 1980; Поплавская 1993; Кочерган 2000; Кодзасов, Кривнова 2001; Сепир 2002; Бровченко та ін. 2003.

**Sound wave** /'saʊnd 'weɪv/ The term used in acoustic phonetics to refer to a wavelike air disturbance from a vibrating body which transmits sounds. Sound waves are characterized by the generic properties of waves, such as frequency, wavelength, period, amplitude, intensity, speed, and direction. Sometimes speed and direction are combined as a velocity vector, and wavelength and direction are combined as a wave vector. Sound characteristics can depend on the type of sound waves as well as on the physical properties of the transmission medium. Whenever the pitch of the soundwave is affected by some kind of change, the distance between the sound wave maxima also changes, resulting in a change of frequency. When the loudness of a soundwave changes, so does the amount of compression in airwave that is travelling through it, which can be defined as amplitude.

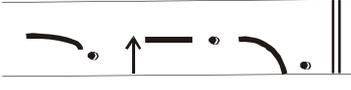
**Southern English** /'sʌðən 'ɪŋɡlɪʃ/ pronunciation. (See **BBC, Orthoepic norm, Pronunciation norm, Received Pronunciation, RP, Pronunciation**)

**Speaking rate** /'spi:kɪŋ reɪt/ The term refers to the overall tempo of the utterances including any filled pauses and prolongations of sounds and syllables within the utterances as well as the duration of all silent pauses between the utterances that constitute a speech fragment. The rate of speaking may be correlated with the speaker's mood, in that a rapid rate of delivery may express irritation, urgency, while a slower rate may show hesitancy, doubt, boredom in statements, or sympathy or encouragement in questions and commands. (See **Articulation rate**)

*Further reading:* Kingdon 1966; O'Connor, Arnold 1976; O'Connor 1984; Gimson 1989; Brown 1990; Cruttenden 1995; Laver 1995; Brazil 1997.

**Special phonetics** /'speʃl fə'netɪks/ The term refers to the branch of phonetics concerned with the study of the phonetic system of a definite language. The phonetic system can be studied synchronically, i.e. in its static form at a particular period of its development. In this case we deal with *descriptive phonetics*. When the language phonetic system is studied diachronically, or in its historical development then we deal with *historical, or evolutionary phonetics*, which studies written documents and compares spelling and

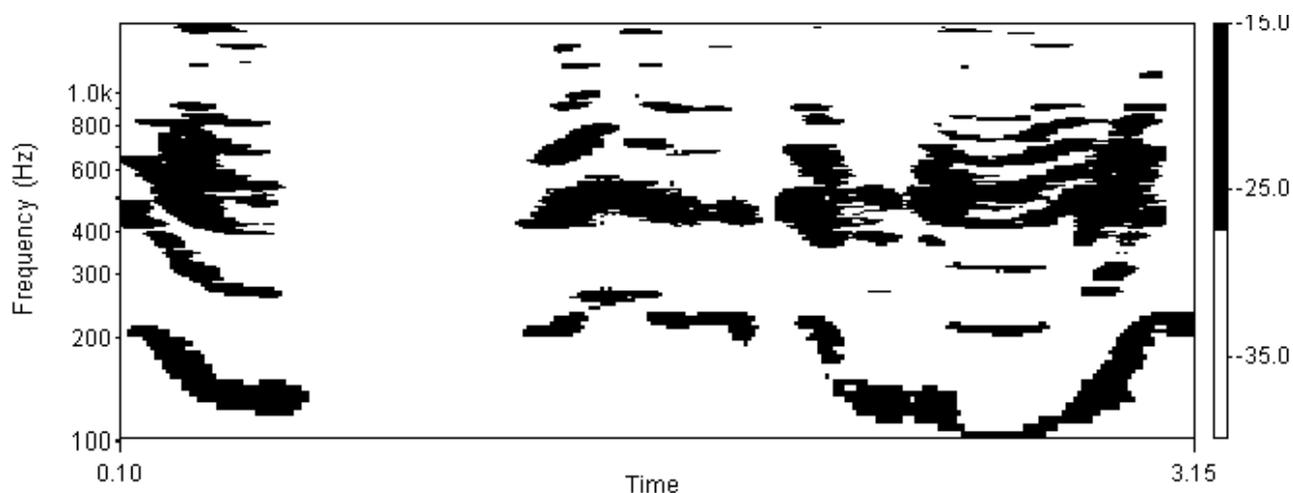
pronunciation of one and the same word in different periods of the language history. (See **Historical phonetics**)

**Special rise** /'speʃ<sup>ə</sup>l raɪz/, or *accidental rise*. The term refers to the pitch of the stressed syllable of the word pronounced on a bit higher pitch than the preceding syllable but not higher than the first stressed syllable. For example, /'ðæts maɪ ↑faɪnəl ˌɒfə || /  where the special rise is indicated by an upward arrow /↑/ before the syllable on which it takes place interrupting the descending pitch movement within the scale. Such a scale is called the Broken Descending Stepping Scale. A special rise is used mainly to give a slight effect of prominence to the word on which it occurs emphasizing its semantic importance. When a special rise occurs on the second stressed syllable of the scale, the tone on the first stressed syllable slightly goes down as is shown on the tonogram above. Side by side with the term *special rise* there exists the so-called *accidental rise*, which is generally used to avoid monotony of speech.

**Spectral analysis** /'spektrəl/ The term is used in acoustic phonetics for a graph in which the horizontal axis represents frequency and the vertical axis represents amplitude. (See **Fundamental frequency**, **Intensity**, **Amplitude**)

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984; Кибрик 1962; ФАНТ 1964; Деркач и др. 1983.

**Spectrogram** /'spektrəʊgræm/ The term used in acoustic phonetics to refer to a picture of recorded sounds produced by a computer. The given figure illustrates the spectrogram of the utterance *So you're the new secretary, are you?*



(See **Spectrograph**, **Spectrum**, **Spectrographic analysis**, **Spectral analysis**)  
*Further reading:* Ladefoged 1975; O'Connor 1984; Laver 1995; Crystal 1997; Артемов 1956; ФАНТ 1964; Деркач и др. 1983; Калита 2001.

**Spectrograph** /spek'trɒgrɑ:f/ The term is used in acoustic phonetics to refer to the device that translates a sound into a visual representation of its component frequencies. The sound spectrograph is regarded as the most valuable of all instruments for the visual display of speech. The technique that has been the most fundamental tool in acoustic analysis is *spectrography*. A spectrography program on a computer produces a picture of recorded sounds, i.e. their *spectrograms*.

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**Spectrographic** /,spektrəʊ'græfɪk/ analysis. The term indicates the type of analysis aimed at acoustic definitions and classifications of speech sounds. One of such classifications was suggested by R.Jacobson, C.Fant and M.Halle. This classification is not only phonoacoustic but also phonemic.

*Further reading:* Ladefoged 1975; O'Connor 1984; Jacobson, Fant, Halle 1952; ФАНТ 1964; Fant 1967; Halle 1983; Якобсон 1985; Деркач и др. 1983.

**Spectrography** /spek'trɒgrɑ:fi/ The term used in acoustic phonetics to refer to the technique that has been the most fundamental tool in acoustic analysis. (See **Spectrograph**, **Spectrum**, **Spectrographic analysis**, **Spectral analysis**)

*Further reading:* Crystal 1997; Ladefoged 1975; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**Spectrum** /'spektrəm/ The term denotes a complex wave presenting the way the vocal tract resonates during a speech sound articulation. The term is used in acoustic analysis of different components of the speech flow.

*Further reading:* Crystal, 1997; Ladefoged 1975; O'Connor 1984; ФАНТ 1964; Деркач и др. 1983.

**Speech** /spi:tʃ/ The term used to refer to the function of man's central nervous system, termed by I.P.Pavlov as the second signal system. It is the result of the conditioned reflexes of the cortex. A group of motor of centrifugal nerves, concentrated in the cortex, go to the outlying organs of speech. Impulses are transmitted by the nerves to the organs of speech (lips, tongue, etc.). On getting an impulse the organs of speech produce certain movements, which result in a definite speech sound wave that travels

through the air between a speaker and listener. Speaking is the means of communicating cognitive, emotional and attitudinal information to other people. Thus speech, as J.Laver puts it, has a most central place in our social, cognitive and affective lives, it is the most open declaration of a man's social identity. (See **Speech perception, Speech production**)

*Further reading:* Palmer 1982; Borden, Harris 1980; O'Connor 1984, 1988; Laver 1995; Сепир 2002; Miller 2001; Артемов 1956; Таранець 1981; Зимняя 2001; Секерина 2002; Єрмоєнко 2003.

**Speech acoustician** /'spi:tʃ ,æku'stɪʃən/ The term refers to a specialist in the field of speech acoustics.

**Speech error** /'spi:tʃ 'erə/ Another term for the *slip of the tongue* (See **Slip of the tongue**)

**Speech markers** /'spi:tʃ 'mɑ:kəz/ or *speech indexes*. The term refers to the evidential information conveyed by signs in speech that act as attributive markers used by the listener as the basis on which to attribute personal characteristics to a speaker. The attributes of the speaker fall into three groups: (1) *physical markers*, that indicate physical characteristics such as sex, age, physique and state of health; markers of physical characteristics lie, for example, in a speaker's voice quality; (2) *social markers* that specify social characteristics such as regional affiliation, social and educational status, occupation and social role; social markers often include such features as accent and choice of vocabulary; (3) *psychological markers* that indicate psychological characteristics of personality and affective state or mood; psychological markers of personality and mood are often reflected in a speaker's habitual and momentary tone of voice.

*Further reading:* Abercrombie 1967; Laver 1996.

**Speech melody** /'spi:tʃ 'melədi/ (See **Melody, Intonation, Pitch, Pitch range**)

**Speech paragraph** /'spi:tʃ 'pærəgrəf/, or *paratone*. The term refers to the intonational cues which signal the shift to a new topic in spoken discourse thus dividing it into structural units. The speech paragraphs or paratones are identified by their boundary markers.

*Further reading:* Brown 1988.

**Speech perception** /'spi:tʃ pə'sepʃən/ The term used in phonetics to refer to the study of the way speech sounds are analyzed and identified by ears and brain. The process of speech perception is, according to D.Crystal, little

understood. The scholar outlines several questions that illustrate problems faced by researchers in this area: (1) the ability of brain to analyze the speech signal so that the language units can be identified; (2) the ability of brain to select auditory information; (3) the ability of brain to recognize sounds when there is so much variation; (4) the ability of brain to bring the information about the differences between pairs of words, which differ by only one sound, together; (5) The brain is able to process rapid sequences of produced sounds in normal speech and cope with their modifications. How does the brain carry out such partial identifications? Besides, the link between speech and listener's perception cannot be studied in a direct manner. Therefore, speech perception studies have to be conducted with the help of a range of indirect methods. There two major types of speech perception theories: (1) when listeners are active they use: a) *motor theory* based on the fact that while perceiving the incoming speech listeners model the speaker's articulatory movements by sensing the articulatory gestures and b) *analysis by synthesis* lying in the speaker's analysis of an incoming acoustic signal into an abstract set of features, their task being to compare the incoming signal with the ones generated by their own perceptual system; (2) when listeners are passive they use: a) *template matching system* according to which listeners match incoming auditory patterns to a set of abstract patterns such as phonemes and syllables stored in their brain; b) *feature detector*, i.e. special neural receptors analogous to those existing in visual processing that are capable of responding to specific features of the sound stimulus, such as a particular formant, or other universal feature.

*Further reading:* Crystal 1997; Chomsky, Halle 2002; Fant 1967, 2004; Fitzpatrick, Wheeldon 2000; Tatham, Morton 2006; Кожевникова, Чистович 1967; Секерина 2002.

**Speech perception theories** /'spi:tʃ pə'sepʃən 'θiəri:z/ (See **Speech perception**)

**Speech processing** /'spi:tʃ ˌprəʊsesɪŋ/ The term refers to the study of speech signals and the processing methods of these signals. The signals are usually processed in a digital representation whereby speech processing can be seen as the intersection of *digital signal processing* and *natural language processing*. Speech processing is divided by D.Crystal into the following categories: (1) speech recognition, which deals with the analysis of the linguistic content of a speech signal; (2) speech recognition, where the aim is to recognize the speaker's identity; (3) enhancement of speech signals, e.g. noise reduction; (4) speech coding for speech compression and transmission; (5) voice analysis for medical purposes, such as the analysis of vocal loading and dysfunction of the vocal cords; (6) speech synthesis:

the artificial synthesis of speech, which usually means computer generated speech.

*Further reading:* Crystal 1997.

**Speech production** /<sup>1</sup>spi:tʃ prə'dʌkʃ<sup>ə</sup>n/ The term (1) denotes the act of articulating a speech sound; (2) refers in acoustic phonetics to (a) the way configurations, shapes, and detailed outlines of the vocal tract cavity system influence the acoustic signal, as well as to (b) the prediction of vocal tract resonator dimensions from speech wave data. (See **Acoustic theory of speech production**)

*Further reading:* Hardcastle 1976; Borden, Harris 1980; Laver 1995, 1996; Crystal 1997; Fant 2004; Tatham, Morton 2006.

**Speech recognition** /<sup>1</sup>spi:tʃ ,rekəg'nɪʃ<sup>ə</sup>n/, or *automatic speech recognition*, or *computer speech recognition*. The term refers to the automation processes of converting spoken words to machine-readable input for speech auditory perception and comprehension. The term *voice recognition* may also be used to refer to speech recognition, but can more precisely refer to speaker recognition which attempts to identify the person speaking, as opposed to what is being said. Speech recognition applications include, for example, voice dialing (e.g., “*Call home*”), call routing (e.g., “*I would like to make a collect call*”), simple data entry (e.g., entering a credit card number), preparation of structured documents (e.g., a radiology report), speech-to-text processing (e.g., word processors or e-mails), in aircraft cockpits (usually termed Direct Voice Input), etc.

*Further reading:* Laver 1995; Crystal 1997.

**Speech sound** /<sup>1</sup>spi:tʃ ,saʊnd/ A term used to refer to the material actualization of a phoneme in connected speech. (See **Allophone**, **Phonetic system**, **Sound**)

*Further reading:* Halle, Stevens 1991; Tsur 1992.

**Speech style** // A term used to refer to the way of speaking that is either formal/careful or informal/casual.

**Speech synthesis** /<sup>1</sup>spi:tʃ 'sɪnθə'sɪs/ The term used in experimental phonetics to refer to the artificial production of human speech. A computer system used for this purpose is called a speech synthesizer, and can be implemented in software or hardware. A text-to-speech (TTS) system converts normal language text into speech; other systems render symbolic linguistic representations like phonetic transcriptions into speech. Synthesized

speech can be created by concatenating pieces of recorded speech that are stored in a database. Speech synthesis systems differ in the size of the stored speech units: a system that stores phones or diaphones provides the largest output range, but may lack clarity. For specific usage domains the storage of entire words or sentences allows for high-quality output. (See **Speech synthesizer, Synthetic speech**)

*Further reading:* Fant 1959, 1968, 2004; Gimson 1980; Crystal 1997; Monaghan 1990.

**Speech synthesizer** /'spi:tʃ 'sɪnθəsaɪzə/ The term denotes an electronic device that generates sound waves with the required combination of frequency, intensity, and time creating artificial sounds to see if listeners would perceive a particular sequence of consonants and vowels. This technique made it possible to establish (1) the role of the first two formants (F1 and F2) for the recognition of vowels; (2) the role of the second formant (F2) as a cue for place of articulation, etc. The results of such studies laid the basis for the research in the field of speech perception, though a great deal still remains to be studied and explained. The quality of a speech synthesizer is judged by its similarity to the human voice and by its ability to be understood. A synthesizer can incorporate a model of the vocal tract and other human voice characteristics to create a completely “synthetic” voice output. An intelligible text-to-speech program allows people with visual impairments or reading disabilities to listen to written works on a home computer. Many computer operating systems have included speech synthesizers since the early 1980s. (See **Speech synthesis, Synthetic speech**)

*Further reading:* Laver 1995; Crystal 1997; Fant 1959, 1968, 2004.

**Spirant** /'spai<sup>ə</sup>rənt/ The term used by some American linguists to refer to a fricative sound made when two organs of speech come so close together that the air moving between them produces audible noise, or friction. (See **Fricative**)

*Further reading:* Christophersen 1970.

**Spirometer** /'spairəʊmi:tə/ The term used in experimental phonetics to denote an instrument for measuring the air capacity of lungs.

**Spread(ing)** /'spredɪŋ/ The term refers to the lip-spread position, produced by pulling the corners of the mouth away from each other as in a smile. Changing the shape of the lips modifies the sounds quality. The best-known positions of lips are lip-spreading and lip-rounding (or

labialisation), the first being most typical of the English pronunciation.

**Square brackets** /'skwɛə 'brækɪts/ The term refers to the brackets used in phonetic transcription. They differ from slanted brackets, which are used in phonemic transcription, and are thus used for visual representation of phonemes. In reality, books and articles on phonology frequently fail to stick consistently to the use of slanted brackets for phonemic representations and square brackets for indicating phonetic (allophonic) symbols. (See **Phonemic transcription, Transcription, Broad transcription, Narrow transcription, Allophonic transcription**)

**Standard** /'stændəd/ of pronunciation. The term refers to the type of pronunciation, which has undergone the sociohistorical process of standardization and is used by educated native speakers of the language since it is just the type of pronunciation which they learn at schools and colleges. In Britain great prestige is still attached to the accepted social standard of pronunciation called *Received Pronunciation* (RP). RP is often identified with *BBC English*. This type of pronunciation is used in many countries as a teaching norm since it is most commonly described in the books on English phonetics. Several different sociolinguistic and sociopolitical factors may lead to the standardization of a language variety, including adopting of an agreed-upon spelling system. (See **Received Pronunciation (RP), Orthoepic norm, Pronunciation norm, Dialect**)

*Further reading:* Jones 1969, Vassilyev 1970; Gimson 1980, 2001, Wells 1982, Abercrombie 1991; Laver 1995; Jeffries 1998; Parashchuk 2000; Farr, Ball 2001.

**Standard language** /'stændəd/ The term refers to the variety of a language treated as the official language used in public broadcasting, publishing and education.

**Statement** /'steɪtmənt/ The term refers to utterances stating facts, affairs, actions, feelings or beliefs, e.g. *It's very cold here in winter* or *I don't think she looks very well*. Statements are actualized in oral speech in the form of a declarative utterance. Categorical statements usually take a falling tone, non-categorical statements are, as a rule, pronounced with a rising tone; statements expressing implications have a falling-rising tone in the communicative and semantic centre of the utterance.

**Static** /'stætɪk/ A term refers to a tone in which the voice remains steady on a given pitch throughout its duration. Such tones are also called *level* tones.

The high, mid, and low static tones are usually mentioned in phonetic literature. (See **Kinetic, Tone**)

*Further reading:* Kingdon 1966; Crystal 1969; Vassilyev 1970; O'Connor, Arnold 1976; O'Connor 1984; Brown 1990; Roach 1990; Cruttenden 1995; Антипова 1979, 1982; Калита 2001.

**Stereotype** /<sup>1</sup>steriətaɪp/ (intonational). A term used in intonology to refer to typical intonation patterns functioning in similar speech acts and communicative situations.

**Stop-stage** /<sup>1</sup>stɒp steɪdʒ/ Another term for the *retention*. (See **Articulatory gesture, Retention**)

**Stops** /stɒps/ A term used in segmental phonetics to refer to the group of plosive consonants. (See **Plosive, Occlusion, Occlusive**)

**Stress** /stres/, or *word accent*. The term refers to a greater degree of special prominence given to one or more syllables as compared with that of the other syllable or syllables in one and the same word. For instance, *August* /<sup>1</sup>ɔ:gəst/ (the month of the year) has more effort on the first syllable than the second syllable; though *august* /ɔ:gʌst/ (causing the feeling of great respect; noble and grand) has the greater effort on the second syllable. Thus, in English stress is a significant factor since it is an essential part of the word-shape; words easily become unrecognizable if the stress is placed incorrectly. Word stress in English performs the following functions: (1) *constitutive* (the ability of syllables to build up a word by forming its stress pattern, without which it ceases to be a word); (2) *distinctive* (the ability to differentiate words with analogous sound structure: <sup>1</sup>insult – in<sup>1</sup>sult, <sup>1</sup>suspect – su<sup>1</sup>spect, <sup>1</sup>accent – ac<sup>1</sup>cent); (3) *identificatory* (words stress patterns enable the listener to identify definite combinations of sounds as meaningful linguistic units). Word stress may be regarded as a *word-level concept*, which should not be confused with utterance stress, which belongs to the utterance. As a meaningful language unit a word has a definite accentual structure formed by the correlation of prominence degree of syllables the word consists of.

*The auditory correlate* of stress is loudness, which varies from syllable to syllable in a word. Besides the effect of prominence may be produced by a greater *length* of the stressed syllable, or by some modifications in its *pitch* and *quality*. The point about this combination of loudness, pitch, length and vowel quality is that it can be used in languages to make some syllables stand out more than others. *On the acoustic level* syllable prominence is manifested in *intensity, duration, frequency, formant structure* which generally interact to produce the effect of prominence. Depending on the leading parameter,

word stress in different languages may be of *different types*: (1) *dynamic*, or force, achieved by a greater force of articulation, resulting in greater degree of loudness or intensity; (2) *musical, or tonic, or pitch*, accent, achieved by the variations in pitch level; (3) *quantitative stress*, achieved by the quantity of the sound, i.e. its duration; vowels in stressed syllables are longer than vowels in unstressed syllables; (4) *qualitative stress*, achieved by a different quality of vowels in stressed and unstressed syllables. Since the quantitative and qualitative types of word stress do not exist separately from dynamic stress we may say that dynamic stress is of two types: *dynamic quantitative stress, dynamic qualitative stress*. Chinese, Japanese, Vietnamese are called musical or tonic languages, in which the meaning of the words depends on the pitch level of their syllables. Swedish word stress is both dynamic and musical. English word stress is considered as dynamic; at the same time it is of a complex nature. It means that it can be either dynamic quantitative or dynamic qualitative since the effect of stress is mainly based on the quantity of a sound and its quality. Word stress in English manifests itself in different ways, either the intensity, or duration of the stressed syllables may increase, or the spectrum of the stressed vowel may be sharpened, or the fundamental frequency may show a distinct rise (or fall), or the combination of any of these parameters. Word stress in Ukrainian, Russian, and other European languages is predominantly dynamic.

*The placement of stress* is conditioned primarily by the *situational and linguistic* context. It can also be conditioned by the *speaker's intention* who may single out this or that syllable as semantically most important. Though in general the word stress pattern is conditioned mainly by the pronunciation tendencies and the orthoepic norm. The distortion of the stress pattern of a word leads to speech unintelligibility.

Stress may be *fixed* in relation to the words of language, or it may be *free*. In Polish, for instance, it is fixed, being tied to the penultimate syllable, and in Czech it is fixed on the first syllable; in French it is fixed on the last syllable of a word. English stress is free since it may occur on the first syllable like in *pillow, troublesomeness*; on the second as in *polite, ideally, potentially*; or on the third as in *international, possibility*, and so on. Though the English word stress is free, there exist the following accentuation tendencies: recessive, retentive, rhythmic and semantic. (1) *Recessive stress* in Modern English is of two types: a) *unrestricted recessive accent* falls on the initial syllable provided it is not a prefix which has no referential meaning. This accent is observed in the words of Anglo-Saxon origin and in the great majority of native English words of this type (*wonder, husband, etc.*); b) *restricted recessive stress* falls on the root of native English words with a prefix which has no referential meaning now (*among, before, between, withstand, forget, forgive, etc.*). (2) *Retentive tendency* refers to the retention of accent in all derivatives on the same

syllable on which it falls in the parent word, e.g.: <sup>1</sup>wonder, <sup>1</sup>wonderful, <sup>1</sup>wonderfully; <sup>1</sup>person, <sup>1</sup>personal, <sup>1</sup>personally. (3) *Rhythmic tendency* refers to avoiding a succession of weak syllables. As a result there appears a stress shift with rhythmic alteration of stressed and unstressed syllables, e.g.: <sup>1</sup>exquisite or ex<sup>2</sup>quisite, <sup>1</sup>sonorous or so<sup>2</sup>norous, <sup>1</sup>hospitable or ho<sup>2</sup>spitable. This tendency is usually observed in polysyllabic words. The accent determined by this tendency is called *rhythmical*. According to the (4) *semantic tendency* the most important elements in words are stressed. Some meaningful prominence is given, for instance, to negative prefixes, e.g.: *un-* (*unknown*), *in-* (*inadequate*), *mis-* (*misbehave*) etc., or semantically important elements in compound words, e.g. <sup>1</sup>well-known (when used attributively) – well-<sup>1</sup>known (when used predicatively), <sup>1</sup>blackbird, or word combinations – <sup>1</sup>black <sup>1</sup>bird.

