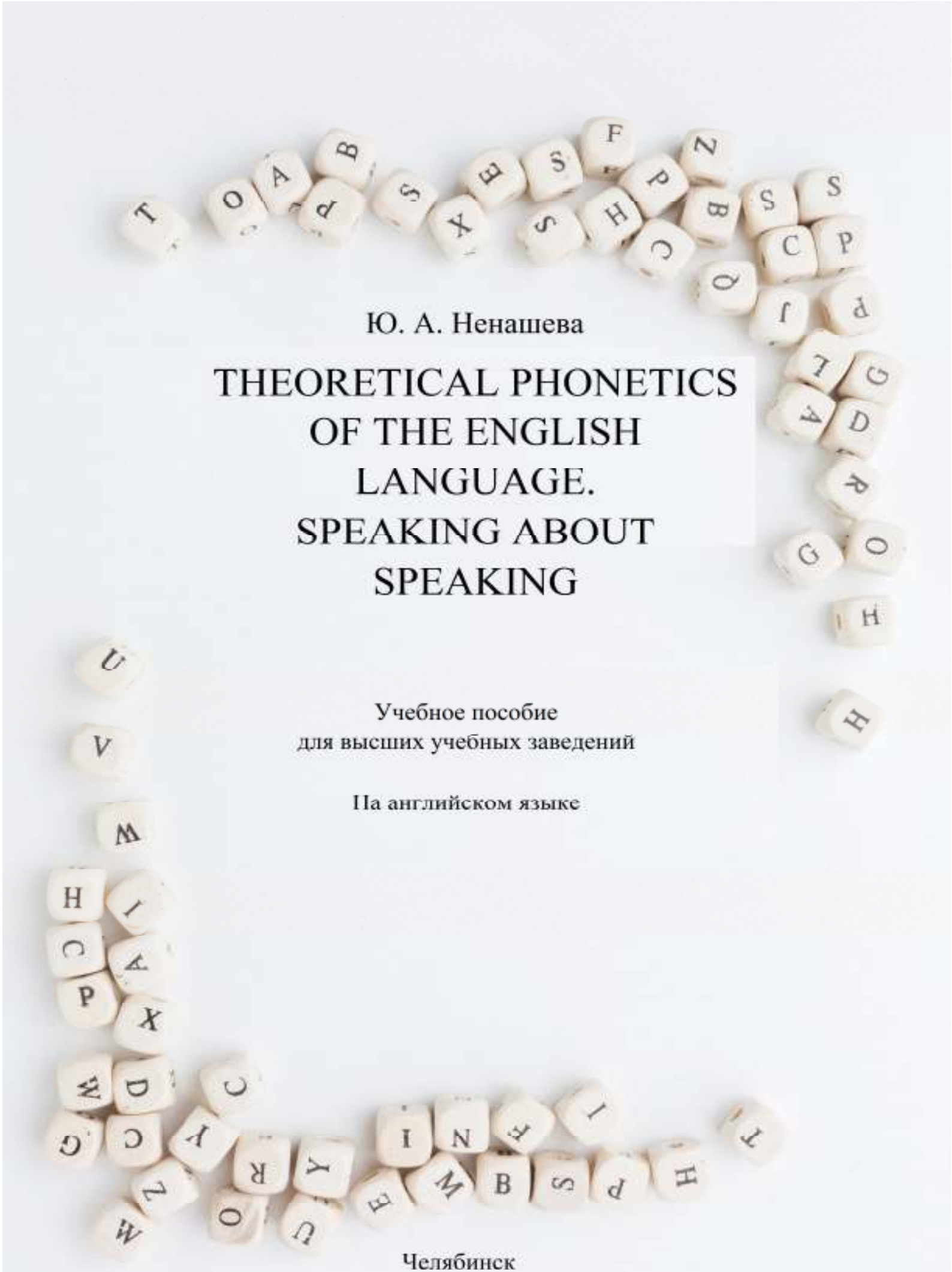

Ю. А. Ненашева

THEORETICAL PHONETICS OF THE ENGLISH LANGUAGE. SPEAKING ABOUT SPEAKING

Учебное пособие
для высших учебных заведений

На английском языке

Челябинск
2023

Южно-Уральский государственный гуманитарно-педагогический университет
Южно-Уральский научный центр
Российской академии образования (РАО)

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Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» представляет собой учебное пособие для проведения лекционных и практических занятий по дисциплине «Теоретическая фонетика английского языка». Целью использования данного учебного пособия является ознакомление обучающихся с особенностями звучащей речи современного английского языка, тенденциями произносительных изменений, стилистической вариативностью английской речи. Пособие содержит теоретический материал, задания для закрепления материала, библиографический список. Учебное пособие предназначено для студентов направления 44.03.05 «Педагогическое образование (с двумя профилями подготовки)», профильная направленность: «Английский язык. Иностранный язык».