There are *three linguistically relevant degrees* of word stress in English (R.Kingdon, V.Vassilyev): *primary* (or *strong*), *secondary* (or *partial*), *weak* (the unstressed syllables). The American descriptivists (H.A.Gleason, G.Trager, A.Hill and others) distinguish *four degrees of word stress*: *primary*; *secondary*; *tertiary* (or *posttonic*) and *weak*. *Secondary stress* occurs before the primary one, while *tertiary* stress usually occurs after the primary stress and is linguistically important since it serves to differentiate the accentual patterns of some British and American polysyllabic words. (See **Word accent**)

*Further reading*: Fry 1958; Bolinger 1961; Cristophersen 1970; Ladefoged 1975; Gimson 1980; Jassem 1983; O'Connor 1984; Brown 1990; Halle, Vergnaud 1990; Laver 1995; Chomsky, Halle 2002; Аванесов 1956; Николаева 1982; Торсуев 1960; Касевич и др. 1990; Сепир 2002; Николаева 1982, 2004.

**Stress mark** /<sup>1</sup>stres ˌmɑ:k/ A term refers to a vertical mark placed before a syllable to indicate that it has a certain degree of stress, e.g. <sup>1</sup>m.

**Stress pattern** /<sup>1</sup>stres ˌpætən/, or *accentual pattern*. A term used to refer to an essential component of a word phonological form. There are more than a hundred stress patterns in English (G.Torsuyev), grouped into 11 types, the commonest of which are as follows: words with one primary stress: <sup>1</sup> – – (*language*), words with two or more equally strong stresses: <sup>1</sup> – <sup>1</sup> – (*well-known*), <sup>1</sup> – <sup>1</sup> – <sup>1</sup> – (*USA*); words with primary and secondary stresses: – <sup>1</sup> – – <sup>1</sup> – – (*assimilation*); <sup>1</sup> – <sup>1</sup> – <sub>1</sub> – – (*un<sup>1</sup>sea<sup>1</sup>worthy*) and so on. (See **Accent, Accentual pattern, Stress, Word Accent**)

*Further reading*: Vassilyev 1970; Ladefoged 1975; O'Connor 1984; Halle, Vergnaud 1990; Торсуев 1960; Теоретическая 1991.

**Stress shift** /<sup>1</sup>stres ˌʃɪft/ A term used to refer to the change of the word stress

pattern when the word occurs in particular contexts. For instance, the word <sup>1</sup>*well-known* in isolation has two equally strong stresses, but in the utterance *He is a <sup>1</sup>well-known writer* the stress in the word *well-known* shifts to the first syllable as it is used attributively, while in the utterance *This writer is well-<sup>1</sup>known* the stress shifts to the second syllable since it is used predicatively. (See **Semantic tendency, Stress, Word Accent**)

**Stress-timed** /'stres ˌtaɪmd/ The term refers to the tendency for stressed syllables to occur in connected speech at approximately equal intervals of time. This means that if there are any unstressed syllables between stresses, these have to be fitted in without delaying the regular beat of the stress pulses. The more unstressed syllables there are after a stress, the quicker they must be said to catch the next stress pulse. Different languages are classified into either stress-timed or syllable-timed. English is a stress-timed language. (See **Syllable-timed, Rhythm, Isochrony, Foot**)  
*Further reading:* Abercrombie 1965, 1967; Crystal 1997; Jeffries 1998.

**Stricture** /'striktʃə/ The term used to refer to the degree to which the flow of air is obstructed in the sound production. In the articulation of most vowels there is very little obstruction. Consonants are characterized by a noticeable obstruction and the classification of consonants is usually based on the specification of the *place of the stricture*, for instance, lips in the production of bilabial consonants, *the manner of the stricture*, or *the manner of noise production* in the pronunciation of plosives, nasal sonorants or fricatives.  
*Further reading:* Laver 1995.

**Strong form** /'strɒŋ 'fɔ:m/ The term refers to one of the possible forms in which a word appears in speech. If a word is said in isolation or if it is stressed (e.g.: *He <sup>ˌ</sup>can play with us*), the *strong form* is used (e.g. /kæn/). If a word is unstressed, it often appears in its *weak form* (e.g. /kən/ as in *He can <sup>ˌ</sup>play with us*). The linguistic context generally determines which form is to be used.  
*Further reading:* Christophersen 1970; Vassilyev 1970; Теоретична 2003.

**Style** /stɑɪl/ The term is used in phonetics to refer to different ways of pronunciation caused by extralinguistic factors and characterized by definite phonetic features suited to the aim and the contents of the utterance, the circumstances of communication, variations in the degree of formality of communication, etc. All people use more than one style of pronunciation in order to adjust their speech to overcome difficult communicating conditions. (See **Intonational style, Phonetic style, Phonostylistics**).

*Further reading:* Jones 1969; Crystal, Davy 1973; O'Connor 1984; Tench 1991; Дикушина 1965; Борисова, Метлюк 1980; Теоретическая... 1991; Кочерган 2000; Теоретична 2003.

**Subsystem** /'sʌb,sɪstəm/ The term refers in phonetics to the set of items that constitute the sound matter of language, i.e. the set of phonemes and components of intonation being a part of a language system. At the same time the set of phonemes taken separately forms its own system which consists of two subsystems, namely the subsystem of vowels and the subsystem of consonants; intonation forms its own system of language, consisting of speech melody, utterance stress, rhythm, tempo, etc., each of which forms its own subsystem, for instance, the subsystem of speech melody, the subsystem of utterance stress, the subsystem of tempo, etc. (See **Phonetic system, Intonation, Utterance stress**)

*Further reading:* Crystal 1969; O'Connor 1984; Борисова, Метлюк 1980.

**Superfix** /'su:pəfiks/ The term used to refer to the vocal effect that extends over more than one segment, e.g. stress.

**Suprasegmental** /,su:prəseg'ment<sup>ə</sup>/ The term refers to the phonetic units such as syllables, rhythmic/accental units, or groups (or phonetic words), intonation groups, utterances in which the prosodic features (speech melody, stress, rhythm, tempo, pausation, loudness, timber are actualized, though there has never been full agreement about how many suprasegmental features are to be found in speech. The term is used predominantly by American phoneticians, while most of the British phoneticians prefer to use the term *prosodic* instead of *suprasegmental*. (See **Intonation, Prosody**)

*Further reading:* Pike 1945; Crystal 1969; Lehiste 1970; Ladefoged 1975; Gimson 1980; Pierrehumbert 1993; Laver 1995; Swerts 1997; Борисова, Метлюк 1980; Зубрицкая 2002.

**Syllabic consonants** /sɪ,læbɪk 'kɒnsənənts/ The term refers to the consonants capable of forming a syllable. In English some syllabic consonants (/m, n, l/) have become obligatory in present-day speech: words such as *bottle* and *button* would not sound acceptable in RP pronunciation if pronounced /'bɒtəl/, /'bʌtən/. These sounds are syllabic when they are preceded by a consonant, thus the words *button* /'bʌtn/, *sudden* /'sʌdn/, *cycle* /'saɪkl/ consist of two syllables: /'bʌt - n/, /'sʌd - n/, /'saɪ - kl/. Sonorants (/n, l, r/) became syllabic when the preceding weak vowels are elided as in *tonight* /tnaɪt/ instead of /tə'nɑɪt/, *police* /pli:s/ instead of /pəli:s/, *correct* /krekt/

instead of /kə'rekt/.

*Further reading:* Roach 1990; Jeffries 1998.

**Syllabi(fi)cation** /sɪ,læbɪfɪ'keɪʃən/ The term used to refer to a cover term for designating both inseparable from each other aspects of syllable: syllable formation and syllable division.

**Syllable** /'sɪləbəl/ A term used to refer to the smallest units into which the speech continuum is divided. It is the smallest pronunciation and perceptible unit since, as is known, in connected speech sounds are not pronounced separately; it is practically impossible to draw articulatory boundaries between syllables. Each syllable contains only one vowel. As a *phonetic unit* syllable is defined in articulatory, auditory (perceptual) and acoustic terms with universal application for all languages. It should not be confused with an orthographic syllable. As a *phonological unit* syllable can be defined and described only with reference to the structure of one particular language. The syllable as a phonological entity gives structure to sequences of consonants and vowels. Rhythmic units give form to sequences of syllables. Syllable performs several functions: *constitutive*, *distinctive* and *identificatory* or *recognative*. Syllable can be divided into three parts: (1) the *onset*, which stands for the beginning of a syllable; (2) the *nucleus* or *peak*, i.e. its central part (formed by a vowel or a sonorant); (3) the *coda*, which is the end of the syllable. For example, in the word *set* /set/ the consonant /s/ is the onset, /e/ is the nucleus and /t/ is its coda. The combination of peak and coda is called the *rhyme*. Syllable can be formed by: a vowel (V), a vowel and a consonant (VC), a consonant and a sonorant (CS), the latter being typical of the English syllabic system. As to the presence, number and arrangement of consonants there are 23 syllable patterns in English (V, VC, CVC, CV, CCVC, CCVCC, CCCVC, CCCVCC, etc.). According to their accentual weight syllables are classified into *stressed* and *unstressed*; from the viewpoint of whether a syllable begins and ends with a vowel or a consonant sound, syllables are classified as *open*, *closed*, *covered* and *uncovered*. A syllable which begins with a consonant and ends with a vowel sound (CV) is called *covered* and *open* (e.g. /tə/, /ðə/). A syllable which begins with a vowel sound and ends with a consonant (VC) is called *uncovered* and *closed* (e.g. /bɒn/, /ɔ:t/, /eɪt/). The most frequent and fundamental syllable pattern in English is CVC. According to the length syllables may be *short* (˘) and *long* (ˉ). The linguistic unit of syllable length is *mora*, which is equal to the duration of a short vowel sound or a syllable. Speech sounds which can be in the nucleus of syllable are called syllabic or syllable-forming or [+ syllabic]; speech sounds which cannot be in the

nucleus are called asyllabic. The structural patterns of syllables formed by sonorants with a preceding consonant in English are similar to C+V pattern. For example, the second syllable in the word *table* /'teɪbl/ consists of the plosive /b/ and the sonorant /l/, consequently, the structure of this syllable can be represented as CS.

There are several syllable formation theories: (1) the most *ancient theory* states that there are as many syllables in a word as there are vowels; but this theory does not take into consideration consonants which can also form syllables in some languages, neither does it explain the syllable boundary; (2) the *expiratory*, or *chest-pulse*, or *pressure theory* states that there are as many syllables in a word as there are expiration pulses the weakest expiration being the borderline between the syllables. This theory is inconsistent because it is quite possible to pronounce several syllables in one articulatory effort or expiration; (3) the *sonority theory* states that there are as many syllables in a word as there are peaks of prominence according to the scale of sonority suggested by O.Jespersen; this theory helps to establish the number of syllables in a word but it fails to explain the mechanism of syllable division; (4) the *muscular tension*, or *the articulatory energy*, or *the arc of loudness theory*, or *the arc of articulatory tension* theory is based on L.V.Shcherba's statement that the syllable forming phoneme is the centre of a syllable; sounds, which precede or follow it constitute a chain or an arc, and are viewed as *finally strong* (or *initially weak*), *initially strong* (or *finally weak*) and *double peaked* (combination of two similar sounds as in *midday*, *penknife*, *that time*, *good day*, etc.). (See **Syllable division, Sonority, Relative sonority theory**)

*Further reading:* Ladefoged 1975; Gimson 1980; O'Connor 1984; Roach 1990; Laver 1995; Yule 2009; Торсуев 1975; Плоткин 1981; Потапова 1986; Кочерган 2000; Сепир 2002; Зубрицкая 2002.

**Syllable division** /'sɪləb<sup>ə</sup>l dɪ'vɪz<sup>ə</sup>n/ The term is used in phonetics to refer to the process of separating syllables from each other within a word. The rules of syllable division are based on phonotactic possibilities of English phonemes: (1) English historically short vowels under stress (checked vowels) occur only in a closed syllable, e.g.: /'sɪl - ə - bl/; the boundary between the syllables lies after the consonant or within it, as in *bigger* /'bɪgə/; (2) English historically long vowels: monophthongs, diphthongs and unstressed short monophthongs (free vowels) can occur both in the open and in the closed syllables. When there is a cluster of consonants between two vowels, the place of the syllabic boundary is conditioned by whether this cluster is permitted at the beginning of words; (3) When two vowels are separated by more than two consonants, as, for instance, in the

word *extra* /'ek - strə/ or /'eks - trə/, the boundary may be both before /s/ and /t/ because both /str/ and /tr/ occur at the beginning of words; (4) The so-called triphthongs in English are disyllabic combinations. (See **Phonotactics**)

*Further reading:* O'Connor 1984; Roach 1990; Борисова, Метлюк 1980; Сепир 2002.

**Syllable structure** /'sɪləb<sup>ə</sup>l ,strʌktʃə/ The term refers to the way in which the syllables are formed. The syllable can be formed by: a vowel (V), a vowel and a consonant (VC), a consonant and a sonorant (CS), the latter being typical of only the English syllabic system. As to the presence, number and arrangement of consonants there are 23 syllable patterns in English (V, VC, CVC, CV, CCVC, CCVCC, CCCVC, CCCVCC, etc.). The most frequent and fundamental syllable pattern in English is CVC. (See **Syllable, Syllable-division**)

**Syllable-timed** /'sɪləb<sup>ə</sup>l taɪmd/ languages. The term used to refer to the languages in which all syllables have an equal time value. Spanish and French are known as syllable-timed languages while English belongs to the group of stress-timed languages. (See **Rhythm, Stress-timed languages**)

*Further reading:* Christophersen 1970; Vassilyev 1970; Ladefoged 1975; Mortimer 1985; Crystal 1997; Jeffries 1998.

**Syllabograph** /'sɪləbəgrɑ:f/ A term used to refer to the parts of a word which represent syllables graphically. They may consist of a vowel, or a combination of vowels and consonants, which corresponds to a syllable or syllables within the graphic norms of the analyzed word. Syllabographs are closely connected with the morphemic structure of words, e.g.: *high-er*.

**Symbol** /'sɪmb<sup>ə</sup>l/ The term is used in phonetics to refer to an approximate specification of the articulations involved in the production of sounds. The use of such symbols for studying and describing English is particularly important, since the spelling system not always represents the pronunciation of a great number of words. Most of the principles for the design of the symbols used today have been developed by the International Phonetic Association. (See **Diacritic**)

*Further reading:* Laver 1995; Jeffries 1998; Сепир 2002.

**Synaesthesia** /,sɪni:s'ti:ziə/, or *synesthesia*. The term is used to refer to a neurologically based phenomenon in which stimulation of one sensory or cognitive pathway leads to automatic, involuntary experiences in a second sensory or cognitive pathway. Synesthetic perceptions vary in intensity and

people vary in awareness of their synesthetic perceptions. Psychologists and neuroscientists study synesthesia to understand the insights it may give into cognitive and perceptual processes. (See **Sound Symbolism, Onomatopoeia**)

*Further reading:* Morton 1987; Tatham 1987; Langacker 1990; Monaghan 1990; Tsur 1992; Lamb 1999; Левицкий В.В. 1998.

**Synchronic** /sɪŋ'krɒnɪk/ The term stands for an approach in phonetics used in the study of a phonetic system at one particular point in time, e.g. the sound system of modern British English. (See **Diachronic**)

**Syncope** /'sɪŋkəpi/ The term refers to the deletion, or elision of a vowel, resulting in the loss of a syllable, as in the disyllabic pronunciation *family* /'fæmli/, as opposed to the trisyllabic pronunciation /'fæməli/. In English, this deletion typically affects unstressed syllables.

**Syntagm** /'sɪntəgm/, or *syntagma*. The term refers to the phonetic entity which expresses the semantic entity in the process of speaking (and thinking) and which may consist either of one rhythmic group or a number of such groups. (See **Breath group, Intonation group, Sense-group, Tone group**)  
*Further reading:* Vassilyev 1970; Laver 1995; Jeffries 1998; Артемов 1956; Щерба 1969; Борисова, Метлюк 1980.

**Syntagmatic** /,sɪntəg'mætɪk/ The term used to refer to (1) the linear relationship between elements in a word or words in an utterance; (2) the rules of utterance actual division into syntagms.

**Synthetic speech** /sɪn'θetɪk 'spi:tʃ/ The term refers to the artificial speech produced entirely by electronic means. Its importance for research is that it enables to perform experiments with artificial acoustic patterns very much simpler than normal speech could possibly produce. By ignoring the total acoustic record the researcher can gradually find essential characteristic in a particular sound sequence as well as the ones being of secondary importance. At the same time such experiments, as J.O'Connor states, depend for their success on the human ear since acoustics alone cannot answers these questions properly. It is only by submitting the filtered or artificial speech to people's judgment that the researcher can come to the conclusion about the relevance/irrelevance of the obtained data. Such an interplay between the acoustic record and the informants' judgments on what they hear is of great importance not only for the research but in general for understanding of the communication process. (See **Speech synthesis, Speech synthesizer**)

*Further reading:* O'Connor 1984; Gimson 1980; Crystal 1997; Fant 2004.

**System** /'sɪstəm/ A term refers to the related elements of a language. In phonetics this term denotes the system of segmental and suprasegmental means forming the language phonetic system (See **Phonetic system**)

*Further reading:* O'Connor 1984; Laver 1995; Jeffries 1998; Сепир 2002.

**System approach** /'sɪstəm ə'prəʊtʃ/ A term in phonetics refers to the approach to the analysis in which (1) all the elements involved are identified; (2) their interaction is analyzed and studied.

**Systemic difference** /sɪ'sti:mɪk 'dɪfrəns/ The term refers to a difference between two varieties of a language if the varieties exhibit differences in the set of phonemic oppositions found in the varieties. For example, in Received Pronunciation (RP), there is a phonemic opposition between short /æ/, as in the word *ant*, and long /ɑ:/, as in the word *aunt*. In Standard Scottish English (SSE), this opposition does not exist; pairs of words such as *ant/aunt* are homophones.

*Further reading:* Трубецкой 2000.

## T

**Tail** /teɪl/ A term used to refer to the unstressed and partially stressed syllables following the nuclear tone. Tails can be ascending, descending, and level. (See **Tone group**, **Intonation group**, **Sense-group**)

*Further reading:* Kingdon 1966; Christophersen 1970; Roach 1990.

**Tap** /tæp/ The term denotes a consonant sound produced by a single rapid tongue contact against the roof of the mouth as in the pronunciation of /t/ when preceded by /w/, e.g. *write* /raɪt/.

**Target** /'tɑ:ɡɪt/ The term refers to (1) the sound under study; (2) the theoretical position adopted by the organs of speech in the process of sound articulation.

**Taxonomic phonetics** // The term refers to the form of phonetics that provides two basic tools for the dealing with speech sounds: first, uniformity in naming speech sounds, and, second, transcribing them (See **Scientific phonetics**).

*Further reading:* Ohala 1991.

**Teeth** /ti:θ/ In phonetics the term refers to the small hard bony objects growing in the upper and lower jaws and which play important roles in the production of sounds, for instance, all the dental allophones of apico-alveolar phonemes are produced with the help of the tip of the tongue in contact with some of the front teeth.

**Tempo** /'tempəʊ/ The term used to refer to (1) an individual person's speaking rate since people vary in their average tempo. (2) In phonetics variations of tempo are used contrastively to help the speaker convey something about his/her attitudes and emotions as well as to communicate meaning, for instance, extra rapid tempo is associated with urgency. In phonetic research two different measures of tempo are usually used: the rate including pauses and hesitations (*speaking rate*) and the rate with these excluded (*articulation rate*). In the study of speech rate it is usual to measure either *syllables* per second or *phonemes* per second. Most speakers seem to produce speech at a rate of five or six syllables per second (*normal speech* /

*moderate* rate), or ten to twelve phonemes per second (for *fast speech / allegro*); for *slow speech / lento* the average rate delivery is from two to four syllables per second. One individual's speaking rate when compared with some other individual's is not linguistically important. Every speaker knows how to speak at different rates, and much research has been done in recent years to study the differences in the pronunciation between words or utterances said in slow speech and the same words or utterances produced in fast speech. Tempo of speech is classified into *rapid (fast), accelerated, moderate, decelerated, slow*. Modifications of tempo largely depend on the type of information delivered (important / unimportant); the psychological type of a speaker, his/her occupation, age, locality, means of information delivery, situation, etc. (See **Articulation rate, Speaking rate, Rate of speech, Intonation**)

*Further reading:* Ladefoged 1975; O'Connor 1984; Cruttenden 1995; Laver 1995; Brazil 1997; Crystal 1997; Brown 1990; Bolinger 1989; Roach 1990.

**Tense** /tens/, or *free*. The term denotes a sound articulated with a comparatively greater amount of energy. The long vowels and diphthongs are classed as tense. In tense sounds the period during which the articulatory organs (muscles) maintain the appropriate configuration is relatively long, while in non-tense, or lax, sounds the entire articulation gesture is executed in a somewhat superficial manner. (See **Articulatory gesture, Consonant, Lax, Tension**)

*Further reading:* Christophersen 1970; Ladefoged 1975; Laver 1995.

**Tension** /'tenʃən/ In phonetics the term is used to refer to the amount of energy necessary for the work of muscles that take part in this or that vowel sound production. According to the degree of muscular tension English vowels are classified into tense and lax. The long vowels and the diphthongs are classed as tense. All short vowels are termed lax. (See **Articulatory gesture, Consonant, Lax, Tense**)

**Terminal tone** /'tɜ:mɪn<sup>ə</sup>l 'təʊn/ In phonetics the term refers to the combination of the nuclear tone and the tail. For example, in the utterance <sup>1</sup>*What do you \take me \for?* the terminal tone is formed with the help of the falling tone realized on the word *\take* and the low level partially stressed tail *\for*. In the utterance <sup>1</sup>*Nothing but \criticism!* the terminal tone is represented by the combination of the low falling tone on the stressed syllable *\crit-* and the low level unstressed tail *-icism*. The terminal tone performs delimitative and distinctive functions as well as conveys emotional and modal

meanings of an utterance. (See **Kinetic, Tone, Nuclear tone**)

*Further reading:* Kingdon 1958; O'Connor 1984; Cruttenden 1995; Laver 1995; Антипова 1974; Калита 2001.

**Tertiary stress** /<sup>1</sup>tɜːʃəri stɪs/, or *posttonic stress*. A term refers to a stress which usually occurs after the primary stress and is linguistically important since it serves to differentiate the accentual patterns of some British and American polysyllabic words, e.g.: *dictionary* /dɪkʃən<sup>ə</sup>rɪ/ (RP) – /dɪkʃənəri/ (GAм). (See **Word accent, Stress**)

*Further reading:* Vassilyev 1970; Борисова, Метлюк 1980.

**Tessitura** /,tesɪ<sup>1</sup>tuərə/ A term sometimes used in phonetics to refer to what is called *pitch range*. Speakers have their own natural tessitura (the range between the lowest and highest pitch they normally use), though they may extend or shift this for special purposes.

**Tetrameter** /te<sup>1</sup>tremɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of four rhythmic units. (See **Metre**)

**Timbre** /<sup>1</sup>tɪmbə/, or *tambre*. The term adopted by phoneticians from musical terminology to refer to the quality of a sound or voice. (See **Voice quality**)

*Further reading:* Abercrombie 1967; Catford 1964; Crystal 1969, 1997; Laver 1968, 1996; Jeffries 1998; Davydov, Yakovleva 2001; Clark et al 2007; Антипова 1982; Медведева 1985.

**Timing** /<sup>1</sup>taɪmɪŋ/ The term refers to the process of observation or recording of the elapsed time of pronouncing a definite phonological unit (a speech sound, a rhythmic group, an intonation group, an utterance, etc.).

**Tip of the tongue** /<sup>1</sup>tɪp əv ðə <sup>1</sup>tʌŋ/, or *apex*. A term refers to the nearest to the front teeth part of the tongue and which is used for describing its participation in speech sounds articulation.

**Tonal interval** /<sup>1</sup>təʊn<sup>ə</sup>l <sup>1</sup>ɪntəv<sup>ə</sup>l/ The term is used in phonetics to refer to pitch differences at the juncture of two neighbouring syllables. The tonal interval is qualified as positive, negative and zero as well as wide, mid, narrow. (See **Intonation, Melody**)

*Further reading:* Crystal 1969; Ladefoged 1975; Дубовский 1975, 1978.

**Tone** /təʊn/ A term used in phonetics to refer to an identifiable movement or

level of pitch that is used in a linguistically contrastive way: *simple* (i.e. the tone which does not change its direction throughout its pronunciation), e.g.: the low/high falling tone, the low/high rising tone, *compound* (i.e. the tone whose movement is changed throughout its duration), e.g.: the falling-rising tone, the rising-falling tone, the rising-falling-rising tone, falling-rising-falling, etc. The most prominent tone in an intonation group may be referred to as a nuclear tone. The tone carried by a word is an essential feature of its meaning. It is sometimes termed as a lexical tone. Tones are classified into *kinetic*, or moving, in which the pitch of the voice varies during the whole duration of the tone, and *static* in which the voice remains steady on a given pitch throughout its duration. There are six kinetic tones in English (falling, rising, rising-falling, falling-rising, rising-falling-rising, falling-rising-falling), which are realized in speech by their allotones, for example, the falling tone is actualized in speech by its high or low falling allotones.

*Further reading:* Kingdon 1966; Crystal 1969; Gimson 1980; Cook 1983; Jassem 1983; O'Connor 1984; Roach 1990; Laver 1995; Сепир 2002; Зубрицкая 2002.

**Tone group** /<sup>h</sup>təʊn gru:p/, or *tune*, or *tone unit*, or *phonemic clause*. A term used in intonology to refer to larger units than syllables or rhythmical units (or foot) into which the speech continuum is divided. In other words tone groups are the phonetically defined units which help the speaker distribute the quanta of information he wishes to express. At the same time the term emphasizes the role of only pitch component of prosody for the formation of the unit. The essential feature of a tone group is the *nuclear tone*, though it may be preceded or followed by other optional components, which constitute a tone group. They are: the *pre-head* (i.e. the unstressed syllables before the first stressed syllable of the tone group), the *head*, or *scale* (i.e. the sequence of syllables between the first stressed syllable and the nuclear tone), and the *tail* (i.e. the syllables following the nuclear tone). For example, in the sentence *I've <sup>h</sup>always <sup>h</sup>admired your <sup>h</sup>work <sub>v</sub>very <sub>h</sub>much*, which is represented as one tone group, the unstressed syllable *I've* exemplifies the pre-head; the part of the tone group *<sup>h</sup>always <sup>h</sup>admired your <sup>h</sup>work* manifests the head or scale; the word <sub>v</sub>very takes the low falling nuclear tone; and the word <sub>h</sub>much presents the partially stressed tail. A tone unit may coincide with a sentence; longer sentences may contain more than one tone group. Speakers use a larger number of shorter tone groups in informal conversational speech, and fewer, longer tone groups in formal styles. A pause after each tone group is the most obvious factor establishing the tone group boundaries in slow careful speech. Besides we can perceive the tone group boundaries even when the speaker does not

make pauses due to an identifiable pitch movement or discontinuity in the rhythm or in the intonation pattern. (See **Intonation group, Breath-group, Sense-group, Pause**)

*Further reading:* Kingdon 1966; Christophersen 1970; Jassem 1983; O'Connor 1984; Crystal 1969; Gimson 1980; Brown 1988.

**Tone language** /<sup>1</sup>təʊn ˌlæŋɡwɪdʒ/ A term refers to the use of tone in some languages for distinguishing word and utterance meanings which are alike in every other respect, or, in some cases, for indicating different aspects of grammar. It is conventional to divide tone languages into *contour* languages where the most important distinguishing characteristic of tones is the shape of their pitch contour, and *register* languages where the height of the pitch is the most important thing. Chinese and other languages of Southeast Asia are said to be contour languages while most African tone languages (mainly in the South and West of Africa) are classed as register languages. Pitch is not the only determining factor in tone: some languages use voice quality differences in a similar way. For example, the Vietnamese language in the North of the country has “creaky” or “glottalized” tones. (See **Stress, Word accent**)

*Further reading:* Christophersen 1970; Ladefoged 1975; O'Connor 1984; Bolinger 1989; Roach 1990.

**Tone unit** /<sup>1</sup>təʊn ju:nɪt/ The term refers to the unit of intonation which has only one tonic syllable as its obligatory component, e.g.: <sup>ˉ</sup>*Oh yes!* where the utterance is represented by one tone unit. (See **Intonation group, Rhythmic phrase, Sense-group, Tone group**)

*Further reading:* Jeffries 1998.

**Toneme** /<sup>1</sup>təʊni:m/ A term used in phonetics to identify contrastive tones. The study of such tones is known as *tonemics*. Different tones can be brought together into one toneme, as different sounds are brought together in one phoneme. Such features of tones as *high*, *low* and *mid* are regarded as a distinctive feature theory of phonology. (See **Distinctive feature theory, Phonology**)

*Further reading:* O'Connor 1984; Laver 1995.

**Tonetic stress-mark** /təʊ'netɪk 'stres mɑ:k/ A term refers to a mark placed before a syllable indicating stress by its presence and tone by its form. For example, the stress-tone mark /<sup>ˈ</sup>m/ denotes the stressed syllable as well as the direction of the tone on this syllable.

*Further reading:* Kingdon 1966.

**Tongue** /tʌŋ/ A term refers to the movable fleshy organ in the mouth cavity known as a very important articulator in speech production. For the purposes of sound description and their phonetic classification the surface of the tongue is subdivided into different parts which are given different names: *the tip*, i.e. the furthest forward section of the tongue; *the blade*, that is situated behind the tongue tip, *the front* of the tongue which is its widest part, behind which is *the back* of the tongue extending past the back teeth and down the forward part of the pharynx, *the root*, i.e. the place where the tongue ends and is joined to the rear end of the lower jaw. Each of these names has a noun form and a corresponding adjective, for instance the *back* of the tongue is involved in the production of consonants such as velar and uvular, and the adjective *back* is used to denote a group of vowels produced with the back of the tongue.

**Tongue root** /'tʌŋ ɹu:t/ The term refers to the part of the tongue which lies behind the back of the tongue opposite the back wall of the pharynx.

**Tonic** /'təʊnɪk/ Another term for *tonic syllable*. (See **Tonic syllable**)

**Tonic placement** /'təʊnɪk 'pleɪsmənt/ The term refers to the placement of the tonic in an intonation group.

**Tonic stress** /'təʊnɪk 'stres/, or *tonic accent* A term used to refer to the localization of the syllable receiving tonic, or nuclear, accent. For example, in sentences \Criticism! ^Nothing but \criticism! the word *criticism* in both intonation groups takes a tonic, or nuclear, stress.

*Further reading:* Brown 1990.

**Tonic syllable** /'təʊnɪk 'sɪləb<sup>ə</sup>l/ A term used to refer to the syllable in an intonation group on which the pitch changes its direction carrying a certain *nuclear tone*. In intonology, where only one nuclear tone may occur in an intonation group, the tonic syllable has a noticeable degree of prominence. The placement of the tonic syllable in English is usually on the last lexical item in an intonation group.

*Further reading:* Brown 1990.

**Tonicity** /təʊ'nɪsəti/ The term refers to the place in an utterance or an intonation group where a pitch movement begins. The choice of such a place depends on what the speaker wishes to emphasize. For example, in the following utterance ^Residents? the change of pitch is placed on the

first syllable of the word; and in the utterance <sup>1</sup>*What do you mean, residents?* the change of pitch starts on the word *mean*.  
*Further reading:* Laver 1995.

**Tonics** /<sup>1</sup>təʊnɪks/ The term used to refer to the study of the phonetic properties of tones.

**Tonogram** /<sup>1</sup>təʊnəʊgræm/ The term used in phonetics to refer to the graphic representation of intonation.

**Trachea** /trə<sup>1</sup>ki:ə/ The term used in phonetics to refer to the tube which forms an air passage from the throat to the top of the lungs used for producing speech.

**Transcription** /<sub>(r)</sub>træn<sup>1</sup>skripʃ<sup>ə</sup>n/ A term used to refer to the representation of speech sounds by means of a special set of phonetic symbols indicating an approximate specification of the articulations involved. There are many different types of transcription: the most fundamental division that can be made is between *phonemic* (or broad) and *phonetic* transcription. The term *phonemic* or *broad transcription* (or phonological) is used to designate a transcription that uses a simple set of phonemes representing one of the phonemes of the language without any of the details of the pronunciation that are predictable by phonological rule thus giving a limited amount of phonetic information. In *phonemic transcription* we use the slant brackets to indicate phonemic symbols, e.g. /r/. A *phonetic transcription* (or *allophonic*, or *narrow*), on the contrary, presents the full range of phonetic symbols if these are required, which carry a lot of fine detail about the precise phonetic quality of sounds. The use of diacritics, small marks that can be added to a symbol to modify its value, is a means of increasing precision, e.g. a small circle [◌<sub>◌</sub>] placed under a symbol represents a voiceless sound like /l/ in the word play [p<sub>◌</sub>leɪ]; the diacritic mark [◌<sub>◌</sub>] beneath a consonant stands for its dental allophone as in *eight* [eɪt<sub>◌</sub>θ]. The square brackets [ ] indicate phonetic (allophonic) symbols. A transcription that shows all the rule-governed alternation of the sounds is called a completely *systematic phonetic transcription*. A widely adopted standardization in transcription was achieved in the late 19th century with the rise of the International Phonetic Association, founded in 1886 by Paul Passy and with the eventual codification of the International Phonetic Association (IPA). Although there have been some additions and modifications in the International Phonetic Alphabet, it has remained in essence unchanged since then. (See **International Phonetic Alphabet**)

*Further reading:* Jones 1969; Christophersen 1970; Vassilyev 1970; Brown 1990; Kemp 1994; MacMahon 1994; Laver 1995; Аванесов 1956; Сепир 2002; Теоретична 2003; Бровченко, Корольова 2006; Щерба 2008.

**Transduction** /ˌtrænsˈdʌkʃən/ The term is used to describe the relationship between phonology and phonological objects, taken to be mental in nature, and which are said to be transduced into phonetic substance.

*Further reading:* Carr 2008.

**Trimeter** /ˈtrɪmɪtə/ The term is used in phonetics while analyzing prosodic peculiarities of poetic speech and refers to a line of verse consisting of three rhythmic units. (See **Metre**)

**Triphthong** /ˈtrɪfθɒŋ/ A term refers to a vowel glide with three distinguishable vowel qualities. In English there are five triphthongs, formed by adding /ə/ to the diphthongs /eɪ/, /aɪ/, /aʊ/, /ɔɪ/, /əʊ/, e.g. *layer* /ˈleɪə/, *liar* /ˈlaɪə/, *tower* /ˈtaʊə/, *loyal* /ˈlɔɪəl/, *lower* /ˈləʊə/ etc. These are the most complex English sounds of the vowel type since they are very difficult to pronounce, and very difficult to recognize. This is due to a glide from one vowel to another and then to a third, all produced rapidly and without interruption.

*Further reading:* Christophersen 1970; Roach 1990; Кочерган 2000.

**Trisyllable** /ˌtraɪˈsɪləbəl/ The term is used to refer to a word consisting of three syllables, e.g.: *histogram* /ˌhɪst - ə - ˈgræm/.

**Trochee** /ˈtrəʊki:/ The term is used in metrical phonology to refer to the measure of poetry consisting of one strong (or long) beat followed by one weak (or short) beat (— ).

E.g.: *Where the water-lilies go*

*To and fro.*

(From “Water-lilies” by A.Milne)

Trochaic and dactylic metres are called falling because their movement supposedly falls from the stressed syllable to the unstressed syllable or syllables. (See **Foot, Rhythm, Metrical phonology**)

*Further reading:* Abercrombie 1967; Dvorzhetskaya, Logvin 1985; Crystal 1992, 1997; Kiparsky 1977; Зубрицкая 2002.

**Tune** /tju:n/, or *intonation contour*. A term refers to a combination of pitches,

stresses and tones which, even when isolated from context, gives meaning or feeling to the speech segment (i.e. an intonation group) on which it occurs, even if it is grammatically incomplete. In its simplest form a tune may be a monosyllable bearing a kinetic tone considered from the point of view of the meaning conveyed, e.g.: *Yes*. Tunes are classified into *simple*, having one kinetic tone, and *complex* tunes having two or more kinetic tones within an intonation group. (See **Tone group**)

*Further reading:* Kingdon 1966; Jassem 1983; Cruttenden 1995; Laver 1995.

**Twang** /twæŋ/ The term used to refer to a sharp nasal quality of a vowel sound.

**Typological** /ˌtaɪpə'lɒdʒɪkəl/. The term is used in syntax, morphology and phonology. An example of a postulated typological difference in phonology is the three-way distinction between *stress* and *intonation languages*, *tone languages* and *pitch accent languages*.

**Typological linguistics** /ˌtaɪpə'lɒdʒɪkəl lɪŋ'ɡwɪstɪks/ Another term for *typology*.

**Typology** /taɪ'pɒlədʒi/, or *typological linguistics*. A term refers to the branch of linguistics which studies structural similarities between languages irrespective of their history and family belonging. *Phonological typology* focuses on similarities within consonant/vowel inventories, types of stress, syllabic structure, rhythmic structure, suprasegmental patterns, etc. of different languages. Any typological investigation of phonetic/phonological features of two or more languages involves a contrastive study of their sounds, phonemes, intonemes, prosodemes. Accordingly two closely connected branches of linguistics studying phonetic and phonological units and phenomena are recognized: (1) *contrastive phonetic typology*, whose aim is to identify and investigate speech sounds isomorphic and allomorphic features within the sound systems of languages under contrasted investigation, and (2) *contrastive phonological typology*, whose purpose is to identify and investigate the isomorphic and allomorphic features in the system of phonological units in contrasted language systems. (See **Typological**)

*Further reading:* O'Connor 1984; Lass 1996; Lindblom 1986; Croft 1993; Korunets' 2004; Сепир 2002; Селіванова 2006.

## U

**Ukrainian Phoneme System** /ju'kreɪniən 'fəʊni:m 'sɪstəm/ The Ukrainian phoneme system consists of 6 *vowel phonemes* (/i, ɪ, e, a, o, y/), which do not differ in length. All Ukrainian vowels are monophthongs. The classification of vowels into different groups according to the position of the tongue testifies the absence of mixed vowels in Ukrainian. The Ukrainian front vowels (/i/, /ɪ/, /e/) are less front and less close than the corresponding English front vowels /i:, ɪ, e/. The back vowels /o/, /y/ are less retracted than the back vowel phonemes in English (/ɒ, u:, ɔ:/). The lips in producing Ukrainian labialized sounds are considerably protruded. In the non-labialized Ukrainian vowels production the lips move noticeably forward from the teeth.

There are 32 *consonant phonemes* in Ukrainian, which *according to the place of articulation* (or *the active organ of speech*) are classified into (1) **labial**: bilabial /п, б, в(w), м/, labio-dental /ф/, (2) **lingual**: forelingual /д, д', т, т', з, з', с, с', ц, ц', р, р', л, л', н, н', ж, ч, ш, дз, дз', дж/, *mediolingual* /j/, and *backlingual* /г, к, х/, (3) **pharyngeal** /г/. According to *the manner of noise production* Ukrainian consonants are classed into: (1) **occlusive**: plosives /п, б, т, д, к, г, т', д'/, *nasal sonorants* /м, н, н'/; (2) **constrictive**: *fricatives* /ф, з, с, ж, ш, г, х, з', с'/, *sonorants*: *lateral* /л, л'/, *central* /в(w), j/, *rolled* /р, р'/; (3) **occlusive-constrictive**, or **affricates** /дз, ц, дж, ч, дз', ц'/. According to *the work of the vocal cords* the Ukrainian consonants are classified into *voiceless* and *voiced*. Ukrainian voiceless plosives are *not aspirated*. In Ukrainian there are pairs of consonants, which differ only in the degree of palatalization and yet are regarded as different sounds since they change the meanings of words, for example: *бал* /бал/ – *біль* /б'іл'/, *саду* /саду/ – *сяду* /с'яду/, *рад* /рад/ – *ряд* /р'яд/. Thus palatalization is phonematically an independent feature of articulation in Ukrainian. All palatalised Ukrainian consonants have *apical* articulation, while non-palatalized consonants are characterized by *dorsal* articulation. The question of Ukrainian long consonant phonemes is not settled yet, though their existence is mentioned by a number of linguists. Only few of them admit the phonematic independence of Ukrainian long consonants, who illustrate their independence by the following examples: *Митю* /мит'у/ – *миттю* /мит'ю/, *у Вані* /у ван'і/ – *у ванні* /у ван'і/, *у вічі* /у в'іч'і/ – *увіччя* /ув'іч'я/. Thus if the consonants length is proved the number of Ukrainian consonants will increase. Ukrainian pronunciation is

not characterized by the noticeable tension of the lips, though they are considerably protruded.

*Further reading:* Корунетс 2004; Перебийніс 1969, 1970; Прокопова 1969; Тоцька 1981; Шевельов 2002; Бровченко 2003; Кочерган 2006; Сучасна... 2006.

**Unaccented** /'ʌnək'sentɪd/ A term refers to (1) an unstressed syllable as in the word *unit* /'ju:nɪt/ where the second syllable /-nɪt/ is not stressed; (2) an unstressed vowel as the phoneme /ə/ in the second syllable of the word *utter* /'ʌtə/. (See **Unstressed Vocalism, Weak Forms, Syllable**)

*Further reading:* Vassilyev 1970.

**Uncovered** /'ʌn'kʌvəd/ Another term for *non-covered*. (See **Non-covered**)

**Unit** /'ju:nɪt/ A term used in phonetics to refer to the elements, which constitute the phonetic level of the language. For example, a *phoneme* can be regarded as a minimal unit of the sound system of the language; *phonemic units* comprise consonants and vowels occurring in a linear sequence; the unit *intonation group* refers to a distinctive sequence of tunes in an utterance, each having a nuclear tone as its obligatory feature; a *rhythmic unit* that consists of a stressed syllable and unstressed syllables preceding it (enclitics) or following it (proclitics).

**Universal** /ju:nɪ'vɜ:səl/ The term in phonetics refers to a certain phonetic phenomenon common for all languages. For instance, the phonetic level in every language consists of two sublevels: *segmental* and *suprasegmental*; segmental level comprises a definite number of phonemes – *consonants* and *vowels*. Consonants in their turn are classified into *voiced* and *voiceless*, *fortis* and *lenis*, etc. Such a division of consonants is typical of all languages existing in the world, i.e. it is universal. While analyzing the suprasegmental level one can come across the same number of components of intonation irrespective of the language: speech melody, utterance stress, rhythm, tempo, pausation, loudness, timbre.

*Further reading:* O'Connor 1984; Tsur 1992; Croft 1993; Laver 1995; Ladd 1997; Chomsky, Halle 2002; Greenberg 2005; Златоустова 1983; Кочерган 2000.

**Unrounded** /'ʌn'raʊndɪd/ vowel. The term refers to the vowels produced with the lips spread or neutral, for instance, the vowels /i:/, /ɪ/, /e/, /æ/, etc. in the articulation of which lips are slightly spread. (See **Non-rounded, Rounded**)

**Unstressed vocalism** /ʌn'strest 'vəʊkəlɪzəm/ The term used to refer to a definite system of the English vowels occurring in unstressed syllables. A vowel in an unstressed syllable is shorter, weaker, less distinct, i.e. reduced, or obscured. It means that these vowels undergo quantitative and qualitative changes (or reduction). The core of the unstressed vocalism is formed by the neutral vowel phoneme /ə/, which has several allophones known as *schwa-vowels*. (See **Weak forms, Reduction**)  
*Further reading:* Vassilyev 1970; Roach 1990.

**Utterance** /'ʌtʳəns/ The term refers to the unit of communication beginning and ending with a clear pause; it is an actualized in speech sentence without implications about its grammatical status since utterances are connected with the speaker's intentions. An utterance may structurally and semantically coincide with the sentence but in a certain situation it gains additional pragmatic and attitudinal meanings, thus being situationally oriented and, consequently, having illocutionary potential that expresses the speaker's communicative actions. The utterance is not the ultimate unit of prosodic analysis, since in connected speech together with other utterances they form larger units known in linguistic literature as hyperutterances, phonetic paragraphs, texts. The degrees of linkage and relationship between utterances and higher phonetic units are indicated by prosodic features, which form their prosodic structure.  
*Further reading:* Palmer 1982; Bolinger 1989; Laver 1995; Кочерган 2000.

**Utterance stress** /'ʌtʳəns 'stres/ The term refers to the special prominence given to one or more words in an utterance. As is known, words grouped into an utterance are not equally important. Depending on the context or the communicative situation some words contribute more information than others. Those that are semantically more important are made prominent. When the potential stress pattern of a word is actualized in an utterance, stress becomes a feature of the utterance. Word stress and utterance stress are in close relation. Word stress is an essential part of word-shape, whereas utterance stress is a feature of the utterance. On the *auditory level* the special prominence is achieved by pitch, loudness, length and quality. *Acoustically*, utterance stress is determined by variations of fundamental frequency, intensity, duration and formant structure. The effect of utterance stress is created, as a rule, not by a single acoustic parameter, but by the interaction of different parameters.

The subsystem of utterance stress in English includes the following basic types: *nuclear stress* (marked by a kinetic tone), *non-nuclear full stress* (often marked by static tones), *partial stress* (marked either by a dot (when a

partially stressed word is pronounced after a rising tone in the rising tail, or within a scale), or a vertical bar (when the word that takes it follows a falling nuclear tone, or within the scale having two kinetic tones, e.g. the falling tone and the rising tone), and *weak stress* (syllables are not normally marked as they are not stressed). Each type of stress has functionally significant degrees depending on the modal and stylistic factors of speech and has different positional variants, say pre-nuclear and post-nuclear partial stresses, etc. The distribution of stresses in an utterance depends on the following factors: *semantic* (which determines the placement, type and degree of stress, singles out the utterance semantic centre by this or that nuclear, or primary stress, carries the greatest semantic importance); *grammatical* (grammatical structure of the utterance also predetermines its accentual structure); and *rhythmical* (the distribution of stresses in an utterance is also affected by the rhythmical laws of English, e.g. notional words that are usually stressed may lose their stress under the influence of rhythm, and form words may take stress under the influence of rhythm). All these factors are closely linked, the semantic factor being the most important.

Utterance stress fulfils three functions: *constitutive* (to form the utterance by integrating words), *distinctive* (to differentiate utterances as to their meaning), and *identificatory* (to provide a basis for the hearer's identification of the important parts of the utterance and for his/her understanding the content). (See **Sentence stress**)

*Further reading:* Vassilyev 1970; Laver 1995; Борисова, Метлюк 1980.

**Uvula** /'ju:vjʊlə/ A term is used to refer to a small lobe of flesh hanging loosely from the centre of the soft palate. It acts as a *place of articulation* (*uvular articulation*) for a number of *consonants* articulated in the back of the mouth. The uvula is active only when it vibrates in a uvular *trill*, e.g. the French /ʁ/.