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Пояснительная записка

Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» представляет собой интегрированный электронный продукт, объединяющий материал для проведения лекционных и практических занятий, а также упражнения для самоконтроля и тестовые задания. Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» состоит из двух частей, первая из которых содержит лекционный материал, включающий иллюстрации, схемы-блоки и таблицы, обеспечивающие систематизацию получаемой информации, вторая часть электронного образовательного ресурса «Theoretical Phonetics of the English Language. Speaking about Speaking» содержит задания для самоконтроля, тестовые задания промежуточного и итогового тестирования к курсу «Теоретическая фонетика английского языка».

Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» предназначен для студентов бакалавриата по направлению подготовки 44.03.05 «Педагогическое образование (с двумя профилями подготовки)», профильная направленность: «Английский язык. Иностранный язык», а также для всех лиц, интересующихся данной тематикой.

Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» призван помочь обучающимся ознакомиться с базовыми понятиями фонетики и фонологии, изложенными в рамках современной научной парадигмы – основными проблемами фонетики и фонологии английского языка. Знакомство студентов с системными отношениями в языке призвано сформировать у них понимание языка как целостной системы, раскрыть

взаимообусловленность связей между элементами системы, показать язык как живое, развивающееся явление.

Системный подход к описанию фонетических и фонологических единиц представлен в тесном взаимодействии с функциональным, коммуникативным и когнитивным подходами. Результатом изучения дисциплины является приобретение навыков критического лингвистического мышления, владение специальной терминологией, формирование и закрепление знаний о фонетической системе современного английского языка, формирование и совершенствование навыков системного лингвистического мышления, понимания лингвистических проблем, лингвистической интерпретации текста, развитие практических навыков лингвистического анализа устного и письменного текста.

Первый раздел электронного образовательного ресурса «Theoretical Phonetics of the English Language. Speaking about Speaking» содержит лекционный материал по определенной тематике. Второй раздел электронного образовательного ресурса «Theoretical Phonetics of the English Language. Speaking about Speaking» содержит планы практических занятий/семинаров по одной/нескольким смежным темам, упражнения, направленные на закрепление навыка лингвистического анализа, список вопросов для самостоятельной работы, тестовые задания для промежуточной и итоговой аттестации. Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» также включает в себя глоссарий, в котором содержатся основные понятия и термины. При составлении глоссария были использованы работы отечественных и зарубежных ученых-фонетистов Р.Л. Зиндера, Ю.А. Дубовского, Г.М. Вишневской, Т.И. Шевченко, P. Roach, D. Crystal, A.C. Gimson, A. Cruttenden и мн. др.

Электронный образовательный ресурс «Theoretical Phonetics of the English Language. Speaking about Speaking» представляет собой

обязательный курс, состоящий из двух разделов. Общая продолжительность курса составляет 72 академических часа (2 ЗЕД). В процессе изучения дисциплины «Теоретическая фонетика английского языка» предусмотрено формирование следующих компетенций:

– ОПК-8 – способность осуществлять педагогическую деятельность на основе специальных научных знаний, использовать понятийный аппарат теоретической и прикладной лингвистики и лингводидактики, применять методы анализа педагогической ситуации, профессиональной рефлексии на основе специальных научных знаний, в том числе в предметной области;

– ПК-11 – умение проектировать и осуществлять учебно-воспитательный процесс с опорой на знания предметной области, психолого-педагогические знания и научно-обоснованные закономерности организации образовательного процесса, знание понятийного аппарата, теоретических аспектов лингвистики и лингводидактики, умение проводить анализ теоретического и фактического языкового материала с использованием понятийного аппарата дисциплины.

Курс можно осваивать как самостоятельно, так и под руководством преподавателя, индивидуально или в группе. Автор курса считает самым эффективным комплексный способ, включающий в себя лекционное представление материала преподавателем/инструктором и групповую/самостоятельную работу с практическими заданиями, позволяющими обеспечить закрепление навыка анализа текста и его составляющих. По окончании изучения материала раздела обучающийся может проверить свои знания при помощи тестовых заданий. Проверка знаний может проходить в форме самоконтроля или тестового задания в форме зачета.