*Further reading:* O'Connor 1984; Laver 1995.

**Uvular** /'ju:vjʊlə/ articulation. The term refers to an articulation involving the back of the tongue and the uvula, or the soft palate, as in the production of English /g/.

**Uvular sounds** /'ju:vjʊlə saʊndz/ A term refers to the sounds articulated with the uvula as is, for instance, in the French /ʁ/.

*Further reading:* O'Connor 1984

## V

**Variable** /<sup>l</sup>vɛəriəb<sup>o</sup>l/ The term is used to refer to (1) a linguistic item having various forms (variants) which may be related to differences in pronunciation, style, etc.; (2) a property whereby the members of a set of group differ from one another.

*Further reading:* Laver 1995.

**Variant** /<sup>l</sup>vɛəriənt/ The term refers in phonetics to (1) different types of pronunciation, e.g. regional variants of English (American, Australian, British, Canadian, New Zealand), territorial, local pronunciation (Scottish; Irish; Northern; Southern; Northern/Southern/Eastern London English), Estuary English, etc.; (2) the pronunciation variant, e.g. rhotic (GAm) or non-rhotic /r/ (RP); (3) different allophones of a phoneme in a certain phonetic contexts, e.g.: phoneme /p/:

<b>p<sub>1</sub></b> –	<b>p<sub>2</sub></b> –	<b>p<sub>3</sub></b> –
bilabial	bilabial	bilabial
occlusive	occlusive	occlusive
fortis	fortis	fortis
aspirated	aspirated	non-aspirated
plosive	plosive	plosionless
unrounded	rounded	unrounded

(See **Idiolectal variants**, **Dialectal variants**)

*Further reading:* Vassilyev 1970; Борисова, Метлюк 1980; Бровченко та ін. 2003.

**Velar** /<sup>l</sup>vi:lə/ A term used to refer to the place of articulation of /k, g, ŋ/, which are made with the back of the tongue and the soft palate. A firm velar closure is used in producing the sounds known as *clicks*. Air is set in motion not by the lung-air or pharynx-air, but by the mouth-air mechanism.

*Further reading:* O'Connor 1984; Laver 1995.

**Velaric** /vi:'lærɪk/ A term refers to the airstream produced in the mouth with a closure between the tongue and the soft palate, or velum.

*Further reading* Crystal 1992; Roach 1990; Laver 1995.

**Velarization** /<sub>1</sub>vi:ləraɪ'zeɪʃən/ The term refers to the secondary articulation that involves raising the back of the tongue.

*Further reading* O'Connor 1984; Laver 1995.

**Velic** /'vi:lɪk/ A term used to refer to the closure between the upper surface of the velum (or soft palate) and the top of the pharynx.

*Further reading*: O'Connor 1984

**Velum** /'vi:ləm/, or *soft palate*. The term is used in phonetics to refer to the soft part of the palate, located behind the hard palate. (See **Soft palate**)

**Ventricular** /ven'trɪkjʊlə/ A term used to refer to a type of voice which represents the most constricted glottal configurations. Ventricular voice accompanies heavy lifting (straining, as in weight lifting) wherever the laryngeal valve needs to be almost closed for efficient respiratory muscular apposition. It is the last phonatory stage before a glottal stop, in which the airway is closed and the larynx is covered up. (See **Breathy voice, Voice, Voice quality**)

*Further reading*: Abercrombie 1991; Laver 1996.

**Ventricular folds** /ven'trɪkjʊlə 'fəʊldz/, or *ventricular cords*. The term refers to the bands of tissue that lie above the vocal folds.

**Verbal code** /'vɜ:bəl 'kəʊd/ The term refers to the language as a code of transmitting information; it consists of a vocabulary, or lexicon, a grammar and phonetic means of language. (See **Communication**)

**Verbal communication** /'vɜ:bəl kə,mju:nɪ'keɪʃən/ The term refers to the type of communication transmitted by a verbal message from an addressor/speaker/sender to an addressee/listener/receiver through a definite channel by means of any systems of signals used for sending messages. Verbal communication may be either oral or written. In oral communication language is used to produce discourse, i.e. a continuous stretch of oral language produced as a result of an oral act of communication. (See **Communication, Verbal code, Non-verbal code**)

*Further reading*: Crystal 1992; Парашук 2005.

**Verner's Law** /'vɜ:nəz 'lɔ:/ The term refers to the law according to which Proto-Germanic non-initial voiceless fricatives in voiced environments became voiced when the previous syllable was unstressed in Proto-Indo-European. (See **Sound Law**)

*Further reading:* Page 1998; Chomsky, Halle 2002; Ильиш 1972; Расторгуева 1983; Сосюр 1998.

**Vibration** /vaɪ'breɪʃən/ The term used to refer to the slight continuous shaky movements of the vocal cords in the process of speech sounds production.

**Vocal cords** /ˌvəʊkəl 'kɔːdz/ A term refers to the thin bands of muscles in the *larynx* at the upper end of a windpipe that can be moved rapidly by the passing of air and thus produce sounds. Their various states have a number of linguistic *functions*: (1) when firmly closed they produce a *glottal stop*; (2) when closed the larynx may be moved up or down to produce an *egressive* or *ingressive glottalic* airstream as used in *ejective* and *implosive* consonants; (3) when *the vocal cords* are brought into light contact they tend to vibrate if air is forced through them, producing *phonation* or *voicing*; this vibration can vary in many ways, resulting in differences in *pitch*, *loudness* and *voice quality*; (4) a narrow opening between the vocal folds, can result in friction noise, found in whispering and in the glottal fricative [h]. There are three main *positions* of the vocal cords: (1) the pyramidal cartilages are drawn wide apart, the vocal cords are lax and do not vibrate, the glottis is broad. Neither voice nor noise is produced. Such a position is typical of breathing. The glottis is wide while inhaling and narrower while exhaling. English speech sounds are formed while exhaling. The described position of the vocal cords is also characteristic of the voiceless consonants production; (2) the pyramidal cartilages are brought together, the vocal cords are tense and vibrate when the air is exhaled from the lungs and passes between them. This position of the vocal cords is typical of vowels and voiced consonants; (3) the pyramidal cartilages are slightly drawn apart, the glottis is narrowed but the vocal cords are not tense; this is the typical position of whisper. The vocal cords can make from 42 to 1707 movements a second. The frequency of the vocal cords variations in singing is from 80 to 1303 Hz which equals to 4 octaves. The singing voice is only two octaves. For a *male voice* the frequency of the vocal cord variations in speech may be between 100 and 250 Hz. A *woman's voice* may go up to about 400 Hz. In speech the frequency of the vocal cords variations is just a bit more than one octave. Sound frequency higher than 8000 Hz is insignificant in speech communication.

*Further reading:* Crystal 1997; O'Connor 1984; Laver 1995; Сепир 2002; Бровченко та ін. 2003.

**Vocal folds** /ˌvəʊkəl 'fəʊldz/ Another term for *vocal cords*. (See **Vocal cords**)

**Vocal tract** /ˌvəʊkəl 'trækt/ The term refers to the three resonance chambers taken together: the oral cavity, the nasal cavity and the pharynx.

**Vocalic** /vəʊ'kæli:k/ The term is used as the opposite to the word *consonantal*.

**Vocalisation** /ˌvəʊkələɪ'zeɪʃən/ The term refers to the process of changing a voiceless consonant into voiced in the intervocalic position or under the influence of a neighboring vowel or a voiced consonant.

**Vocalism** /ˌvəʊkəlɪzəm/ The term used to refer to the vowel system of a language or dialect with regard to their sound variability. Vocalism in different languages is characterized by different number of vowels, three vowels being universal /i, a, u/. The rest of the vowels are intermediate; the presence of diphthongs, reduced vowels, long and short vowels, etc. enriches the vocalic system of a definite language. (See **Vowel**)

**Vocal organs** /ˌvəʊkəl 'ɔ:gənz/ Another term for *organs of speech*. (See **Organs of speech**)

**Vocal tract** /ˌvəʊkəl 'trækt/ The term used to refer to the air passages above the larynx. The shape of the vocal tract is a very important factor in the production of speech sounds. The air passages that make up the vocal tract are classified into *oral tract* within the mouth and the pharynx, and *nasal tract* within the nose.

**Vocative** /ˌvɒkətɪv/ The term used to refer to nouns or their special forms used in some languages when addressing someone or something, e.g.: *Oh dear, is that clock right?*, where *Oh dear* functions as a vocative.

**Vocoid** /ˌvəʊkɔɪd/ The term refers to the vowel-like sounds /j, w/; very often these sounds are called semi-vowels or semi-consonants. It is clearly helpful if vowel and consonant are kept as term to denote linguistic categories, for the phonetic division of sound types it is better to use the term vocoid.

*Further reading* Pike 1947; Gimson 2001.

**Voice** /vɔɪs/ The term refers to different types of phonation, or a continuous vibration or note which the listener perceives. The physiological scale corresponding to it is the degree of approximation of the arytenoid cartilages. Voice is present in various speech sounds. The actual way in which the vocal cords vibrate may also be used to express the speaker's

attitude. It is necessary to specify the type of voice: *breathy, creaky, harsh, neutral* (or *modal, or normal*), *falsetto, ventricular* and so on.

*Further reading:* Abercrombie 1967; Laver 1995, 1996; Palmer 1982; Сепир 2002.

**Voice onset time** /'vɔɪs 'bɒnsət ˌtaɪm/, or *VOT*. The term used to refer to designate the point in time at which the voicing starts in relation to the opening of the two articulators. In other words it refers to the specific measure of voice timing, or the moment at which the voicing starts relative to the release of closure. For example, when we pronounce /p/ or /b/ in the words *pit, bit*, the two articulators, i.e. the lips are closed and then open again. It is usually measured in milliseconds (or msec).

*Further reading:* Ladefoged 1975; Carr 2008.

**Voice-print** /'vɔɪs ˌprɪnt/ The term used to refer to the spectrograms of a definite person's voice, which are said to be specific and individual. The position of the fourth and higher formants in most vowels is indicative of a speaker's voice quality rather than the sound's linguistic characteristics. There are a number of features on the spectrogram that indicate a speaker's speech habits and which are not language dependent, for instance the locations of the higher formants in the nasal cavity is regarded as the speaker's individual physiological characteristics. (See **Voice quality**)

**Voice quality** /'vɔɪs 'kwɒləti/ A term used to refer to the component of intonation (sometimes called *timbre*), which denotes the peculiarities of a speaker's voice or its variations for particular purposes, some variations being linguistically relevant. It has been assumed that all the relevant variables are located in the larynx. Besides the supralaryngeal area is responsible for a number of overall voice quality characteristics, particularly those which can be categorized as *articulatory settings*. Voice quality highly depends on the individual's anatomical configuration of his/her speech organs and this helps the hearer to identify one person's voice from the other. Speakers differ from each other in terms of voice quality. J.Laver distinguishes *slow, fast, loud, whispery, soft, nasalised, labialised, lax, tense, breathy, creaky, harsh, neutral* (or *modal, or normal*), *falsetto, ventricular* voices. At the same time voices which have some plausible reference to (a) **segmental pronunciation** J.Laver terms as *sibilant, bleary, blurred, distinct, lisping, orotund, precise, slurred, twittering, thick, clipped*; (b) **pitch-range differences** are called *bird-like, bleating, colorless, creaky, croaky, dark brown, deep, flat, fluttering, grating, gravelly, gravy, graveyard, gruff, heavy, high, light, light blue, loud, low, pale, pale pink, piping, rich, reedy, rumbling, sepulchral, shill, silvery*,

*sombre, sonorous, twittering, whining*; (c) **particular types of pitch movements within a particular pitch-range** are classified as *droning, melodious, monotonous, musical, quavery, querulous, sing-song, whining*; (d) **loudness-range**: *big, booming, colorless, creaky, croaky, farcarrying, full, gravelly, gruff, husky, light blue, loud, low, orotund, pale, pale pink, piercing, querulous, raucous, resonant, rumbling, sharp, shrill, small, soft, sombre, sonorous, staccato, strident, strong, weak, brazen, rasping*; (e) **tempo**: *drawning, droning, fast, graveyard, quick, sepulchral, slow, ,sombre, staccato, twittering, sharp*; (f) **continuity**: *clipped, droning, jerky, staccato, smooth, fluent, fluid*; (g) **phonational registre**, as the mode vibration: *breathy, cracked, crackling, creaky, croaky, falsetto, grating, gravelly, gritty, gruff, harsh, hoarse, husky, rasping, rough, rumbling, shrill, sombre, thin, throaty, velvety, whispery, thick, blurred*; (h) **physical foundation**: *tenor, baritone, bass, double-bass, soprano, contralto*; (j) **different types of muscular setting**, firstly the effect of vertical adjustment of the position of the larynx: *clergyman's, dark brown, graveyard, hollow, light blue, pale pink, pulpit, preacher's, sepulchral*; secondly latitudinal settings: *clenched teeth, grinning, guttural, hot-potato, open-mouthed, orotund, plummy, slack-jawed, strangled*; velic settings: *droning, nasal, sonorous, whining, plangent*; settings of overall muscular tension of the vocal track: *brassy, brazen, dull, hard, metallic, muffled, pig's whistle, plangent, rasping, raucous, resonant, soft, strident, tinny*; laryngeal settings: *beery, bird-like, brandy, breathy, cracked, crackling, creaky, croaky, dark brown, dulcet, falsetto, fluting fruity, grating, gravelly, gruff, harsh, hoarse, husky, light blue, mellifluous, mellow, melodious, metallic, muffled, musical, pale pink, pig's whistle, piping, rasping, rich, rough, rumbling, shrill, thick, thin, velvety, whisky, whispery*. J.Laver considers that voice quality derives from two sources, the anatomical foundation and the extrinsic settings. Voice quality is also a very important feature of the speaker's geographical and social identity. Thus speakers in the UK usually speak with a creaky voice, frequently using the glottal stop, glottalized stop consonants in final position which gives the voice more clipped and precise quality. A pervasive nasal quality is typical of American and Australian speech; the voices of North American males are termed as lowered larynx voices, characterized by a deeper, hollowed sound. The American English voice setting is described as combining apico-alveolar articulation with uvularization, nasalization and lax voice. (See also **Extrinsic, Intrinsic**)

*Further reading*: Abercrombie 1967; Catford 1964; Celce-Murcia et al 1996; rystal 1969, 1997; Wells 1982; Laver 1968, 1995, 1996; Brown 1990; Pennington 1996; Jeffries 1998; Davydov, Yakovleva 2001; Антипова 1982; Медведева 1985; Сепир 2002.

**Voice recognition** /'vɔɪs ˌrekəg'nɪʃən/ The term used in phonetics to refer to individual's speech recognition, i.e. the identification of person's prosodic markers typical of his/her speech. Voice recognition is opposed to speech recognition since researchers are interested in establishing the individual's speech prosodic markers rather than in the content of a spoken message. (See **Speech recognition**)

**Voice setting** /'vɔɪs 'setɪŋ/ The term is used in phonetics to refer to various adjustments of the vocal cords which give rise to different effects of voicing that the listener interprets as modifying the utterance meaning. There are many possible adjustments of the vocal cords, though three of them seem to be the most significant ones: (1) the *normal vocal cords setting* of the individual, the so-called *unmarked voice setting*; (2) voicing accompanied by breathiness, known as *breathy voice*; and (3) voicing which gives an effect rather like “a cat's purr”, termed as “*creaky voice*”. *Breathy* and *creaky* types of voice setting are associated with the expression of emotions and attitudes. The scope of *breathy voice* comprises such types of voice variations: *panted, gasped, whispered, breathed, husky(-ly), breathless(-ly)*. Most of these variations suggest some seepage of voiceless air accompanying voicing. *Panted* and *breathlessly* also suggest breathing quickly, and *gasped* – speaking on an indrawn breath. *Whispered* and *breathed* may well suggest no voicing at all, implying *soft breathy voice*. Thus this set of terms shares the “*breathy*” voice feature. “*Creaky*” voice often accompanies lowered placing in the voice range and is frequently found in RP in expressing a “responsible” attitude, deeply-felt sympathy. Descriptive terms implying “*creaky*” voice are as follows: *purred, gratingly, murmured, majestically, earnestly*. *Purred* and *murmured* are both located low in the voice range and both imply soft rather than loud, slow rather than rapid speech. *Gratingly* is associated with loudness rather than softness, unmarked for tempo, unmarked for placing in voice range, “*creaky*” with tense articulatory setting. *Majestically* and *earnestly* both describe speech placed low in the voice range. (See **Voice quality**)

*Further reading:* Abercrombie 1967; Catford 1964; Celce-Murcia et al 1996; Crystal 1969, 1997; Laver 1968, 1995, 1996; Brown 1990; Pennington 1996; Crystal 1997; Jeffries 1998; Davydov, Yakovleva 2001; Антипова 1982; Медведева 1985; Сепир 2002.

**Voiced** /vɔɪst/ sounds. The term used to refer to the consonants uttered with the vocal cords vibration, e.g. /b, d, g, ʒ, z, ʃ, v, etc./. (See **Voiceless**)

**Voiced pause** /'vɔɪst 'pɔ:z/ Another term for *filled pause*. (See **Filled pause**)

**Voiceless** /'vɔɪsləs/ sounds. The term used to refer to: 1) the absence of any phonation; the vocal folds are held far enough apart to allow a laminar airflow through the glottis; 2) the consonants in the production of which the vocal cords are pulled apart so that they cannot be set into vibration by the airstream.

*Further reading:* Clark et al 2007.

**Voicing** /'vɔɪsɪŋ/ The term used to refer to the audible vibration of the vocal cords (or vocal folds), known as voice or phonation, e.g., /m, b, z/.

**VOT** /'vi: 'əʊ 'ti:/ The abbreviation refers to the term *voice onset time* that designates the point in time at which the voicing starts in relation to the opening of the two articulators. (See **Voice onset time**)

**Vowel** /'vaʊəl/ A term refers to the class of speech sounds in the production of which there is no obstruction to the airflow as it passes from the larynx to the lips. The vocal cords in the production of vowels are always in their raised position. All vowel sounds in normal speech display two, and usually three, formants. Vowels are almost always found at the centre of a *syllable*, being able of forming a syllable alone. There are twenty vowels in English. Their various qualities are determined by the *oral resonator* – its *size, volume* and *shape*. The resonator is modified by the *most movable speech organs* – the *tongue* and the *lips*. The quality of a vowel depends on whether the speech organs are tense or lax, and whether the force of articulation weakens or is stable. All these factors predetermine the principles according to which vowels are classified: (1) according to *the horizontal movement of the tongue*: *front* (/i:, e, æ/ and the diphthongs /eɪ, εə, aɪ/), *front-retracted* (/ɪ/ and the diphthong /ɪə/), *mixed or central* (/ɜ:, ə/), *back-advanced* (/ʊ, ʌ, ɑ:/ and the diphthongs /əʊ, uə/), and *back* (/u:, ɔ:, ɒ/); (2) according to *the vertical movement of the tongue*: *close (high)*, *mid*, and *open or low* (American phoneticians more often talk about “high” and “low” vowels); besides the vowels may be of narrow (/i:, u:, ɜ:, ʌ, ɔ:/) and broad variation (/ɪ, ʊ, ə, ɑ:, ɒ/); (3) according to *the position of the lips* (*rounded* /u:, ɔ:, ɒ, ʊ/ and *unrounded* (/i:, e, æ, ɪ, ʌ, ɜ:, ə, ɑ:/); (4) according to *the degree of articulatory organs muscular tension*: *tense* and *lax* (all long vowels are tense and the short vowels are lax); (5) according to *the force of articulation at the end of a vowel*: *free* (long monophthongs, diphthongs in open syllables and unstressed short vowels)

and *checked* (historically short vowels under stress); (6) according to *the stability of articulation: monophthongs* (/e, æ, ɪ, ʌ, ɜ:, ə, ɑ:, ɔ:, ɒ/), *diphthongoids* (/i:, u:/) and *diphthongs* (/ɪə, ʊə, εə, eɪ, aɪ, ɔɪ, əʊ, aʊ/); (7) according to *the length of a vowel: historically short* (/e, æ, ɪ, ʌ, ə, ɒ, ʊ/) and *historically long* (/i:, u:, ɜ:, ɑ:, ɔ:/) vowels. There are 8 diphthongs in English. These are the unisyllabic gliding sounds which consist of a vowel and a glide. Three of them end in /ə/ and are called *centering* /ʊə, ɪə, εə/; *closing* diphthongs make up two subgroups: /ɪ/-gliding /eɪ, aɪ, ɔɪ/ and /ʊ/-gliding /əʊ, aʊ/. In English there are some complex sounds known as triphthongs consisting of two syllables, they are: /eɪə, aɪə, ɔɪə; əʊə, aʊə/ as in *mayor* /ˈmeɪ – ə/, *fire* /ˈfaɪ – ə/, *hour* /ˈaʊ – ə/, etc.

According to the height of the tongue		FRONT		CENTRAL	BACK	
		Fully front	Front retracted		Back advanced	Fully back
HIGH	Narrow	i:				u:
	Broad		ɪ		ʊ	
MID	Narrow	e		ɜ:		
	Broad			ə ʌ		
LOW	Narrow					ɔ:
	Broad	æ				ɑ: ɒ

*Further reading:* Christophersen 1970; Jassem 1983; Brown 1990; Laver 1995; Ladefoged 2003; Стериополо 1995.

**Vowel length** /ˈvaʊəl ˈleŋθ/ A term used in phonetics to refer to the duration of a vowel sound usually marked by two dots, like in *see* /si:/. There are five historically long monophthongs in English: /i:, ɜ:, ɑ:, ɔ:, u:/. In connected speech they occur in their positional variants: the longest when word final, half long when followed by a voiced consonant and the shortest if it is followed by a voiceless consonant as in /si:/ – /si:d/ – /si:t/, respectively.

**Vowel overtones** /ˈvaʊəl ˈəʊvətəʊnz/ The term used to refer to a number of different pitches simultaneously which a vowel contains: (1) the pitch at which it is actually spoken and (2) the various overtone pitches that give

the vowel its distinctive quality. One vowel is distinguished from others by the differences in the audible overtones, or by its overtone structure. These characteristic overtones are called the *formants* of the vowel, the lowest of the two being called the *first formant*, and the higher the *second formant*. There is also another characteristic overtone, the third overtone, but there is no simple way of demonstrating its pitch, though it can be measured and represented graphically in comparison with the other formants. (See **Formants**)

*Further reading:* Ladefoged 1975; O'Connor 1984; Crystal; Fant 1968, 2004; Duffy 1970; Ohala 1994.

## W

**Wave** /weɪv/ The term used in acoustic phonetics to refer to a weak compression wave that moves at the speed of sound. Alternating compression and expansion acoustic waves moving in unison cause sound. (See **Sound wave**)

**Waveform** /'weɪvfɔ:m/ The term used to refer to a graph of air particles movement in a sound wave.

**Wavelength** /'weɪvleŋθ/ The term used in acoustic phonetics to refer to the distance travelled by a sound wave during a single cycle of vibration.

**Weak form** /'wi:k 'fɔ:m/ The term used to refer to the pronunciation of words, usually form-words like conjunctions (e.g. *and* – /ænd → ənd → n/, *but* – /bʌt → bət/, *or* /ɔ: → ɔ/), articles (e.g. *a* /eɪ → ə/, *an* /æn → ən/, *the* /ði: → ði: → ði → ðə/), pronouns: (e.g. personal: *she* /ʃi: → ʃi: → ʃi/, *he* /hi: → hi: → hi/, possessive: *her* /hɜ: → hɜ: → hə/, reflexive, relative and indefinite pronoun *some* /sʌm → səm → sm/), prepositions (e.g. *for* /fɔ: → fɔ: → fə/, *to* /tu: → tu: → tə/, *at* /æt → ət/) and some auxiliary and modal verbs (e.g. *do* /du: → du/, *must* /mʌst → məst → mst/, *should* /ʃʊd → ʃəd/) in unstressed positions. These words have the vowel of full formation when they are under stress, i.e. when they are quoted or contrasted, or when they are in sentence final position. The English vowels occurring in unstressed syllables form a definite system called *unstressed vocalism*. Vowels in unstressed syllables are shorter, weaker and less distinct. It means that they undergo quantitative and qualitative reduction. (See **Reduction, Strong Form**)

*Further reading:* Christophersen 1970; Vassilyev 1970; Roach 1990; Laver 1995; Теоретична 2003.

**Weakening** /'wi:kəniŋ/ The term is used as a synonym for *lenition*. (See **Reduction, Lenition**)

**Whisper** /'wɪspə/ A term used to denote the way of speaking in conditions where it is necessary to be quiet, so that only a person close by can hear.

Physiologically, in whispering the vocal cords are brought fairly close together until there is a small space between them, and air from the lungs is then forced through the hole to create friction noise which acts as a substitute for the voicing that would normally be produced. When a speaker whispers it is still possible to recognize his/her intonation: theoretically, intonation can only result from the vibration of the vocal cords, but it seems that speakers can modify their vocal tracts to produce the effect of intonation by other means. Whisper is also used paralinguistically as the register of secrecy. Besides, J.Laver and P.Trudgill state that creakiness as well as whispering are more highly valued (in the sense of social prestige) in some varieties of British English. Whispy voice describes the louder “stage whisper” giving the impression of a whisper while adding voice for efficient projection. (See **Loudness, Voice quality**)

*Further reading:* Catford 1964; Esling 1994; Laver 1995, 1996; Laver, Trudgill 1979.

**Windpipe** /'wɪnd paɪp/ The tube which forms an air passage from the throat to the top of the lungs. When we breathe, the air is drawn in and forced out through this tube. It is this stream of air that is utilized when we speak. Normally it is only the outgoing stream that is used in sound articulation.

**Word** /wɜːd/ A term refers to the smallest linguistic unit which can be used in speech or writing on its own. It frequently happens that a phonemic analysis is based on a unit not larger than the word since any larger section of the utterance makes the analysis a great deal more complicated. As D.Jones has pointed out, the two phrases *plum pie* and *plump eye* exemplify the complication, which will arise. The two phrases differ principally in the aspiration which accompanies the /p/ of the *pie* but which is absent from the final /p/ of *plump*. A phonemic analysis which is based on such an extensive sound sequence would require the establishment of two /p/ phonemes, one with, one without aspiration. The difficulty is avoided if the word is treated as a complex phonetic and phonemic entity, special consideration being given to word boundaries in the utterance. If, however, the linguistic analysis is based on a sequence more extensive than the word, a mark of contrast has to be established in order to deal with the behavior of phoneme sequences at word or morpheme boundaries.

*Further reading:* Gimson 1980.

**Word accent** /'wɜːd 'æksənt/, or *word stress* /'wɜːd stres/. A term refers to greater pronunciation effort as compared with that of the other syllable or syllables in a word, achieved by a greater degree of *loudness*, greater

*length* of the stressed syllable, or modifications in its *pitch* and *quality*. Different languages harness different combinations of these in their word stress systems. Depending on the leading parameter (loudness, length, pitch and quality), word stress may be of the following types: (1) *dynamic* – achieved by a greater force of articulation, which results in a greater degree of loudness or intensity. Dynamic stress may be: *quantitative*, achieved by the quantity of the sound, i.e. its duration, and *qualitative*, achieved by a different quality of vowels in stressed and unstressed syllables; (2) *musical* – achieved by the variations in pitch level (Chinese, Japanese, Vietnamese are called musical or tonic languages). Swedish word stress is both dynamic and musical. English word stress is considered as dynamic and is of a complex nature, since it is *dynamic quantitative* and *dynamic qualitative*. Word stress in English manifests itself in intensity, or duration of the stressed syllables, or the spectrum of the stressed vowel, or the fundamental frequency, or the combination of any of these parameters. *The placement of stress* is conditioned primarily by the pronunciation tendencies (recessive (restricted/unrestricted), retentive, rhythmic and semantic) and the orthoepic norm. There are more than a hundred stress patterns in English (G.Torsuyev), grouped into 11 commonest types.

There are three linguistically relevant degrees of word stress in English (R.Kingdon, V.Vassilyev): *primary* (or *strong*), *secondary* (or *partial*), *weak* (the unstressed syllables have *weak* stress). G.Trager and A.Hill distinguish four degrees of word stress: 1) *primary*; 2) *secondary*; 3) *tertiary*; and 4) *weak*. *Secondary stress* occurs before the primary one. *Tertiary stress* usually occurs after the primary stress and is linguistically important since it serves to differentiate the accentual patterns of some British and American polysyllabic words. Word stress in English performs several functions: 1) *constitutive* (the ability of syllables to build up a word by forming its stress pattern, without which it ceases to be a word); 2) *distinctive* (the ability to differentiate words with analogous sound structure: *ˈinsult* – *inˈsult*, *ˈsuspect* – *suˈspect*, *ˈaccent* – *acˈcent*); 3) *identificatory* (words stress patterns enable us to identify definite combinations of sounds as meaningful linguistic units). Stress is sometimes referred to as *accent* and stressed syllables are said to be accentuated. (See **Accent**)

*Further reading*: Cristophersen 1970; Gimson 1980; O'Connor 1984; Halle, Vergnaud 1990; Laver 1995; Торсуев 1960; Касевич и др. 1990.

**Word boundary** /'wɜːd 'baʊndəri/ (See **Juncture**)

**Word stress** /'wɜːd stres/ Another term for *word accent*. (See **Word accent**)

## X

**X-ray** /'eksreɪ/ The term refers to the powerful unseen beam of light used in experimental phonetics for photographing the articulatory movements in the process of sound production. Radiography has played a very important role and much of what we know about the dimensions and movements of the vocal tract has resulted from the examination of X-ray photos and film. Nowadays there has been a decline in the amount of radiographic research in speech since special computer programmes were invented to control the direction of a very narrow beam of low-intensity radiation and to build up a picture of articulatory movements through rapid scanning. In present-day research, such techniques as measuring the movements of articulators by means of electromagnetic tracking is more widely used.

*Further reading:* Jones 1969.

**X-rays analysis** /'eksreɪ ə'næləʊsɪs/ A term used in experimental phonetics to refer to the radiographic study of the dimensions and movements of the vocal tract in producing speech sounds.

# Y

**Yod** /'jɒd/ The term refers to the tenth letter of the Hebrew alphabet.

**Yod dropping** /'jɒd ˌdrɒpɪŋ/ A term used to refer to the nonpronunciation of yod in certain accents of English. In many varieties of American English, there is yod dropping in words such as *new* and *suit*, pronounced /nu:/ and /su:t/. Yod dropping only applies where the yod is preceded by a coronal consonant, and thus fails to apply in words such as *cure* /kjʊə/, *pure* /pjʊə/, etc. (See **Coronal consonant**)

## PROMINENT PERSONALITIES IN PHONETICS

**Abercrombie, David** (1909-1992), Professor, the doyen of phonetics of the British School, Lecturer in Phonetics in the University of Edinburgh.

David Abercrombie went on to establish within a decade an outstanding Department of Phonetics that was to attract academics and postgraduate students from throughout the world. The quality of the teaching that took place there, of the ideas that underlay it and of the work done to elaborate these ideas into phonetic theory, rose well above that of the surroundings. Some part of Abercrombie's strength in building up his department came from the traditions of his background and the diversity of his family scientific experience. A particular advantage was the training he received in London during the 1930s. Here, whilst working as a postgraduate student, he was taught by D.Jones and J.R. Firth at University College, and later at the LSE (the London School of English) by B.Malinowski. In Edinburgh he was able to bring together in a well-integrated whole the sound and substantial phonetic training of D.Jones with the interest in wider linguistic concerns, which characterized the work of J.R. Firth and B.Malinowski. In this he was aided by a number of excellent scholars some of whom had shared this early dual training in London. D.Abercrombie's aim was to demonstrate the values of the earlier tradition and evoke new interest in it. His very special combination of interests and abilities led to a distinctive and cogent programme of teaching and research in Edinburgh, his own lucid and definitive writings being amongst its key products. He was appointed Professor in 1964.

The hallmark of D.Abercrombie's approach to phonetics was the combination of a demanding attention to theoretical rigour, allied to the scrupulous development of practical skills of performance and perception. One of his chief concerns was the contribution of phonetics to the teaching of English as a foreign and second language. His work was grounded in an excellent appreciation of the historical roots of the subject. The orientation that he brought to phonetics was based not only on a strong interest in semiotics, the iconic and indexical properties of the speech medium were amongst his major concerns. Prof. D.Abercrombie was a specialist in the theory of transcription. He made some major contributions to the study of paralanguage and tone of voice, and to that of speaker-identifying voice characteristics. His main impact on international phoneticians was achieved by his theoretical textbook *Elements of General Phonetics* (1967), which is still in print and has been used in very many courses as the basic textbook. His other major works in the field of phonetics and linguistics are internationally properly regarded: *Forgotten phoneticians* (1949), *The Way People Speak* (1951), *English Accents* (1953), *A*

*phonetician's view of verse* (1956), *Teaching Pronunciation: A book of readings* (1956), *Problems and Principles* (1956), *Palatography* (1957), *English Phonetic Texts* (1964), *Syllable quantity and enclitics in English* (1964), *Conversation and spoken prose* (1965), *Studies in Phonetics and Linguistics* (1965), *Paralanguage* (1968), *Paralinguistic communication* (1975), *The accents of Standard English in Scotland* (1977), *Fifty Years in Phonetics* (1991).

**Bloomfield, Leonard** (1887-1949), an American linguist who worked on the native languages of North America and is often associated with American structuralism. He made significant contributions to Indo-European historical linguistics, the description of Austronesian languages and as well as of the Algonquian family.

Leonard Bloomfield's approach to linguistics was characterized by its emphasis on the scientific basis of linguistics and on formal procedures for the linguistic data analysis. Influenced by the drift away from mentalism in psychology, L. Bloomfield adopted, not only empiricism, but also behaviourism. Because he opposed mentalism, L. Bloomfield argued that one should analyse linguistic structure independently of meaning, though he inevitably failed to do so. He also embraced the concept of the phoneme, but one cannot establish phonemic contrasts without recourse to meaning. Leonard Bloomfield considered that linguistics could be 'scientific', and his conception of what this meant was influenced by logical positivism. It is because of this conception he believed that the only scientifically valid generalizations in linguistics were inductive ones.

Prof. Bloomfield was Instructor in German at the University of Cincinnati (1909-1910) and that of Illinois (1910-1913); Assistant Professor of Comparative Philology and German, University of Illinois (1913-1921); Professor of German and Linguistics at the Ohio State University (1921-1927); Professor of Germanic Philology at the University of Chicago (1927-1940); Sterling Professor of Linguistics at Yale University (1940-1949). During the summer of 1925 L. Bloomfield worked as Assistant Ethnologist in the Geological Survey of Canada in the Canadian Department of Mines, undertaking linguistic fieldwork on Plains Cree; this position was arranged by Edward Sapir.

Leonard Bloomfield had six main publications during his lifetime: *Introduction to the Study of Language* (1914), *Tagalog Texts with Grammatical Analysis* (1917), *Menomini Texts* (1928), *The Stressed Vowels of American English* (1935), *Linguistic Aspects of Science* (1939). His most influential textbook *Language* (1933) presents a comprehensive description of American structural linguistics.

Prof. Bloomfield was one of the founding members of the Linguistic Society of

America and was President of the Society in 1935. Leonard Bloomfield is not only one of the best linguists of his time, he is also regarded as one of the best linguists of all times.

**Bolinger, Dwight** (1907-1992), an American linguist, Professor Emeritus of Romance Languages and Literatures at Harvard University, visiting Professor Emeritus at Stanford University. He began his career as the first editor of the “Among the New Words” feature for *American Speech*. As an expert in Spanish, he was elected President of the American Association of Teachers of Spanish and Portuguese in 1960. He was known for the support and encouragement he gave younger scholars and for his hands-on approach to the analysis of human language. His scientific interests were rather versatile and his works touched on a wide range of subjects, including semantics, intonation, phonesthesia, the politics of language, etc. His book *The Phrasal Verb in English* (1971) encouraged a scientific treatment of phrasal verbs by many linguists. His another book, *Meaning and Form* (1977), established the principle according to which a difference in form implies a difference in perceived meaning.

In 1972 he was elected President of the Linguistic Society of America. Besides, D.Bolinger served as President of Linguistic Association of Canada and the U.S. (1975-76). In 1981 he was awarded the Orwell Award by the National Council of Teachers of English for his book *Language: The Loaded Weapon* (1980), which inspired other linguists to restore the role for the application of common sense in the study of language. Geoffrey Nunberg describes D.Bolinger as “one of the most distinguished semanticists” of the mid-twentieth century, pointing to his “uncanny ear for the nuances of words”.

His honors included the following: Fellow, American Academy of Arts and Sciences (1973); Corresponding Member, Royal Spanish Academy (1988); Corresponding Fellow, British Academy (1990); Co-chairman, Honorary Editorial Advisory Board, The Encyclopedia of Language and Linguistics, R.E. Asher and J.M.Y. Simpson, eds., Pergamon (1994). D.Bolinger was a prolific writer, his scientific experience is reflected in 339 publications, among which the most significant are: *New Words and Meanings* (1944), *Spanish Intonation* (1945), *The Intonation of Quoted Questions* (1946), *American English Intonation* (1947), *American English Intonation (review of K.L.Pike, The Intonation of American English, 1945)* (1947), *The Intonation of Accosting Questions* (1948), *Intonation and Analysis* (1949), *Shivaree and the Phonostheme* (1950), *Rime, Assonance and Morpheme Analysis* (1950), *Intonation: Levels Versus Configurations* (1951), *The Life and Death of Words* (1953), *The Melody of Language* (1955), *Intersections of Stress and Intonation* (1955), *Intonation as Stress-Carrier* (1955), *Stress on Normally Unstressed Elements* (1956), *Maneuvering for Stress and Intonation* (1957), *Intonation and*

*Grammar* (1957-58), *A Theory of Pitch Accent in English* (1958), *Stress and Information* (1958), *Ambiguities in Pitch Accent* (1961), *Contrastive Accent and Contrastive Stress* (1961), *Binomials and Pitch Accent* (1962), *Length, Vowel, Juncture* (1963), *Around the Edge of Language: Intonation* (1964), *Intonation as a Universal* (1964), *Forms of English: Accent, Morpheme, Order* (1965), *Aspects of Language* (1968, 1975, 1981), *Intonation: Selected Readings* (1972), *Relative Height* (1972), *Accent is Predictable (If you're a Mind-reader)* (1972), *Are You a Sincere H-Dropper?* (1975), *Meaning and Form* (1977), *Intonation Across Languages* (1978), *Metaphorical Aggression: Bluenoses and Coffin Nails* (1979), *The Socially-Minded Linguist* (1979), *Intonation and Nature* (1980), *Accents that Determine Stress* (1980), *Linguistic Essays on Phonosemic Subjects* (Foreword to Roger W. Wescott *Sound and Sense*, 1980), *Some Intonation Stereotypes in English* (1981), *Voice Imprints* (1981), *Two Kinds of Vowels, Two Kinds of Rhythm* (1981), *Consonance, Dissonance, and Grammaticality: The Case of Wanna* (1981), *Intonation and Its Parts* (1982), *The Network Tone of Voice* (1982), *Nondeclaratives from an Intonational Standpoint* (1982), *On Pre-Accentual Lengthening* (1982), *Where Does Intonation Belong?* (1983), *Intonation and Gesture* (1983), *Intonational Signals of Subordination* (1984), *Two Views of Accent* (1985), *The Inherent Iconism of Intonation* (1985), *Intonation and Its Parts: Melody in Spoken English* (1986), *Intonation* (1986), *Intonation and Emotion* (1986), *On Accent* (1987), *Anticipatory Lengthening* (1988), *Intonation and Its Uses: Melody in Grammar and Discourse* (1989), *Accent in Prototypical 'Wh' Questions* (1990), *The Doolittling of English* (1990), *Sound Symbolism* (1991), *The Dimensions of Accent* (1991), *The Teaching of Intonation: Classroom Experiences to Theoretical Models* (1991), *Role of Accent in Extraposition and Focus* (1992), *Intonation in American English* (1998) and many others.

**Boomer, Donald**, the experimental and clinical psychologist, the National Institutes of Mental Health in Bethesda, Maryland, who spent a year (1966) in Edinburgh, carrying out a research of slips of the tongue in spontaneous speech. He regarded slips of the tongue as evidence for the way that the brain might control the otherwise hidden processes of generating and monitoring the production of normal, everyday speech, as part and parcel of the normal constructional process of preparing a neurolinguistic and neuromuscular program for speaking.

Donald Boomer had a formidable analytic talent. He regarded experimental data as “a prisoner captured in a hard-won battle, to be interrogated and kept under close scrutiny until it had yielded every last drop of significance and subtle implication” (J.Laver). His scientific interests are connected with the way the brain might control the speech production, modelling the control of speech production and the like. His scientific interests

found their reflections in the following publications: *Hesitation pauses and juncture pauses in speech* (1962, co-authored with A.T.Dittman), *Hesitation and grammatical encoding* (1965), *Slips of the tongue* (1968, co-authored with J.Laver) and others.

**Brazil, David** (1925-1995), Professor, lecturer on discourse intonation, Department of English, the University of Birmingham, the originator of discourse intonation.

He got his external degree from the University of London, and he is best known for his association with the University of Birmingham, which began in the 1960s. In the early 1970s he studied for a Master's degree at the University of Birmingham, where he worked with John Sinclair and Malcolm Coulthard on the Discourse Analysis research projects. The work on these projects became the subject matter of his PhD, and led to the famous discourse analysis publications of the mid 1970s and the publication of *Discourse Intonation and Language Teaching* (1980). From 1979 to 1983 he was employed by the University as a full time lecturer. In his teaching practice he had the ability to make complex ideas seem simple.

In 1986 he entered full retirement and the time he had at his disposal enabled him to undertake writing projects, which culminated in the publication of *Pronunciation for Advanced Learners of English* (1994) and *A Grammar of Speech* (1995). His works *Discourse Intonation and Language Teaching*, co-authored with M.Coulthard and C.Johns (1980), *The Communicative Value of Intonation in English* (1985/1997), *Pronunciation for Advanced Learners of English* (1994), *A Grammar of Speech* (1995) are increasingly cited in a great number of different scientific papers. The most detailed statement of the theory of Discourse Intonation is to be found in his fundamental book *The Communicative Value of Intonation in English* (1985). Besides D.Brazil is known by the following publications: *Reading intonation* (1979), *Exchange Structure: Discourse analysis* (1979, co-authored with M.Coulthard), *The place of intonation in a discourse model* (1981), *Impromptuness and intonation* (1982), *Teacher Talk* (1982, co-authored with J.Sinclair), *Intonation and discourse: Some principles and procedures* (1983), *Intonation and connectedness in discourse* (1983), *The intonation of sentences read aloud* (1984), *Tag questions* (1984), *Where is the edge of language?* (1985), *Phonology: Intonation in discourse* (1985), *Intonation and the study of dialect* (1986), *Investigating the intonation of language learners* (1986), *Discourse intonation* (1986), *Representing Pronunciation* (1987), *Intonation and the grammar of speech* (1987), "Oh What is that Sound": *An exercise in metrical analysis* (1990), *Discourse intonation: The teacher's talk* (1991), *Speaking English or talking to people* (1992), *Listening to people reading* (1992), *Telling tales* (1993), *The nature of English conversation* (1994) and many others.

**Catford, J.C.**, Professor Emeritus of linguistics at the University of Michigan. He came to the University of Michigan (1964) from the School of Applied Linguistics, which he had founded at the University of Edinburgh (1956), to be Director of Michigan's English Language Institute. A phonetician who had studied under D.Jones, P.Fouché, and J.Durand (among others), J.C.Catford not only directed the Institute, but also took over the direction of the Communication Sciences Laboratory, as well as much of the teaching of phonetics in the Department of Linguistics.

During this period, the laboratory – now known as the Phonetics Laboratory – was maintained as an ongoing and generally available resource for faculty or students investigating spoken language, whether in phonetics, applied linguistics, or psycholinguistics. Instrumentation included a Kay Sonograph, a mingograph, and airflow recording equipment. Between 1966 and 1985, 38 dissertations were written on topics in phonetics and phonology, about half of them incorporating research carried out in the laboratory. J.C.Catford's *Fundamental Problems in Phonetics*, and his work on the phonetics of Caucasian languages, likewise owed much to research in the laboratory.

The theory of componential-parametric phonetics expounded in J.C.Catford's *Fundamentals* was taught to Linguistics students and Speech and Hearing students through thorough introspective observation of the motor sensations of speech production and intensive ear-training. This approach induced students to acquire a personally experienced understanding of the basic components of speech production – initiation, articulation, and phonation – as well as of the parametric ranges of characteristic features of these components. Upon retirement as Emeritus Professor in 1985, J.C.Catford presented a series of informal talks on his phonetics career.

In 1989, an International Conference on Linguistic Approaches to Phonetics was held at Michigan in honor of J.C. Catford. The common thread of that conference – the fundamental interaction of research in phonetics with areas not traditionally viewed as part of the phonetic sciences – is the common thread of the past decade of phonetics research at Michigan. Recent and on-going dissertations in phonetics all reflect this interest in the integration of the linguistic subdisciplines concerned with sound structure.

**Chomsky, Avram Noam** (1928), the Institute Professor Emeritus of linguistics at the Massachusetts Institute of Technology. N.Chomsky received his Ph.D. in linguistics from the University of Pennsylvania in 1955. In his doctoral thesis, he began to develop some of his linguistic ideas, elaborating on them in his 1957 book *Syntactic Structures*, perhaps his best-known work in linguistics. In 1961 he was appointed full professor in the Department of Modern Languages and Linguistics (now the Department of Linguistics and Philosophy). From 1966 to 1976 he held the Ferrari P. Ward Professorship of

Modern Languages and Linguistics. In 1976 he was appointed Institute Professor. Prof. Chomsky has been teaching at MIT continuously for the last 50 years. Besides, he delivered lectures at many universities of the world.

He is credited with the creation of the theory of generative grammar, considered as one of the most significant contributions to the field of theoretical linguistics made in the 20th century. He also helped spark the cognitive revolution in psychology through his review of B.F. Skinner's *Verbal Behavior*, in which he challenged the behaviorist approach to the study of mind and language dominant in the 1950s. His naturalistic approach to the study of language has affected the philosophy of language and mind. He is also attributed with the establishment of the Chomsky-Schützenberger hierarchy, a classification of formal languages in terms of their generative power. N. Chomsky's ideas published in *Logical Structure of Linguistic Theory* (1955, 75), *Syntactic Structures* (1957), *Topics in the Theory of Generative Grammar* (1968), *Language and Mind* (1968), *Minimalist Program* (1995) and others have had a strong influence on researchers in the field of linguistics. His best-known work in phonology is *The Sound Pattern of English* (1968), written with Morris Halle, which is regarded as the major generative work on English phonology.

Prof. Chomsky's work in linguistics has had major implications for modern psychology. For N. Chomsky linguistics is a branch of cognitive psychology; genuine insights in linguistics imply concomitant understandings of aspects of mental processing and human nature. His theory of a universal grammar was seen by many as a direct challenge to the established behaviorist theories of the time and had major consequences for understanding how language is learned by children and what, exactly, is the ability to use language. Many of the more basic principles of this theory are now generally accepted in some circles.