Изучение курса идет в наиболее комфортной для обучающегося манере и темпе: он может многократно повторять отдельные лекции/их

части и задания, а также возвращаться к уже пройденным темам. Особый интерес представляют практические задания, предполагающие работу с аутентичным текстом. В этих заданиях обучающемуся предлагается самостоятельно выполнить ряд действий по определению, классификации и анализу различных фонетических явлений, представленных в текстах. По окончании курса обучающийся может проверить свои знания, пройдя тест, который охватывает темы из всех семи тем.

Автор выражает искреннюю благодарность рецензентам, а также всем, кто принял участие в подготовке данного издания. Автор учебного пособия надеется, что представленные материалы окажутся полезными широкому кругу читателей.

A List of Abbreviations Used in the Book

RP – Received Pronunciation

BrE – British English

GA – General American English

C – consonant

V – vowel

L2 – Second Language (the language a student learns as a foreign language)

dB – decibel (units used to measure voice loudness)

Hz – Hertz (units used to measure voice frequency)

AmE – American English

AuE – Australian English

CAuE – Cultivated (or Educated) Australian English

GAuE – General Australian English

BAuE – Broad Australian English

CnE – Canadian English

NZE – New Zealand English

PART I. Topic 1 INTRODUCTION TO THE COURSE OF THEORETICAL PHONETICS

1. Phonetics as a branch of linguistics. Branches of phonetics. Phonetics and its connection with social sciences

2. Methods of investigating the sound matter of the language

1 Phonetics as a Branch of Linguistics. Branches of Phonetics. Phonetics and its connection with social sciences

Everyone who has ever started learning English knows poem «The Chaos» written by Gerard Nolst Trenité in 1922. Its first verses give the reader an excellent idea about what is in store.

Dearest *creature* in *creation*
Studying English *pronunciation*,
I will teach you in my *verse*
Sounds like *corpse*, *corps*, *horse* and *worse*.

I will keep you, *Susy*, *busy*,
Make your *head* with *heat* grow dizzy;
Tear in eye, your dress you'll *tear*;
Queer, fair *seer*, *hear* my *prayer*.

From the very beginning the reader understands that the road to learning how it sounds is not going to be covered with roses, only with their thorns.

Pray, console your loving *poet*,
Make my coat look *new*, dear, *sew it*!
Just compare *heart*, *hear* and *heard*,
Dies and *diet*, *lord* and *word*.

Sword and *sward*, *retain* and *Britain*
(Mind the latter how it's *written*).
Made has not the sound of *bade*,
Say-said, *pay-paid*, *laid* but *plaid*.

Now I surely will not *plague you*
With such words as *vague* and *ague*,
But be careful how you *speak*,
Say: *gush, bush, steak, streak, break, bleak* ,

You can see that even the simplest words are, in fact, traps for an unexpecting L2 student. And there is no way you can predict or prevent making a mistake. Now read the poem to the end and count how many times you misread or mispronounced words in italics.

Previous, precious, fuchsia, via
Recipe, pipe, studding-sail, choir;
Woven, *oven*, *how* and *low*,
Script, *receipt*, *shoe*, *poem*, *toe*.

Say, expecting fraud and *trickery*:
Daughter, *laughter* and *Terpsichore*,
Branch, ranch, measles, *topsails*, *aisles*,
Missiles, *similes*, *reviles*.

Wholly, *holly*, *signal*, *signing*,
Same, *examining*, but *mining*,
Scholar, *vicar*, and *cigar*,
Solar, *mica*, *war* and *far*.

From "desire": *desirable-admirable* from "admire",
Lumber, *plumber*, *bier*, but *brier*,
Topsham, *brougham*, *renown*, but *known*,
Knowledge, *done*, *lone*, *gone*, *none*, *tone*,

One, *anemone*, *Balmoral*,
Kitchen, *lichen*, *laundry*, *laurel*.
Gertrude, *German*, *wind* and *wind*,
Beau, kind, kindred, queue, *mankind*,

Tortoise, *turquoise*, *chamois-leather*,
Reading, Reading, *heathen*, *heather*.
This phonetic labyrinth
Gives *moss*, *gross*, *brook*, *brooch*, *ninth*, *plinth*.

Have you ever yet *endeavoured*
To pronounce *revered* and *severed*,
Demon, lemon, ghoul, foul, soul,
Peter, petrol and *patrol*?

Billet does not end like *ballet*;
Bouquet, *wallet*, *mallet*, *chalet*.
Blood and *flood* are not like *food*,
Nor is *mould* like *should* and *would*.