Noam Chomsky has received many honorary degrees from the most prestigious universities around the world, including University of London, University of Chicago, Delhi University, Bard College, University of Massachusetts, University of Pennsylvania, Georgetown University, Cambridge University, Columbia University, University of Connecticut, University of Toronto, Harvard University, Universidad de Chile, University of Calcutta, Universidad Nacional De Colombia and others. He is a member of the American Academy of Arts and Sciences, the National Academy of Sciences, and the American Philosophical Society. He is a member of other professional and learned societies in the United States and abroad, and is a recipient of the Distinguished Scientific Contribution Award of the American Psychological Association, the Kyoto Prize in Basic Sciences, the Helmholtz Medal, the Dorothy Eldridge Peacemaker Award, the Ben Franklin Medal in Computer and Cognitive Science and others. He is twice winner of The Orwell Award, granted

by The National Council of Teachers of English for “Distinguished Contributions to Honesty and Clarity in Public Language”. Early in his career N.Chomsky was granted the prestigious MacArthur Award. In 2003 he was elected as a member of Serbian Academy of Sciences and Arts. According to the Arts and Humanities Citation Index, between 1980 and 1992 N.Chomsky was cited as a source more often than any other living scholar, and the eighth most cited source overall. Chomsky was voted the leading living public intellectual in The 2005 Global Intellectuals Poll conducted by the British magazine *Prospect*. In a list compiled by the magazine *New Statesman* (2006) he was voted seventh in the list of “Heroes of our time”.

**Cook, Norman D.**, a professor of informatics at Kansai University, Osaka, Japan, is a psychologist interested in the higher cognitive functions of Homo sapiens, notably music perception, speech prosody, pictorial depth perception and the reverse perspective illusion.

In his works Norman D. Cook has made an attempt to establish the correlation between pitch changes in the voice and the affective state of the speaker during normal speech. These empirical facts about the role of the right hemisphere that is more sensitive to pitch information (melody and harmony) than the left, and is also more capable of perceiving emotions, while the left hemisphere is better at denotative and syntactic processing, have formed the backbone of a theory of interhemispheric communications. This theory explains not only the highest-level division of labor of the cerebral hemispheres during language processing, but also why there are resolved (major and minor) and unresolved (augmented and diminished) harmonies and indeed why the “ring” of major chords is generally considered to be “bright” and that of minor chords “dark”. According to N.Cook, these ancient problems in music perception can be neatly resolved on the basis of psychophysical principles if the relative size of the intervals contained within three-tone chords.

He studies the pitch changes in speech and their interval combinations. Norman D. Cook states that although the changes in pitch during normal speech do not have the musicality of song, it is of interest that the basic pitch phenomena underlying diatonic music can also be found in speech. He introduces topological organization of auditory information related to the production and perception of intonation in speech. In so far as auditory information-processing at the cortical level is known to have tonotopic organization, it is likely that the processing of specifically voice intonation involves the analysis of patterns of excitation in similar maps, which he terms “intonatopic maps” (see *Tone of Voice and Mind*, 2002).

The results of his research are reflected in the following most known publications of the scholar: *Correlations Between Input and Output Units in Neural Networks* (1995), *Activation of Verbal Labels on Bilateral Self-Organized*

*Maps* (1998, co-authored with Takefumi Hayashi), *Simulating the Information Processing Associated with Human Consciousness in a Bilateral Neural Network: “Nuclear” and “Fringe” Awareness* (1998), *Explaining Harmony. The Roles of Interval Dissonance and Chordal Tension* (2001), *Tone of Voice and Mind* (2002), *The Psychophysics of Harmony Perception: Harmony is a Three-Tone Phenomenon* (2006, co-authored with Fujisawa T.X.), *Why Not Study Polytonal Psychophysics?* (2007, co-authored with Fujisawa T.X., Konaka H.).

**Cruttenden, Allan** (1936), Emeritus Professor of Phonetics, Department of Linguistics, University of Manchester. He took a degree in English at Oxford and then spent five years working for Oxford University Press, mainly in Africa, where he developed an interest in English language teaching and in the local Bantu languages. He did his postgraduate courses firstly in teaching English as a foreign language at the University of Wales and then in phonetics at University College, London. He later completed his doctorate on intonation at the University of Manchester, where the major part of his academic career was spent. Allan Cruttenden has published widely on intonation and on child language. He was the Editor (1984-1987) and Joint Editor (1987-1990) of the *Journal of Child Language*. His books include *Language in Infancy and Childhood* (1979) and *Intonation* (1986). He has also edited and substantially rewritten *Gimson’s Pronunciation of English* (6<sup>th</sup> edition, 2001). Allan Cruttenden retains an interest in comparative studies of intonation as shown in *Manchester intonation and its relevance to intonational theory* (2001) and in *The de-accenting of old information: a cognitive universal?* (2006).

He was a Visiting Scholar at Stanford, California in 1982; Head of the Department of Linguistics at Manchester University from 1992 to 1995; retired in 2001.

**Crystal, David** (1941), one of the world’s foremost authorities on language. An internationally renowned writer, journal editor, lecturer, consultant and broadcaster on language matters, and formerly professor of linguistics at the University of Reading. D.Crystal is probably best known internationally for his works on linguistics and phonetics of English.

He grew up bilingual in Welsh and English, which influenced his approach to language and education. D.Crystal studied English at University College London and later was a researcher under Randolph Quirk (1962-1963), working on the Survey of English Usage. Since then he has lectured at the University of Wales, Bangor (UWB) and the University of Reading. He published the first of his 100 or so books in 1964, and became known chiefly for his research work in English language studies, in such fields as intonation and stylistics (*Prosodic systems and intonation in English* (1969), *Investigating English Style* (1969) co-authored with D.Davy), and in the application of

linguistics to religious, educational and clinical contexts, notably in the development of a range of linguistic profiling techniques for diagnostic and therapeutic purposes. He held a chair at the University of Reading for 10 years, and is now Honorary Professor of Linguistics at the University of Wales, Bangor. These days he divides his time between work on language and work on general reference publishing. His many academic interests include English language teaching, forensic linguistics, language death, ludic linguistics (or language play), English style, Shakespeare, indexing and lexicography. He is also a qualified speech therapist.

Prof. D. Crystal is the author of books on a wide variety of subjects, specialising among other things in editing reference works, including the *Cambridge Encyclopedia of Language* (1987), *the Cambridge Encyclopedia of the English Language* (1995), *the Cambridge Biographical Dictionary*, *the Cambridge Encyclopedia* itself, and *the New Penguin Encyclopedia* (2003), *The Penguin Factfinder* (2003). Recent authored books (all 2006) include: *How Language Works*; *Words, Words, Words*; *The Fight for English*, and *As They Say in Zanzibar*. Co-authored books include *Words on Words* (2000), *A Dictionary of Language Quotations* (2001) and *Shakespeare's Words* (2002) and *The Shakespeare Miscellany* (2005). He has also edited literary works, and is Chair of the UK National Literary Association. His hypothesis is that globally English will both split and converge, with local variants becoming less mutually comprehensible and therefore necessitating the rise of what he terms World Standard Spoken English. His non-linguistic writing includes poems, plays and biography. D. Crystal continues to write as well as contribute to television and radio broadcasts and for many years presented a BBC Radio 4 programme on language issues.

His books on English phonetics and phonology include: *Prosodic Systems and Intonation in English* which gives a thorough critical examination of the whole treatment of English intonation, and *The English Tone of Voice*. His clinical books include: *Introduction to Language Pathology*, *Profiling Linguistic Disability*, *Clinical Linguistics*, and *Linguistic Encounters with Language Handicap*. His work for schools includes the *Skylarks*, *Databank* and *Datasearch* programmes, *Nineties Knowledge*, *Language A to Z*, *Rediscover Grammar*, *Discover Grammar*, and *Making Sense of Grammar*.

He was a founder-editor of the *Journal of Child Language*, *Child Language Teaching and Therapy*, and *Linguistics Abstracts*, and has edited several book series, such as Penguin *Linguistics* and Blackwell's *Language Library*.

David Crystal is currently the Patron of the International Association of Teachers of English as a Foreign Language (IATEFL), president of the UK National Literacy Association, and an honorary vice-president of the Royal College of Speech and Language Therapists, the Institute of Linguists and the Society for Editors and Proofreaders. He is a past honorary president of the

National Association for Professionals concerned with Language-Impaired Children, the International Association of Forensic Phonetics, and the Society of Indexers. He was Sam Wanamaker Fellow at Shakespeare's Globe in 2003-2004 and was honorary president of the Johnson Society for 2005-2006. D. Crystal has also been a member of the Board of the British Council and of the English-Speaking Union. He received an OBE (Officer of the Order of the British Empire) for services to the English language in 1995, and was made a Fellow of the British Academy (FBA) in 2000. He now lives in Holyhead, where he is the director of the Ucheldre Centre, a multi-purpose arts and exhibition centre.

**Fant, Carl Gunnar Michael** (1919-2009), Professor Emeritus at the Royal Institute of Technology (KTH) in Stockholm. Gunnar Fant received a Master of Science in Electrical Engineering in 1945. Later he specialized in the acoustics of the human voice, measuring formant values, and continued to work in this area at Ericsson and at the Massachusetts Institute of Technology. He also took the initiative of creating a speech communication department at KTH, unusual at the time. His work led to the birth of a new era of speech synthesis with the introduction of powerful and configurable formant synthesizers. In the 1960s, Gunnar Fant's Orator Verbis Electris (OVE) competed with Walter Lawrence's Parametric Artificial Talker (PAT) in creating very life-like speech synthesis. In later years, Gunnar Fant remained active in the area of speech synthesis, focusing mainly on research on prosody. For almost 60 years Gunnar Fant has actively contributed to the field of Speech Acoustics and Phonetics.

Gunnar Fant received honorary doctorates from the Grenoble University (1978) and from Stockholm University (1988), and several other awards, such as the Swedish Academy Margit Pålson award, and the IEEE James L. Flanagan Speech and Audio Processing Award. He was President of the Acoustical Society of Sweden (1962-1974) and of the Acoustical Society of Scandinavia (1963-1968); a member of the Royal Swedish Academy of Sciences and the Royal Swedish Academy of Engineering Sciences.

Phoneticians may also know about some of his work, but only few have a proper knowledge about the details and the breadth of his pioneering and still ongoing research. His list of publications with over 260 titles are focused on speech research overview, speech production and synthesis, the voice source, speech analysis and features, speech perception and prosody.

His pioneering book on the *Acoustic theory of speech production* (1960) is a classic being still invaluable in articulatory synthesis. However, many other topics, like the formant banana, the Jakobsen-Fant-Halle distinctive features, the LF source model, the OVE synthesiser, the invariance-variability dispute, syllable prominence and the speech code, prosody of spoken Swedish and that of poetry get much attention. G. Fant's major books and publications include:

*Modern Instruments and Methods for Acoustic Studies of Speech* (1958); *Acoustic Analysis and Synthesis of Speech with Applications to Swedish* (1959); *Preliminaries to Speech Analysis: The Distinctive Features and Their Correlates* (1961, co-authored with R.Jakobson and M.Halle); *Analysis and Synthesis of Speech Processes* (1968); *Speech Sounds and Features* (1973); *The Relation Between Area Functions and the Acoustical Signal* (1980); *Acoustical Analysis of Speech* (1997); *Speech Acoustics and Phonetics: Selected Writings* (2006) and others.

**Fry, Dennis Butler** (1907-1983), the leading British experimental phonetician of the third quarter of the twentieth century. In 1934 Dennis Butler Fry was appointed Assistant Lecturer in the Phonetics Department of University College London, then the only university phonetics department in the UK headed by Daniel Jones. Apart from the war years, which he spent in the acoustics laboratory of the RAF Central Medical Establishment, he remained at University College London throughout his career. D.B.Fry became Superintendent of its Phonetics Laboratory at the age of thirty, and in 1949 succeeded Daniel Jones as Head of Department. He was appointed Professor of Experimental Phonetics in 1958, which he gave up in 1971; in 1975 he retired.

Despite some early work associated with the Daniel Jones school, Fry's principal interest was experimental phonetics. His scientific career started in an era when the equipment of a modern phonetics laboratory included sensitive flames and mechanical kymographs, and culminated in the era of the mini-computer.

New signalling processing techniques, which appeared in 1940s and 1950s, and the birth of information theory led to a growth of interest in experimental phonetics in general. For the first time automatic recognition and synthesis of speech began to seem feasible. D.B.Fry, with a wide interdisciplinary knowledge and an awareness of linguistic aspects of speech not always shared by those educated solely in the scientific tradition, saw that an understanding of the speech process would involve not only acoustic aspects but also psychological, perceptual, and linguistic analysis.

He was the first to experiment with automatic speech recognizers using not only acoustic but also linguistic cues. To linguistic phoneticians, who tended to be naïve about the physical aspects of speech, D.B.Fry demonstrated the importance of laboratory experimentation. One of his best-known achievements was to demonstrate that stress in English words is perceived not mainly as a consequence of loudness (as American structuralists assumed) but of spectral (pitch) and temporal (duration) characteristics. To the experimentalists he insisted that communication could not be dependent solely on acoustic cues.

In 1958 D.B.Fry founded the scholarly journal *Language and Speech*.

From 1971 he was President of the Permanent Council responsible for organizing the International Congresses of Phonetic Sciences. D.B.Fry was an excellent singer and was involved in semi-professional singing throughout his life.

One practical application of D.B.Fry's work was in relation to the hearing-impaired: his book *The Deaf Child* (co-authored with E. Whetnallm, 1964), is still in print. The books for which his name is most widely known were written after his retirement: *Acoustic Phonetics: a Course of Basic Readings* (1976), *Homo Loquens* (1977) and *The Physics of Speech* (1979).

**Gimson, Alfred Charles** (1917-1985), a British phonetician known throughout the world for his works on English pronunciation, became Professor of Phonetics at University College, London in 1966, and from 1971 until his retirement in 1983 was Head of its Department of Phonetics and Linguistics. D.Jones, who groomed A.Gimson as his successor and scholar, invited him to work as lecturer in Phonetics. When D.Jones retired in 1949, A.Gimson took over from him as Secretary of the International Phonetic Association and Editor of its journal. He maintained D.Jones's emphasis on practical performance (both in producing and in recognizing sounds), but reinvigorated and extended English phonetic theory and practice by propagating views deriving from contemporary American structuralist doctrine, including the phoneme/allophone notational distinction, and by extending Jonesian ear-training exercises with minimal-pair drills. When his *Introduction to the Pronunciation of English* first appeared in 1962, it was and is still accepted as the standard description of RP.

A.Gimson was a popular lecturer and broadcaster, and in the sixties became familiar to the British public through a series of brief talks on pronunciation he gave as part of the breakfast-time *Today* programme on the BBC. But it is in the world of English as a Foreign Language (EFL) that his name is particularly well known. He made frequent overseas lecture tours at the invitation of the British Council, Linguaphone, or local universities. His *The Linguistic Relevance of Stress in English* (1956), *The Instability of English Alveolar Articulation* (1960), *English Pronunciation Practice* (1965, with G.F.Arnold) and *A Practical Course of English Pronunciation: a Perceptual Approach* (1975) reflect his concern with the teaching of pronunciation in this context. Perhaps A.Gimson's most enduring influence on EFL will be in the matter of phonetic transcription. He popularized this notation first in his *Introduction* and then, crucially, in the fourteenth edition of D.Jones's *English Pronunciation Dictionary* (1977).

In 1973 the Department of Linguistics and Department of Phonetics were combined under A.Gimson's leadership. At that time the Department's main teaching load was for students who were not registered for any University degree but for the Licentiatehip of the College of Speech Therapy. A.Gimson took a

major role in the reorganization of speech therapy education in Britain and the conversion of speech therapy (now called speech and language therapy) into an all-graduate profession. At UCL he was responsible for the arrangement whereby students of what became the National Hospital's College of Speech Sciences were registered for the BSc as undergraduates of University College. A.Gimson left the Department of Phonetics and Linguistics one of the strongest in the UCL Arts Faculty, with a large undergraduate body. Prof. A.C.Gimson was President of the International Phonetic Association until his death. He was not only the most influential British phonetician but also the one who was much loved by all his colleagues and students.

**Halle, Morris** (1923), a well-known American linguist, born in Liepaja, Latvia, in 1923. He arrived in the United States in 1940, got his master's degree in linguistics in 1948. Then he studied at Columbia University under Roman Jakobson, became a professor at the Massachusetts Institute of Technology (MIT) in 1951, and earned his Ph.D. from Harvard University in 1955. M.Halle retired from MIT in 1996, however he still teaches a few classes each semester. He is fluent in German, Yiddish, Latvian, Russian, Hebrew and English. M.Halle is likely best known for his pioneering work in generative phonology, having written *On accent and juncture in English* (1956, co-authored with N.Chomsky and F.Lukoff) and *The Sound Pattern of English* (1968, co-authored with N.Chomsky), which is the major generative work on English phonology. M.Halle is widely regarded as one of the founding fathers of generative phonology. M.Halle has worked on a wide range of phonological phenomena, notably word stress systems.

**Halliday, Michael Alexander Kirkwood** (1925), a well-known Australian linguist who developed an internationally influential grammar model, the systemic functional grammar which also goes by the name of systemic functional linguistics (SFL), elaborating on the foundations laid by his British teacher J.R. Firth and a group of European linguists of the early 20th century, the Prague School of Linguistics. This theory is concerned with the operation of texts in their contexts and is successfully applied to education at all levels. Language is seen as sets of meaning resources that are selected for use in particular social contexts. Field, mode, and tenor are the variables that are at stake in contexts. Meanings at various levels of abstractions (e.g., ideology, genre, register) are studied paradigmatically to present the meaning contrasts that speakers draw from. The meaning contrasts are then worded by the lexis and grammar of the language.

He had applied functional systemic theory to education from early language learning to university education. He has studied the intonation, vocabulary, cohesion, and grammar in first and second language teaching and

learning. In these applications the emphasis is on the speaker's control over text types, the ways texts are constructed and the functions of language in social contexts. M.A.K.Halliday's work on grammar, cohesion, and intonation is widely used in research on education, language learning and pathology. His book *Intonation and Grammar in British English* (1967) presents an important treatment of the relationship between intonation and grammar.

The impact of his work extends beyond linguistics into the study of visual and multimodal communication, and he is considered to have founded the field of social semiotics. He has worked in various areas of language study, both theoretical and applied, and has been especially concerned with relating the understanding of the basic principles of language to the theory and practices of education.

M.A.K.Halliday received his Ph.D. from Cambridge University in 1955. He held professorships at University College London, University of Illinois, Chicago circle, and at University of Sydney as Foundation Professor of Linguistics (1976), where he remained until he retired in 1987. Since 1990 he is regarded as one of the pioneers of eco-critical discourse analysis (a discipline of ecolinguistics).

He received the status of emeritus professor of the University of Sydney and Macquarie University, Sydney, in 1987, and is currently Distinguished Visiting Professor in the Faculty of Education, University of Hong Kong. M.A.K.Halliday has been visiting professor at Yale, Brown, University of California; Nairobi, National University of Singapore, and Fellow of the Center for Advanced Studies in the Behavioral Sciences, Stanford, California. He is an honorary member of the Linguistic Society of America and holds honorary doctorates from the Universities of Nancy and Birmingham.

His best known works are: *Intonation and Grammar in British English* (1967); *Explorations in the Functions of Language* (1973); *Cohesion in English* (1976); *Language, Context and Text: Aspects of Language in a Social-semiotic Perspective* (1985); *Construing Experience through Meaning: a Language-Based Approach to Cognition* (1999) and many others.

**Jakobson, Roman Osipovich** (1896-1982), a Russian thinker and linguist who became an American citizen in the mid-twentieth century, who became a major figure in twentieth-century linguistics by pioneering the development of structural analysis of language, poetry, and art, one of the founders of the Moscow and Prague Schools of Linguistics and a major contributor to many fields in general phonetics. R. Jakobson was the one who bridged the gap between European Structuralism, American Structuralism and generative phonology, since he spent the first half of his career in Europe and the second half in the USA, where he met and collaborated with Claude Lévi-Strauss and made the acquaintance of many American linguists and anthropologists, such

as Franz Boas, Benjamin Whorf, and Leonard Bloomfield.

R.Jakobson co-founded the Prague School with N.Trubetzkoy. He had a wide range of interests, including aphasia, poetry, phonology, Slavic folklore and child language acquisition.

He adopted Saussure's notion of the linguistic sign, and also a functionalist conception of the notion "phoneme". R.Jakobson adhered to the concept of markedness, and attempted to state implicational universals based on markedness. He proposed that historical sound changes were teleological in nature. R.Jakobson also worked with Gunnar Fant and Morris Halle on an acoustic theory of distinctive features in phonology. His work on phonology incorporated the idea of redundancy. Prof. Jakobson was a functionalist since he believed that linguistic structure was driven by what he took to be the main function of language: that of communication. In this respect, his views are quite distinct from those of the formalist linguist, Noam Chomsky. In the field of child acquisition of phonology, R.Jakobson argued that there was a major discontinuity between the babbling stage and the first words stage. This view was later discredited by Marilyn Vihman in her empirical work on infant speech.

R.Jakobson's theory of communicative functions was first published in *Closing Statements: Linguistics and Poetics* (1960). His most important works are: *Remarques sur l'évolution phonologique du russe comparée à celle des autres langues slaves* (1929), *Principles de Phonologie Historique* (1931), *Phoneme and Phonology* (1932), *Zur Struktur des Phonems* (1939), *Kindersprache, Aphasie und Allgemeine Lautgesetze* (1941), *Звуковые законы детского языка и их место в общей фонологии* (1949), *Preliminaries to Speech Analysis: The Distinctive Features and Their Correlates* (1952, co-authored with G.Fant, M.Halle), *Phonology and Phonetics* (1955 co-authored with M.Halle), *The Phonemic Concept of Distinctive Features* (1961), *Linguistic Types of Aphasia* (1963), *Значение лингвистических универсалий для языкознания* (1965), *The New Wording of the Study "Phonology in Relation to Phonetics"* (1968, co-authored with M.Halle), *В поисках сущности языка* (1970, 1983), *Звук и значение* (1976), *Brain and Language* (1980), *The Sound Shape of Language* (1987, co-authored with L.R.Waugh) and many others.

**Jassem, Wiktor** (1922), Professor of Phonetics Emeritus, Institute of Fundamental Technological Research, Polish Academy of Sciences, Kraków, Poland. He studied English Philology at Jagiellonian University, Kraków and University of Wrocław. In 1949 graduated from postgraduate course in phonetics at University College London. He received his Ph.D. in English Philology (1950) and in Technology (Speech Acoustics) in 1973. Since 1980 he is a fellow of International Society of Phonetic Sciences.

Prof. Jassem lectured at the University of Wrocław; the University of Poznań, where he held the position of Head of the Department of Phonetics; the

Institute of Linguistics (phonetics). He was Head of the Research Unit, later Department of Acoustic Phonetics at the Institute of Fundamental Technological Research.

Prof. Jassem also extended his research and teaching outside Poland: at Speech Transmission Laboratory, Division of Telegraphy and Telephony, Royal Institute of Technology, Stockholm (1960-1962); at Summer Institute of Linguistics, University of Michigan Ann Arbor (1967); Department of Computer Science, University of Calgary, Calgary Alberta, Canada (1976-1977); Institut für digitale Sprachverarbeitung, Universität Kiel (1986).

He was a council member of the International Phonetic Association (1950) as well as a co-founder and chairman of Polish Phonetic Association (1980-1997).

Wiktor Jassem is best known for his monographs *Intonation of Conversational English (Educated Southern British)* (1951); *Akcent języka polskiego (Accent in Polish)* (1961); *Podstawy fonetyki akustycznej (Bases of acoustic phonetics)* (1973); *Mowa a nauka o łączności (Speech and the communication theory)* (1974); *The Phonology of Modern English* (1983).

**Jones, Daniel** (1881-1967), a leading British phonetician in the first half of the 20<sup>th</sup> century, still the most influential figure in the development of present-day Phonetics in Britain. D.Jones was first introduced to phonetics at William Tilly's Marburg Language Institute in Germany in 1900. From 1905 to 1906 he studied at Paris under Paul Passy, one of the founders of the International Phonetic Association, and took private lessons from the great British phonetician Henry Sweet. In 1907 he became a phonetic lecturer in University College, London, and since 1912 he headed the department of phonetics, a post he held until his retirement in 1949. From 1906 onwards, D.Jones was an active member of the International Phonetic Association and its President from 1950 to 1967.