Banquet is not nearly *parquet*,
Which exactly rhymes with *khaki*.
Discount, *viscount*, *load* and *broad*,
Toward, to *forward*, to *reward*,

Ricocheted and *crocheting*, *croquet*?
Right! Your pronunciation's OK.

Rounded, *wounded*, *grieve* and *sieve*,
Friend and *fiend*, *alive* and *live*.

Is your r correct in *higher*?
Keats asserts it rhymes *Thalia*.
Hugh, but *hug*, and *hood*, but *hoot*,
Buoyant, *minute*, but *minute*.

Say *abscission* with *precision*,
Now: *position* and *transition*;
Would it tally with my *rhyme*
If I mentioned *paradigm*?

Twopence, threepence, tease are *easy*,
But *cease, crease, grease* and *greasy*?
Cornice, nice, valise, revise,
Rabies, but *lullabies*.

Of such puzzling words as *nauseous*,
Rhyming well with *cautious, tortious*,
You'll *envelop* lists, I hope,
In a linen *envelope*.

Would you like some more? You'll *have it*!
Affidavit, David, davit.
To *abjure*, to *perjure*. *Sheik*
Does not sound like *Czech* but *ache*.

Liberty, *library*, *heave* and *heaven*,
Rachel, *loch*, *moustache*, *eleven*.
We say *hallowed*, but *allowed*,
People, *leopard*, *towed* but *vowed*.

Mark the difference, moreover,
Between *mover*, *plover*, *Dover*.
Leeches, *breeches*, *wise*, *precise*,
Chalice, but *police* and *lice*,

Camel, *constable*, *unstable*,
Principle, *disciple*, *label*.
Petal, *penal*, and *canal*,
Wait, *surmise*, *plait*, *promise*, *pal*,

Suit, *suite*, *ruin*. *Circuit*, *conduit*
Rhyme with "shirk it" and "beyond it",
But it is not hard to tell
Why it's *pall*, *mall*, but *Pall Mall*.

Muscle, *muscular*, *gaol*, *iron*,
Timber, *climber*, *bullion*, *lion,*
Worm and *storm*, *chaise*, *chaos*, *chair*,
Senator, *spectator*, *mayor*,

Ivy, *privy*, *famous*; *clamour*
Has the a of *drachm* and *hammer*.

Pussy, *hussy* and *possess*,
Desert, but *desert*, *address*.

Golf, *wolf*, *countenance*, *lieutenants*
Hoist in *lieu* of flags left *pennants*.
Courier, courtier, tomb, *bomb*, *comb*,
Cow, but *Cowper, some* and *home*.

"*Solder, soldier*! Blood is *thicker*",
Quoth he, "than *liqueur* or *liquor*",
Making, it is sad but *true*,
In bravado, much *ado*.

Stranger does not rhyme with *anger*,
Neither does *devour* with *clangour*.
Pilot, pivot, gaunt, but *aunt*,
Font, *front*, *wont*, *want*, *grand* and *grant*.

Arsenic, specific, scenic,
Relic, rhetoric, hygienic.
Gooseberry, goose, and *close*, but *close*,
Paradise, rise, rose, and *dose*.

Say *inveigh, neigh*, but *inveigle*,
Make the latter rhyme with *eagle*.
Mind! *Meandering* but *mean*,
Valentine and *magazine*.

And I bet you, dear, a *penny*,
You say *mani*-(fold) like *many*,
Which is wrong. Say *rapier, pier,*
Tier (one who ties), but *tier*.

Arch, archangel; pray, does *erring*
Rhyme with *herring* or with *stirring*?
Prison, bison, treasure trove,
Treason, hover, cover, cove,

Perseverance, severance. *Ribald*
Rhymes (but *piebald* doesn't) with *nibbled*.
Phaeton, paean, gnat, ghat, gnaw,
Lien, psychic, shone, bone, pshaw.

Don't be *down*, my *own*, but *rough it*,
And distinguish *buffet*, *buffet*;
Brood, stood, roof, rook, school, wool, boon,
Worcester, Boleyn, to *impugn*.

Say in sounds correct and *sterling*
Hearse, hear, hearken, year and *yearling*.
Evil, devil, mezzotint,
Mind the z! (A gentle hint.)

Now you need not pay attention
To such sounds as I don't mention,

Sounds like *pores, pause, pours* and *paws*,
Rhyming with the pronoun *yours*;

Nor are proper names *included*,
Though I often heard, as *you did*,
Funny rhymes to *unicorn*,
Yes, you know them, *Vaughan* and *Strachan*.