He worked on many of the world's languages and on the theory of the phoneme, but is probably best remembered internationally for his works on phonetics of English, particularly for his *The Pronunciation of English* (1909), *An Outline of English Phonetics* (1918), which actually became the first comprehensive description of Received Pronunciation and indeed the first description of the standard pronunciation of any language. D.Jones is also known for his famous *English Pronouncing Dictionary*, first published in 1917 and still used by learners of English all over the world. It was here that the cardinal vowel diagram appeared for the first time. The International Phonetic Association still uses a Jones-type vowel diagram on its influential International Phonetic Alphabet leaflet contained in the "Handbook of the International Association". Many phoneticians especially those trained in the British school resort to it constantly as a quick and convenient form of reference.

D.Jones was the first linguist in the western world to use the term phoneme in its current sense, employing the word in his article *The phonetic structure of the Sechuana Language*. His conception of the phoneme was that of a ‘family’ (a set) of sounds.

Although D.Jones is especially remembered for his work on phonetics and phonology of English, he ranged far more widely. D.Jones studied phonetics of various languages. In particular, he did the analysis of the tone in Tswana. He developed new alphabets for African and Indian languages and suggested systems of romanisation for Indian languages and Japanese. Prof. Jones also researched Cantonese, Sinhalese, and other non-Indo-European languages.

Apart from his own vast array of published works, D.Jones is remembered for having acted as mentor to numerous scholars who later became famous linguists. These included such names as L.Armstrong, H.Palmer, I.Ward, H.Coustenoble, A.L.James, D.Fry, A.C. Gimson, G.Arnold, J.D.O’Connor, and many more. For several decades his department at University College was pivotal in the development of phonetics and in making its findings known to the wider world.

After retirement, D.Jones worked assiduously at his publications almost up to the end of his long life.

**Kingdon, Roger** (1891-1984), Professor of Phonetics at the Department of Phonetics, University College, London. He had always shown remarkable aptitude for phonetics, and especially for intonation, for which he had a very keen ear; he made many discoveries in the field of English intonation. His work in the field of intonation has been vastly influenced by Harold Palmer who made R.Kingdon be fully aware that the pitches of speech are patterned into sequences having climaxes for which he coined the expression “nucleus tone”. R.Kingdon preferred the slightly different form “nuclear tone” and introduced a considerable number of additions and modifications to Palmer’s distinctly flawed treatment of the subject.

R.Kingdon’s earliest publication in the field *Tonetic Stress Marks for English*, contribution to the journal of the International Phonetic Association, appeared in 1939. It contained 35 lines of exemplificatory dialogue and listed 60 possible stress-tone variants of the sentence *I can’t find one* heralding a new era in English intonation studies. Roger Kingdon was the inventor of the system of “tonetic stress-marks” used in his book *The Groundwork of English Intonation* (1958), which opened up a new era in English intonation studies and has become indispensable to teachers of English Intonation and to those who are interested in this fascinating branch of phonetic science.

The most fundamental of these was his recognition that the pre-nuclear syllables in the intonation unit need to be clearly differentiated into unstressed and stressed ones. He conveyed these distinctions and thus offered an adequate systemic iconic notation of tune. The principle involved in his work on intonation

permeated subsequent British intonation studies, essentially taken for granted.

Roger Kingdon is also known by his other books: *The Groundwork of English Stress* (1958), *English Intonation Practice* (1958), *Phonetic Symbols for English* as well as his lexicographical work. In 1973 he was honoured by his fellow members of the International Phonetic Association by election to its governing Council.

**Ladd, Robert D.**, an American phonologist based at Edinburgh University who is widely known for his work on intonation, Professor of Linguistics, Linguistics and English Language Department, the University of Edinburgh. He took his Ph.D. at Cornell in 1978. Since coming to Edinburgh in 1985 he has taught at various summer schools and institutes, and has had visiting affiliations with the Institute for Perception Research (IPO) in Eindhoven (1994), the Max Planck Institute for Psycholinguistics in Nijmegen (1995), and the Department of Cognitive Science at Johns Hopkins (2000). For the period 2006-2012 he is a member of the *Fachbeirat* (Scientific Advisory Council) of the Max Planck Institute for Psycholinguistics in Nijmegen.

He was Head of the former Department of Theoretical and Applied Linguistics from 2000-2003. From mid-2001 till the beginning of 2007 he was heavily involved in creating and running the School of Philosophy, Psychology, and Language Sciences (PPLS). For more than 20 years he has played a major role in undergraduate curriculum development in Linguistics in Edinburgh. He is a member of the Laboratory Phonology community.

R.Ladd normally teaches phonetics and phonology at various levels, and has supervised PhD students working on a variety of phonetic, phonological, and prosodic topics. He organised an active Phonetics and Phonology Research Group. An important part of his professional life he devoted to editorial work. He was co-editor of *Language and Speech* from 1994-2000 and has been an Associate Editor of *Phonology* since 1995. He was also on the editorial boards of *Linguistics* and *Journal of Linguistics* and frequently reviewed papers for other journals, especially *Journal of Phonetics*, *JASA* and *Language*.

R.Ladd is also a writer on phonetics. His major publications include: *Stylized Intonation* (1978), *The Structure of Intonational Meaning: Evidence from English* (1980), *Phonological Features of Intonational Peaks* (1983), *Even, Focus, and Normal Stress* (1983), *Evidence for the Independent Function of Intonation Contour Type, Voice Quality, and F0 Range in Signalling Speaker Affect* (1985, co-authored with K.Silverman, F.Tolkmitt, G.Bergmann, and K.R.Scherer), *Intonational Phrasing: The Case for Recursive Prosodic Structure* (1986), *Declination "Reset" and the Hierarchical Organization of Utterances* (1988), *Metrical Representation of Pitch Register* (1990), *Symbolic Output as the Basis for Evaluating Intonation in Text-to-Speech Systems* (1990, co-authored with A.Monaghan), *Papers in Laboratory Phonology II: Gesture,*

*Segment, Prosody* (1992, co-editor G.J.Docherty), *Intonational Phonology* (1996), *The Perception of Intonational Emphasis: Continuous or Categorical?* (1997, co-authored with R.Morton), *Tones and Turning Points: Bruce, Pierrehumbert, and the Elements of Intonational Phonology* (2000), *Conceptual Foundations of Phonology as a Laboratory Science* (2000, co-authored with J.Pierrehumbert, M.E.Beckman), *On the place of phrase accents in intonational phonology* (2000, co-authored with M.Grice, A.Arvaniti), *Intonation* (2001), *Raising Bilingual Children* (2004, co-authored with A.Sorace), *Tonal association and tonal alignment: Evidence from Greek polar questions and contrastive statements* (2006, co-authored with A.Arvaniti, I.Mennen), *Segmental anchoring of pitch movements: autosegmental phonology or gestural coordination?* (2006) and others.

**Ladefoged, Peter** (1925-2006), a British-American phonetician, Professor of Phonetics Emeritus. He worked at the universities of Edinburgh, from which he earned his PhD in 1959, Scotland and Ibadan, Nigeria (1953-1961), University of California, Los Angeles (1962-1991). Professor P.Ladefoged was President of the International Phonetic Association from 1987 until 1991, and has published widely on Phonetics. P.Ladefoged was involved with the phonetics laboratory at UCLA since he set it up in the 1960s. He also was interested in listening to and describing every sound used in spoken human language, which he estimated at 900 consonants and 200 vowels. This research formed the basis of much of *The Sounds of the World's Languages*. P.Ladefoged was also a member of the International Phonetic Association for a long time, and has been involved in maintaining its International Phonetic Alphabet. He was also editor of the *Journal of the International Phonetic Association*.

Peter Ladefoged has been a prolific writer, and his influence has been very wide. The publication, which has most influenced phonetic theory, has probably been *Preliminaries to Linguistic Phonetics* (1971), which provides a more empirically substantiated theory of phonetic features systematically used in the sound-patterns of the languages of the world. His book *A Course in Phonetics* (1975) is a common introductory text in phonetics, and *The Sounds of the World's Languages* (co-authored with Ian Maddieson) is widely regarded as a standard phonetics reference. P.Ladefoged also wrote several books on the phonetics of African languages. He passed away in January 2006 at the age of 80 while in London.

His most famous publications are: *The nature of vowel quality* (1962), *Some possibilities in speech synthesis* (1964), *The nature of general phonetic theories* (1965), *Three Areas of Experimental Phonetics* (1967), *A Phonetic Study of West African Languages* (1968), *Preliminaries to Linguistic Phonetics* (1971), *A Course in Phonetics* (1976), *The Many Interfaces Between Phonetics*

*and Phonology* (1992), *Stops in the world's languages* (1992, co-authored with C.Henton, I.Maddieson), *Individual differences in vowel production* (1993, co-authored with K.Johnson, M.J.Lindau), *The phonetics of partially nasal consonants* (1993, co-authored with I.Maddieson), *Quantifying acoustic properties of modal, breathy and creaky vowels in Jalapa Mazatec* (1993, co-authored with P.Kirk, J.Ladefoged), *Clicks and their accompaniments* (1994, co-authored with A.Traill), *Elements of Acoustic Phonetics* (1996), *The status of phonetic rarities* (1996, co-authored with D.Everett), *Instrumental techniques for linguistic phonetic fieldwork* (1997), *Linguistic phonetic descriptions* (1997), *David Abercrombie and the changing field of phonetics* (1997), *Vowels and Consonants: An Introduction to the Sounds of Language* (2001).

**Laver, John**, a noted Professor of Phonetics, Vice-Principal of the University of Edinburgh, the Chairman of the Humanities Research Board of the British Academy. He was a pupil of the great phonetician, David Abercrombie. He is a Fellow of the British Academy, and of the Royal Society of Edinburgh, the Institute of Acoustics and the Royal Society of Arts. Professor J.Laver was President of the International Phonetic Association from 1991 until 1995, and has published widely on Phonetics. Professor Laver has authored many publications, in particular: *The Synthesis of Components in Voice Quality* (1967), *Voice Quality and Indexical Information* (1968), *The Detection and Correction of Slips of the Tongue* (1969), *The Production of Speech* (1970), *Labels for Voices* (1974), *Individual Features of Voice Quality* (1975), *Language and Non-verbal Communication* (1976), *Neurolinguistic Aspects of Speech Production* (1977), *The Concept of Articulatory Setting: an Historical Survey* (1978), *Voice Quality: A Classified Research Bibliography* (1979), *Slips of the Tongue as Neuromuscular Evidence for the Model of Speech Production* (1979), *The Phonetic Description of Voice Quality* (1980), *Cognitive Science and Speech: a Framework for Research* (1989), *The Gift of Speech* (1991) and *Principles of Phonetics* (1992). J. Laver has many co-authored publications: *Slips of the Tongue* (1968, co-authored with D.Boomer), *Phonetic and Linguistic Markers in Speech* (1979, co-authored with P.Trudgill), *Describing the Normal Voice* (1981, co-authored with R.Hanson), *An Acoustic Screening System for the Detection of Laryngeal Pathology* (1986, co-authored with J. Mackenzie, S.M.Hiller, E.Rooney).

J.Laver's significance in expanding the frontiers of the study of speech is well-founded and internationally recognised. In his works he explores two interdisciplinary fundamental themes: (1) how the brain plans, controls, monitors and edits its programs for speech; in this connection he identifies some major strategic research issues within a cognitive science approach to speech; and (2) how the quality of a speaker's voice can be described; thus he details the many kinds of information that voice quality conveys about the speaker.

**Lehiste, Ilse** (1922), a well-known American linguist. She received her PhD in Linguistics in 1959 from the University of Michigan and was a Research Associate at the Communication Sciences Laboratory (1959-1963). There she focused on the acoustic structure of English; her discoveries included the intrinsic pitch, intensity, and duration of vowels. Language automation was a major research effort of the laboratory, funded by numerous governmental grants (Air Force, Navy, NIH, NSF).

The history of phonetics at Ohio State University began in 1963 where Ilse Lehiste started her long and productive work. She divided her time between phonetics, historical linguistics, and administration, serving as Chairman (1965-1971), Acting Chairman (1984-1985), Chairman (1985-1987), and Professor Emeritus since 1987. She established the phonetics laboratory associated with the Department of Linguistics, then equipped primarily for research in acoustic phonetics.

Her research areas included the study of boundary signals, the phonetic realization of syntactic structure, and the description of units of speech production and perception. Much of her research dealt with the prosodic structure of numerous languages, published in her book *Suprasegmentals* (1970). Her more recent projects deal with the phonetic realization of metrical structure in orally produced poetry. The languages to which she has devoted considerable attention are Estonian (*Estonian Prosody: Papers from a Symposium*, co-authored with J.Ross, 1997); and Serbocroatian (*Word and Sentence Prosody in Serbocroatian* co-authored with P.Ivic, 1986). I.Lehiste has also worked in the areas of historical linguistics (*Principles and Methods for Historical Linguistics* (co-authored with Robert Jeffers, 1979) and language contact (*Lectures on Language Contact*, 1988).

**O'Connor, J.D.** (1919-1998), Professor Emeritus of Phonetics at University College, London; remained on the phonetics staff at UCL throughout the rest of his career, accepting early retirement in 1980. He was a pupil of the great phonetician, Daniel Jones, at University College. J.D.O'Connor and his contemporaries set the tone for much of British phonetics in the period 1950-1980 with influences from the structuralist linguistics that was then all the rage in the United States.

J.D.O'Connor's main interests were intonation, rhythm and syllabic structure of English and other languages. Prof. O'Connor explains in clear undaunting prose the very complex manner in which the human noises, called speech, are produced by the vocal organs, transmitted from mouth to ear and processed between ear and brain; and these three stages define the sphere of articulatory, acoustic and auditory phonetics. He introduces the symbols used in the description and classification of speech sounds and shows how these latter are organised into patterns describable in terms of phonemes and other abstract concepts.

His best-known works are *Intonation of Colloquial English* (1961, co-authored with G.F. Arnold), *Better English Pronunciation* (1967) and *Phonetics* (1973), which are written in a very accessible style and have thousands of well-chosen examples of intonational form and function. In *Phonetics* he discusses the application of phonetics in the analysis and teaching of languages, in speech therapy and in the whole field of communications.

Phonetics is a subject that if poorly taught can seem austere and difficult. J.D.O'Connor was a phonetician whose lectures were witty and effortlessly informative, and whose writing was elegant and readable.

**Ohala, John** (1941), an American phonologist, Emeritus Professor of Linguistics; Professor at the Department of Linguistics, University of California, Berkeley, since 1970. He received his Ph.D. in Linguistics in 1969 directed by Peter Ladefoged. His research interests are in experimental phonology and phonetics and ethological aspects of communication, including speech perception, sound change, phonetic and phonological universals, psycholinguistic studies in phonology, and sound symbolism.

J. Ohala has been a long-standing critic of generative phonology, which he takes to be non-explanatory and 'non-scientific'. J. Ohala seeks genuine 'scientific' explanations for phonological patterns, which he believes to be grounded in facts about human articulation, perception and social behaviour that, can be investigated in laboratory experiments. Proper explanation, for Ohala, is phonetic explanation. Ohala is known for stressing the role of the listener in phonological change.

J. Ohala is the member of Linguistic Society of America (life member), Acoustical Society of America (1967-present), American Association for the Advancement of Science (1966-1990), International Phonetic Association (life member), New York Academy of Sciences (life member), International Speech Communication Association (1991-present). His best known works include: *Experimental historical phonology* (1974); *The physiology of stress* (1977); *The production of tone* (1978); *Phonetic universals in phonological systems and their explanation* (1979); *Listeners' ability to identify languages by their prosody* (1981); *Articulatory constraints on the cognitive representation of speech* (1981); *Cross-language Use of Pitch: An Ethological View* (1983); *An Ethological Perspective on Common Cross-language Utilization of F<sub>0</sub> of Voice* (1984); *Experimental phonology* (1987); *The Integration of Phonetics and Phonology* (1991); *The frequency code underlies the sound-symbolic use of voice pitch* (1994); *Sound Change* (2001); *Prosody and Phonology* (2004); *Phonetic explanations for sound patterns* (2005) and others.

**Palmer, Harold Edward** (1877-1949), an English linguist, phonetician and pioneer in the field of English language learning and teaching, who contributed to the development of the applied linguistics of the 20<sup>th</sup> century. Especially he dedicated himself to Oral Method.

In 1892-1893, H.Palmer studied in France. In 1902, he went to Belgium and started teaching English at Berlitz school. In 1903, he established his own school. In 1915, he started teaching at University College, London. In 1922, he went to Japan as Linguistic Adviser to the Japanese Department of Education where he stayed for 14 years and reformed its English education. In 1923, he established the Institute for Research in English Teaching (IRET), now the Institute for Research in Language Teaching (IRLT), and became the first director. He founded the Institute's Bulletin. In 1936 he returned to England and became consultant for Longmans, Green. In 1937 he published *Thousand-Word English* with A.S. Hornby, the main creator of the first *Advanced Learner's Dictionary*. H.Palmer's most important publications are: *English Intonation, With Systematic Exercises* (1922); *Thousand-Word English* (1937, co-authored with A.S. Hornby); *A Grammar of English Words* (1938); *The Teaching of Oral English* (1940).

**Pierrehumbert, Janet** (PhD, MIT), an American phonologist known for her work on intonation, Professor of Linguistics (also affiliated with the Program in Music Cognition). J.Pierrehumbert is a leading light in the Laboratory Phonology community, and is a proponent of stochastic phonology. Her research also deals with the cognitive representation of sound structure. She deals with the ways in which native speakers' implicit knowledge of the sound system of their language enable them to utter new sentences with a native accent, accurately perceive speech by others, create new word forms, and appropriately modify words that they are borrowing into their language from other languages. Her work combines evidence from experiments on speech production and perception with evidence from on-line dictionaries and corpora. Prof. Pierrehumbert spent her sabbatical at the Ecole Nationale Supérieure des Telecommunications (ENST) in Paris where she held a CNRS Poste Rouge (Centre National de la Recherche Scientifique). Currently she is engaged (together with NU linguist Jeffrey Lidz) in a collaborative research with the LSCP, a comparative study between French and English concerning the way the language acquisition process shapes and constrains the nature of the language system. She received a FIG grant (Façade Improvement Grant Program) to support this project. Prof. Pierrehumbert is a past recipient of an NSF Faculty Awards for Women Scientists and Engineers (1991-1996) and a John Simon Guggenheim fellowship (1996-1997). Her most important publications are: *Prosody, Intonation, and Speech Technology* (1993), *The Phonetic Grounding of Phonology* (2000), *What people know about sounds of language* (2000), *The Meaning of Intonation in the Interpretation of Discourse* (1990, co-authored with Hirschberg J.) and others.

**Pike, Kenneth L.** (1912-2000), American linguist and anthropologist, Professor Emeritus of Linguistics, the University of Michigan, internationally recognized for his contributions in the study of linguistics and its development. He is known for his studies of the aboriginal languages of Mexico, Peru, Ecuador, Bolivia, New Guinea, Java, Ghana, Nigeria, Australia, Nepal, and the Philippines. He was also the originator of tagmemics: a theory of discourse founded upon certain principles about human language and behavior. The theory focuses particularly on the relationship of linguistic forms and functions and whose central notion is the contrast between the “emic” units, i.e. between the functionally contrastive units in a language (such as phoneme and morpheme), and the “etic” units which give them the physical shape. It was further described in his *Language in Relation to a Unified Theory of the Structure of Human Behavior* (1967). Later K.Pike applied tagmemics to the matrix of field theory and English rhetoric.

In addition to this work, K.Pike has done research in phonology and is the author of *Intonation of American English*, co-editor of *Tone Systems of Tibeto-Burman Languages of Nepal*, *Tone Languages: a technique for determining the number and type of pitch contrasts in a language, with studies in tonemic substitution and fusion* (1948), as well as co-author of *Grammatical Analysis*. Working in Mexico, he analyzed the language and developed an alphabet for the Mixtec people. From 1955 to 1977 K.Pike was Professor of Linguistics at the University of Michigan, where he received his PhD in 1942. K.Pike’s dissertation, *A reconstruction of phonetic theory*, was published in 1943 as *Phonetics: a critical analysis of phonetic theory and technique for the practical description of sounds*. His other great achievements include: Professor of Linguistics, Chairman of the Department of Linguistics, president of the Linguistic Association of Canada and the United States, Director of the English Language Institute, a member of the Council of the International Phonetic Association in London, member of the National Academy of Sciences, and a Nominee (for 15 consecutive years) for the Nobel Peace Prize. In 1999 K.Pike was honored as a Significant Contributor to the Field of English as a Second Language, where he was cited as one of the pioneers whose dedicated work helped define the profession.

K.Pike was also a prolific writer, publishing 20 books and 200 articles. Some of his principal publications are: *The Intonation of American English* (1945), *Tagmemic and Matrix Linguistics Applied to Selected African Languages* (1970), *Rhetoric: Discovery and Change*, (1970, co-authored with R.E.Young, A.L.Becker), *Universals and Phonetic Hierarchy* (1979), *Linguistic Concepts: an Introduction to Tagmemics* (1982), *Text and Tagmeme* (1983, co-authored with E.Pike), *On the Value of Local Languages* (1986), *Cultural Relativism in Relation to Constraints on World View: An Emic Perspective* (1988), *Emics and Etics: the Insider/Outsider Debate* (1990),

*Paradigmatic and Syntagmatic Features or Prosodies in Sound, Syllable, Word or Poem* (1994), *A Holistic Semantics – the Semantics of Phonology, Grammar, and Reference* (1995), *Talk, Thought, and Thing: The Emic Road toward Conscious Knowledge* (1993). He was a poet, a Christian Philosopher, and in 1935 he joined the Wycliffe Bible Translators. Kenneth Pike died December 31, 2000.

**Plotkin, Vulf** (1927), Professor of English, Germanic and General Linguistics at universities and pedagogical institutes in Petrozavodsk, Novosibirsk, Chisinau, Moscow, Tula (1953-1989); linguistic researcher at the Siberian branch of the Russian Academy of Sciences in Novosibirsk (1989-1992). Since 1993 he has been working as a linguistic consultant at the Institute for industrial mathematics in Beer-Sheva, Israel. V. Plotkin is the author of 14 monographs and over 100 papers: *The Dynamics of the English Phonological System* (1972), *Systems of Ultimate Phonological Units* (1976), *Очерк диахронической фонологии английского языка* (1976), *The Kinakeme as the Ultimate Unit of Language* (1978), *The Ultimate Phonological Unit as the Smallest Morpheme Shape* (1987), *Sound Distinction: Universal Inventories of Phonic Substance or Language-Specific System?* (1991), *Кинакема, фонема, слог* (1981), *Эволюция фонологических систем (на материале германских языков)* (1982), *Строй английского языка* (1989), *Фонологические кванты* (1993), *The Language System of English* (2006) in which he describes the English language as a dynamic system in the evolutionary process of radical typological restructuring, that has deeply affected its constituent subsystems – grammatical, lexical and phonic, *The Evolution of Germanic Phonological Systems: Proto-Germanic, Gothic, West Germanic, and Scandinavian* (2008), which presents a new approach to fundamental problems of phonology, based on following the principles of general systemics in linguistic exploration. The root causes of phonological evolution are shown to lie in the restructurings on the systemic tier of phoneme constituents, i.e. ultimate phonological quanta.

**Roach, Peter**, Senior Lecturer in the Department of Linguistics and Phonetics, University of Leeds, Emeritus Professor of the University of Reading, the author of a complete basic course in English phonetics *English Phonetics and Phonology* (1983) which bridges the gap between simple pronunciation handbooks and technical phonetics textbooks.

Peter Roach did his first degree at Oxford in Psychology and Philosophy, and then took postgraduate courses in Teaching English Overseas (Manchester University) and in Phonetics (University College London). He was appointed to the Linguistic Science Department as a lecturer in 1968; he taught phonetics here until 1978, and also gained his PhD. He then moved to the University of Leeds to become Senior Lecturer in Phonetics in the Department of Linguistics

and Phonetics; he later moved to the Department of Psychology at Leeds, and was appointed Professor of Cognitive Psychology. He returned to Reading in 1994. He is interested in the phonetics of English, where his publications include *English Phonetics and Phonology* (Cambridge University Press) and *The English Pronouncing Dictionary* (16<sup>th</sup> edition). His latest book is *Phonetics* (Oxford University Press). He has research interests in speech perception and in the computer analysis of speech. He has held a number of research grants for work in automatic speech recognition and in large-scale computer-readable speech databases. On his retirement in September 2003, the University of Reading has awarded him the position of Emeritus Professor.

**Sapir, Edward** (1884-1939), an American linguist, the most distinguished researcher of Native American languages in the first half of the twentieth century. He studied with Franz Boas, and is known for his combination of anthropological linguistics and mentalism. E.Sapir stressed the cultural, as opposed to biological, nature of linguistic practices. Unlike some of his American successors in the mid-twentieth century, he was committed to the psychological reality of phonological representations.

He received MA in 1905 in Germanic philology and his PhD in 1909 was in anthropology and reflected the program of urgent ethnology and linguistics of Franz Boas. E.Sapir was the only one of Boas's students to specialize in linguistics and rapidly came to set the standards for linguistic description and theory for anthropology.

Prof. Sapir held research fellowships at the University of California and at the University of Pennsylvania and headed the new Division of Anthropology of the Geological Survey of Canada. He taught at the University of Chicago and at Yale University. He was a co-founder of the Linguistic Society of America in 1925 and taught at its Linguist Institute in 1937.

Independently of parallel developments in Europe, E.Sapir developed the concept of the phoneme, emphasizing the psychological reality of sounds for the speakers of a language.

His name is also associated with the 'Sapir-Whorf Hypothesis' because of his Yale student, Benjamin Lee Whorf, who developed E.Sapir's ideas about the relationship of language and culture, i.e. the idea that the language one has learned shapes the kinds of thought process in which people regularly engage. Among his most distinguished linguistic students were F.K.Li, Morris Swadesh, Stanley Newman, Mary Haas, George Trager, Benjamin Lee Whorf, Zellig Harris, and Charles Hockett.

His best known publications include *The Handbook of American Indian Languages* (1911); *Language: An Introduction to the Study of Speech* (1921).

**Saussure, Ferdinand de** (1857-1913), a Swiss linguist often described as 'the father of modern linguistics', and frequently associated with various

versions of Structuralism. He was concerned to identify what the object of linguistic inquiry was, and argued that it was *langue*, a system of linguistic signs, as opposed to *parole*, often referred to as the physical realisation of the underlying system. The distinction between *langue* and *parole* bears some similarity to N.Chomsky's distinction between competence and performance, but, for F. de Saussure, *langue* is said to be a social fact, whereas Chomsky takes competence to reside in individuals, not in a social collectivity. The linguistic sign, for F. de Saussure, was an arbitrary connection between a phonological representation (the so-called acoustic image) and a concept. But if acoustic images and concepts exist in individual minds, rather than in a social collectivity, it is hard to see how the social concept of *langue* can be sustained. Linguistic signs were said by F. de Saussure to stand in opposition to each other. He also distinguished between the synchronic and the diachronic study of language. His emphasis on the importance of synchronic linguistics influenced the way linguistics was practised in the twentieth century. He is best known for the *Course in General Linguistics* (in French, 1916). Unfortunately, the book was not actually written by F. de Saussure; it is a reconstruction of lecture notes taken by two of his students. There is a large literature on how to interpret Saussure's ideas, and on decisions taken by different translators as to how best to translate key terms from the *Course in General Linguistics* into English.

**Setter, Jane**, Lecturer in Phonetics, Department of Applied Linguistics, School of Languages and European Studies, the University of Reading, Director of the English Pronunciation Research Unit, Member of the Higher Education Academy.

She did her first degree at the College of Ripon & York St. John in Language Studies and English, after which she spent two years in Japan teaching English, returning to Yorkshire to do an MA in Linguistics and English Language Teaching at the University of Leeds, working with Peter Roach on the English Pronouncing Dictionary and subsequently as a Research Fellow on the Emotion in Speech project, City University, University College London. From 1995 Jane Setter spent six years in Hong Kong as an Assistant Professor in the English Department at the Hong Kong Polytechnic University and completed her PhD on Hong Kong English speech rhythm (University of Reading). She is the Director of BA programmes, and Convener for the BA in Applied English Language Studies. She teaches Phonetics and Phonology and English in the World on the Undergraduate and Postgraduate degrees at Reading, and won the student-awarded University of Reading Faculty of Arts and Humanities Teaching Award in 2005. Her outreach activities include a yearly INSET (the In-Service Teacher Training) for teachers of A Level English Language and refresher courses in Grammar and Phonetics for Speech and Language Therapists.

Her areas of interest are English Phonetics and Phonology, English Pronunciation and Interlanguage Phonology, phonology and pronunciation in

clinical populations, including the description of World Englishes and learner Englishes. She supervises PhD students in these areas. Prof. Setter is also interested in the phonetics and phonology of English in atypical populations. Her current research projects include *Intonation deficits in Williams syndrome* and *The perception and production of intonation amongst learners of English in the academic population*. J.Setter regularly reviews journal articles for *TESOL* (Teachers of English to Speakers of Other Languages) *Quarterly*, *JIPA* (Journal of the International Phonetic Association) and *World Englishes*, and has reviewed book proposals for publishers in the area of English pronunciation teaching and learning. She is joint coordinator of the Pronunciation Special Interest Group of IATEFL (International Association of Teachers of English as a Foreign Language), a member of the International Phonetic Association, the British Association of Academic Phoneticians, the British Association for Applied Linguistics, the Linguistics Association of Great Britain, the Higher Education Academy, and is an associate member of the Hong Kong Association for Applied Linguistics and the Linguistic Society of Hong Kong. J.Setter is co-editor of the 16<sup>th</sup> Edition of Daniel Jones' *English Pronouncing Dictionary* (2003).

Her recent publications include: *Cambridge English Pronouncing Dictionary* (by D.Jones (2007), co-edited with P.Roach, J.W.Hartman), *The emergence of systematicity in the English pronunciations of two Cantonese-speaking adults in Hong Kong* (2000, co-authored with P.Long), *The pronunciation of English for international communication* (2002), *Listening to other Englishes: British listeners on Singapore speakers* (2005), *Communicative patterns of intonation in L2 English teaching and learning: the impact of discourse approaches* (2005), *Speech rhythm in World Englishes: The case of Hong Kong* (2006), *Pronunciation* (2005, co-authored with J.Jenkins), *The appliance of science* (2005), *Rhythm and Timing in Hong Kong English: Implications for Teaching* (2002).

**Shcherba L.V.** (1880-1944), an outstanding Russian soviet linguist, academician, Ivan Aleksandrovich Baudouin de Courtenay's most prominent disciple. His scientific interests were rather versatile. He paid much attention to the description of one of the least studied Slavic dialects, spoken by the Slavs who inhabited Germany (vostochno-luzhytsky dialect), using the methods of field linguistics. Later this study resulted in publishing the monograph *Восточно-лужицкое наречие* (1915). The scientist devoted much time to the research of the living speech. He is internationally known as a phonologist and phonetician, the founder of Leningrad (St-Petersburg) Phonetic School. Shcherba L.V. was the first to implement experimental methods into linguistic studies, having received remarkable results. One of the most recognized works in the field of phonetics is "Русские гласные в качественном и

количественном отношении” (1912). He also provided much in the theory and practice of lexicography and lexicology. A new type of the bilingual dictionary (“Русско-французский словарь”, 1936) was compiled and edited under his supervision, and is still widely used in translation practice as well as in teaching French. His article “О частях речи в русском языке” (1928) contributed a lot into the theory of Russian grammar. Shcherba L.V. was a brilliant teacher. For many years he had worked in Leningrad and later in Moscow universities, and trained a pleiad of outstanding linguists, such as Vinogradov V.V., Zinder L.R. and many others.

**Sweet, Henry** (1845-1912), a British philologist, phonetics/phonology scholar based at Oxford University. He was the father of the British School of Phonetics. Sweet raised the standards of phonetic description. With Passy and Viëtor he helped to establish the taxonomic system (the descriptive and classificatory framework) used today in phonetics, as well as the IPA for transcription. He specialized in languages related to English (Anglo-Saxon, Old Icelandic and West Saxon), in the history of English and in the transcription of English and other languages.

His work contains an appeal to the distinction between phonemic and phonetic representations. H.Sweet also published on larger issues of phonetics and grammar in language, but his work on the Germanic languages is more widely remembered. Some of H.Sweet’s works are still in print and continue to be used as course texts at colleges and universities.

H.Sweet is known as a great pioneer of Phonetics based in Oxford University. He made extremely important contributions not only to the theory of Phonetics, describing it as the “indispensable foundation to the study of language”, but also to spelling reform, shorthand, Philology, Linguistics and language teaching.

Some of the books he wrote are *Handbook on Phonetics* (1877), *Oldest English Texts* (1885), *Primer of Old Icelandic* (1888), *A Primer of Spoken English* (1890), *A Primer of Phonetics* (1890), *The Practical Study of Languages* (1899), *The History of Language* (1900), *The Sounds of English* (1908), “*Phonetics*” (Encyclopaedia Britannica, 1911) and he edited several books for the Early English Text Society. He never managed to get a position with a college, which disturbed him greatly.

It has been widely assumed that H.Sweet was the model for Professor Henry Higgins in George Bernard Shaw’s play *Pygmalion* (which forms the basis for the film *My Fair Lady*), but the British phonetician Beverley Collins has argued persuasively that Higgins was modelled on Daniel Jones.

**Tatham, Mark**, professor (BA in French and Russian, Leeds; PhD in

Linguistics, Leeds). He came to Essex in 1967 from the University of California at Los Angeles. He has been a visiting teacher and researcher at several universities, including the Ohio State University in Columbus.

Prof. M.Tatham's basic interests lie in how speakers formulate plans for what they want to say, and how listeners work these out from the waveforms produced by speakers. The research area therefore covers the theory of both speech production and speech perception, and focuses on the development of plausible models which help elucidate and explain speech as a key human behaviour. Mark Tatham has tried to concentrate on fully explicit computational models which can be experimented with to see if they are capable of adequately simulating aspects of speech production and perception.

His current work focuses on characterising some aspects of prosody: especially rhythm and intonation; cognitive management of phonetic processes; mapping the relationship between production and perception processes and the acoustic signal; how speakers communicate expressive content and how listeners perceive it. He also pays much attention to the work on prosodic patterns in synthetic speech. Mark Tatham developed the Theory of Cognitive Phonetics in the late 1970s and early 1980s. This arose from a clear gap in the theory. Professor M.Tatham has published a variety of papers in his area of research including several since 1980 on the application of artificial intelligence techniques in speech synthesis and automatic speech recognition. A refinement of Cognitive Phonetics was introduced in the 1990s: cognitive intervention was refined to include a characterisation of the monitoring and supervision of phonetic processes. Phonetic rendering of phonological plans was seen as a *managed process*, not a process started and left to its own devices. Phonetics is seen as having an active element acting both managerially and as a means of stabilising production processes. Management is carried out by the *Cognitive Phonetic Agent*. These ideas have been extended in the following Mark Tatham's papers: *Cognitive Phonetics – Some of the Theory* (1987); *Data structures in speech production* (co-authored with Morton K., 2003); *Expression in Speech* (co-authored with Morton K., 2004); *Speech Production and Perception* (co-authored with Morton K., 2006) and others.

Currently he is involved in the study of how speech communicates expression, especially emotional content, incorporating this into his general cognitive theory.

**Trager, George Leonard** (1906-1992), an American linguist, president of the Linguistic Society of America in 1960.

During his years at Yale in the 1930s and 1940s he was a close associate of Edward Sapir, Morris Swadesh, Benjamin Lee Whorf, Charles Hockett, and after 1941, Leonard Bloomfield. From 1937, he collaborated with Benjamin Whorf on historical-comparative Azteco-Tanoan, but further planned

collaboration was cut short by Whorf's death in 1941. He wrote the entries on Language and Linguistics for the 14<sup>th</sup> edition of the Encyclopaedia Britannica. Like E.Sapir and M.Swadesh, he was a consultant of the International Auxiliary Language Association, which presented Interlingua in 1951.

The major works connected with phonetics and phonology, written personally and co-authored, are as follows: *The pronunciation of "short a" in American Standard English* (1930); *What conditions limit variants of a phoneme?* (1934); *The phonemes of Russian* (1934); *One phonemic entity becomes two: The case of "short a"* (1940); *The syllabic phonemes of English* (1941, co-authored with B.Bloch); *The phoneme 'T': A study in theory and method* (1942); *The historical phonology of the Tiwa languages* (1942); *The phonemic treatment of semivowels* (1942); *An outline of English structure* (1951, co-authored with Henry L. Smith); *Paralanguage: A first approximation* (1958); *The typology of paralanguage* (1961).

**Trubetzkoy, Nikolay Sergejevich** (1890-1938), a Slavic linguist at the centre of the Prague school of linguistics, noted as the author of its most important work on phonology, *Grundzüge der Phonologie* (1939; "Principles of Phonology"). Having graduated from the Moscow University (1913), N.Trubetzkoy delivered lectures there until the revolution; he fled Russia at the time of the Russian Revolution. Thereafter he moved first to the university of Rostov-na-Donu, then to the University of Sofia (1920-1922), and finally took the chair of Professor of Slavic Philology at the University of Vienna (1922-1938).

Influenced by Ferdinand de Saussure and in turn influencing Roman Jakobson, N.S.Trubetzkoy redefined the *phoneme* functionally as the smallest distinctive unit. N.Trubetzkoy's chief contributions to linguistics lie in the domain of phonology, in particular in analyses of the phonological systems of individual languages and in search for general and universal phonological laws, as well as a distinction between phonetics and phonology. But he rejected a mentalistic (psychological, sometimes termed 'cognitive') interpretation of phonology. He was interested in systems of opposition between phonemes. Central ideas in N.Trubetzkoy's work are the identification of different kinds of phonological opposition (bilateral, multilateral, proportional, isolated, privative, gradual and equipollent oppositions). He also developed the notion of the neutralisation of phonological oppositions (archiphoneme). Connected with this is the appeal to markedness in phonological oppositions.

His major work, *Grundzüge der Phonologie (Principles of Phonology)*, was issued posthumously. In this book he famously defined phoneme as a smallest distinctive unit within the structure of a given language. This work was crucial in establishing phonology as a discipline separate from phonetics.

It is sometimes hard to distinguish N.Trubetzkoy's views from those of his friend Roman Jakobson, who should be held responsible for spreading the

Prague school views on phonology after N.Trubetskoy's premature death.

**Trudgill, Peter** (1943), a British noted sociolinguist, professor, academic and author who was originally trained at Edinburgh. He was later awarded a Ph.D. from the University of Edinburgh in 1971. He taught in the Department of Linguistic Science at the University of Reading from 1970 to 1986 before becoming Professor of Sociolinguistics at the University of Essex. He was Professor of English Language and Linguistics at the University of Lausanne (1993-1998), and after that at the University of Fribourg, Switzerland, from which he retired in September 2005. Nonetheless, he continues to lecture part-time in the school of Language, Linguistics and Translation Studies at the University of East Anglia in Norwich, where he is Honorary Professor of Sociolinguistics. He is also Adjunct Professor of Sociolinguistics at Agder University in Kristiansand, Norway; and Adjunct Professor at the Research Centre for Linguistic Typology at La Trobe University, Melbourne, Australia.

He has carried out linguistic fieldwork in Britain, Greece and Norway and has lectured in most European countries, Canada, the United States, Colombia, Australia, New Zealand, India, Thailand, Hong Kong, Fiji, Malawi and Japan. Being a well-known authority on dialects, Peter Trudgill is the Honorary President of the Friends of Norfolk Dialect society, and a Fellow of the British Academy.

Prof. Trudgill's publications place him in the tradition of British, European and US dialectology. He is the leading proponent of the study of spoken language in context for the purpose of gaining insight into language structure and change. He sees his own databased work as contributing to linguistic theory. P.Trudgill was interested in phonetic and linguistic markers (or indices) in speech that serve to reveal characteristics of the speaker to the listener.

His *Dialects in Contact* (1986) is the most substantive contribution to theorizing about language change to date. Prof. Trudgill is known as a popularizer both of sociolinguistics (*Sociolinguistics: An Introduction to Language and Society*, 1974) and of English dialectology (*The Dialects of England*, 1998). Many of his publications report both his original studies as well as syntheses of a wide range of other work. He has also contributed to work on English as an international language.

**Tsur, Reuven** (1932), a professor Emeritus of Hebrew Literature at TelAviv University, served several times as the director of the Katz Research Institute of Lancaster. Reuven Tsur has developed a theory of Cognitive Poetics, and applied it to rhyme, sound symbolism, poetic rhythm, metaphor, poetry, etc. In his books (in particular, *Toward a Theory of Cognitive Poetics*,

1992) and articles he presented his Perception-Oriented Theory of Meter which includes a theory of the rhythmical performance of poetry. On the basis of the data obtained as a result of his instrumental research he published a book *Poetic Rhythm, Structure and Performance* (1998). The list of his other major publications includes: *A Perception-Oriented Theory of Metre* (1977), *Meaning and Emotion in Poetry* (1983), *How Do the Sound Patterns Know they are Expressive: The Poetic Mode of Speech-Perception* (1987), *What Makes Sound Patterns Expressive: The Poetic Mode of Speech-Perception* (1992).

He teaches courses in cognitive poetics, the phonetics of poetic language and its relationship to meaning, interpretation, basic issues in poetic theory, a cognitive approach to religious and mystic poetry, the grotesque, romantic and anti-romantic elements in Modern Hebrew Poetry, a perspectivistic approach to Mediaeval Hebrew Poetry, Literature of extreme situations, metaphor, critical competence and the critic's decision style, poetic drama, elements of drama, etc.

**Uldall, Elizabeth Theodora**, Professor of Phonetics, University College, London. She had a long and varied academic career, in many different countries. Her first appointment was as assistant in the English Department at Barnard College in New York. She subsequently held posts in the Phonetics Department, University College, London, and in Athens, Baghdad, Cairo, Alexandria, Asunción in Paraguay, Tucumán in the Argentine, Urbana in Illinois, Haskins Laboratory in New York, Ann Arbor, Annamalai in India, and Copenhagen. But the greater part of her career was spent in Edinburgh, originally in the Department of Phonetics, to which she came from the Argentine in 1949 as lecturer; she was made a Senior Lecturer in 1965.

Although in many places where she held posts she was engaged in teaching English as a foreign language, she was always first and foremost a phonetician. Her main speciality from early days has been intonation, and her M.A. thesis, *The Intonation of American English*, was published by Kenkyusha in Japan. Later she worked on rhythm. She did most of her research in the Phonetics Laboratory, including work on synthetic speech: she made the PAT (Performance Acceleration Technology) demonstration tape in 1962. The film which she made on the human vocal cords, taken at high speed, was justly famous as a valuable teaching aid, and although it was made more than forty years ago, it is still shown.

Numerous articles from her research have come in a wide variety of periodicals, in particular: *What is a speech defect?* (1954); *A high-speed film of the human vocal cords* (1957); *Attitudinal meanings conveyed by intonation contours* (1960); *The synthesis of a long piece of corrected speech on PAT* (1962, co-authored with J.K. Anthony); *Dimensions of Meaning in Intonation* (1964); *Instrumental investigations of articulatory phonetics: an annotated bibliography* (1970); *Rhythm in very rapid RP* (1978) and others. She also

published a large number of book reviews.

**Wells, John Christopher** (1939), a British phonetician, Emeritus Professor of Phonetics, and Esperanto teacher at University College London (UCL), where he holds the departmental Chair in Phonetics. He is a Fellow of the British Academy (since 1996), a member of the five-person Academic Advisory committee to Linguaphone. Both at school and as undergraduate at Cambridge he specialized in Classics, but switched to phonetics as a postgraduate at University College London, where he became a member of the academic staff (1962). There he teaches English phonetics, both to native speakers and to EFL learners, as well as general phonetics and phonology and the phonetics of various other languages.

His interests centre on the phonetic and phonological description of languages but also extend to lexicography and language teaching. Formerly Secretary of the International Phonetic Association and Editor of its *Journal*, in 2003 he was elected as its President. He is also the current president of the Simplified Spelling Society. Based in Britain at UCL throughout his career, he has over the years given invited lectures in many countries around the world.

He is best known for his three-volume book and cassette *Accents of English* (1982), a large and valuable systematic description of the pronunciation of a great number of varieties of English around the world; the book and CD *The Sounds of the IPA, Lingvistikaj Aspektoj de Esperanto*, and the *Longman Pronunciation Dictionary* (1990). His other publications include: *Practical Phonetics* (1971), *Jamaican pronunciation in London* (1973), *Geiriadur Esperanto* (1985), *Hutchinson Dictionary of Difficult Words* (1993), *Longman Interactive English Dictionary* (1994), *Overcoming phonetic interference* (2000), *Accents in Britain today* (2002), *English Intonation: an introduction* (2006), etc. He is the author of the most widely used English-Esperanto dictionary, and is also the inventor of the X-SAMPA ASCII phonetic alphabet (The Extended Speech Assessment Methods Phonetic Alphabet). In summer, John Wells directs a two-week course in phonetics, which focuses on practical and theoretical phonetics as well as some aspects of teaching phonetics.

**Wescott, Roger Williams** (1925), professor of Linguistics, the most prolific of researchers on the subject of linguistic iconism during the 1960's and 1970's. After receiving his Ph.D. in Linguistics in 1948, he held a Rhodes Scholarship at Oxford. Roger Wescott served as Professor of Linguistics in the Humanities Division of the Graduate School and Professor of Anthropology in the Social Science Division of the College of Liberal Arts at Drew University in Madison, New Jersey (1966-1991). He founded Drew's Anthropology Department and chaired it for 12 years. For 13 years, he was Director of Drew's Linguistics Program. In 1980-1981 R.Wescott was the Presidential Professor of

Humanities and Social Sciences at the Colorado School of Mines. In 1982 and 1983, he served as a forensic linguist in New Jersey state courts.

He was the first holder of the endowed Chair of Excellence in Humanities at the University of Tennessee at Chattanooga (1988-1989). From 1989 through 1991, he occupied the position of Director of Drew's Behavioral Science Program. Roger Wescott was First Vice-President of the International Organization for Unification of Terminological Neologisms (1988-1996) and President of the International Society for the Comparative Study of Civilizations (1992-1995). Now he is Vice President of the Association for the Study of Language in Prehistory and First Vice-President of the World Bank of International Terms.

Of his 550 publications, 40 are books, including *The Divine Animal: An Exploration of Human Potentiality* (1969), and *Sound and Sense: Linguistic Essays on Phonosemic Subjects* (1980). He published many articles about specific correlations between sound and meaning that he had observed in English and in African languages, primarily Bini and Ibo. He remains perhaps the only researcher who united the African tradition of linguistic iconism with the Western tradition of sound symbolism whose most outspoken proponents were D.Bolinger and R.Jakobson. Prof. Wescott is also a poet and an anthropologist. His research often goes into language origins, the relationship between animal communication and human speech and orthographic iconism. D.Bolinger in the introduction of *Sound and Sense* describes Roger Wescott as having the "most irrepressible imagination to be found among serious scholars", and that R.Wescott's research is indeed always founded on a very solid and extensive empirical base.

R.Wescott serves as co-editor of the journals *Futurics*, *Forum Linguisticum*, and *Mother Tongue*, and is past president of The Linguistic Association of Canada and the US. Among his listings are *Who's Who in the World*; *Who's Who in Educational Futuristics*, and *The World's Who's Who of Authors*.

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### **Recommended programmes for acoustic study of speech**

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2. *SFS/WASP*: Program by Mark Huckvale. Version 1.2. Copyright © 2003 University College London, Department of Phonetics and Linguistics.

3. *SpectraLAB*: FFT Spectral Analysis System. Version 4.3213. Copyright © 1997 Sound Technology, Inc. 1400. Dell Avenue. Campbell, CA 95008 USA.

4. *WaveLab*: Program by Ph.Goutier. Version 2.1. Copyright © 1995-1998 Steinberg.