No, my maiden, coy and *comely*,
I don't want to speak of *Cholmondeley*.
No. Yet *Froude* compared with *proud*
Is no better than *McLeod*.

But mind *trivial* and *vial*,
Tripod, menial, denial,
Troll and *trolley*, *realm* and *ream*,
Schedule, mischief, schism, and *scheme*.

Argil, gill, Argyll, gill. Surely
May be made to rhyme with *Raleigh*,
But you're not supposed to say
Piquet rhymes with *sobriquet*.

Had this *invalid invalid*
Worthless documents? How *pallid*,
How *uncouth* he, *couchant*, looked,
When for *Portsmouth* I had booked!

Zeus, Thebes, Thales, Aphrodite,
Paramour, enamoured, flighty,
Episodes, antipodes,
Acquiesce, and *obsequies*.

Please don't monkey with the *geyser*,
Don't peel 'taters with my *razor*,
Rather say in accents pure:
Nature, stature and *mature*.

Pious, impious, limb, climb, glumly,
Worsted, worsted, crumbly, dumbly,
Conquer, conquest, vase, phase, fan,
Wan, sedan and *artisan*.

The **th** will surely *trouble you*
More than *r*, *ch* or *w*.
Say then these phonetic *gems*:
Thomas, thyme, Theresa, Thames.

Thompson, Chatham, Waltham, Streatham,
There are more but I *forget 'em*-
Wait! I've got it: *Anthony*,
Lighten your anxiety.

The archaic word *albeit*
Does not rhyme with *eight*-you *see it*;

With and *forthwith*, one has voice,
One has not, you make your choice.

Shoes, goes, does. Now first say: *finger*;
Then say: *singer, ginger, linger*.
Real, *zeal*, *mauve, gauze* and *gauge*,
Marriage, *foliage*, *mirage*, *age*,

Hero, heron, query, very,
Parry, tarry fury, bury,
Dost, *lost*, *post*, and *doth*, *cloth*, *loth*,
Job, *Job*, *blossom*, *bosom*, *oath*.

Faugh, oppugnant, keen *oppugners*,
Bowing, *bowing*, banjo-*tuners*
Holm you know, but *noes, canoes*,
Puisne, *truism*, *use*, to *use*?

Though the difference seems *little*,
We say *actual*, but *victual*,
Seat, *sweat*, *chaste*, *caste*, *Leigh*, *eight*, *height*,
Put, *nut*, *granite*, and *unite*.

Reefer does not rhyme with *deafer*,
Feoffer does, and *zephyr*, *heifer*.
Dull, *bull*, *Geoffrey*, *George*, *ate*, *late*,
Hint, *pint*, *senate*, but *sedate*.

Gaelic, *Arabic*, *pacific*,
Science, *conscience*, *scientific*;
Tour, but *our, dour, succour*, *four*,
Gas, *alas*, and *Arkansas*.

Say *manoeuvre, yacht* and *vomit*,
Next *omit*, which differs from it
Bona fide, alibi
Gyrate, dowry and *awry*.

Sea, *idea*, *guinea*, *area*,
Psalm, *Maria*, but *malaria*.
Youth, *south*, *southern*, *cleanse* and *clean*,
Doctrine, *turpentine*, *marine*.

Compare *alien* with *Italian*,
Dandelion with *battalion*,
Rally with *ally*; *yea*, *ye*,
Eye, *I*, *ay*, *aye*, *whey*, *key*, *quay*!

Say *aver*, but *ever*, *fever*,
Neither, *leisure*, *skein*, *receiver*.
Never guess-it is not *safe*,
We say *calves*, *valves*, *half*, but *Ralf*.

Starry, granary, *canary*,
Crevice, but *device*, and *eyrie*,

Face, but *preface*, then *grimace*,
Phlegm, *phlegmatic*, *ass*, *glass*, *bass*.

Bass, *large*, *target*, *gin*, *give*, *verging*,
Ought, *oust, joust*, and *scour*, but *scourging*;
Ear, but *earn*; and *ere* and *tear*
Do not rhyme with *here* but *heir*.

Mind the o of *off* and *often*
Which may be pronounced as *orphan*,
With the sound of *saw* and *sauce*;
Also *soft, lost, cloth* and *cross*.

Pudding, puddle, putting. *Putting*?
Yes: at golf it rhymes with *shutting*.
Respite, spite, consent, resent.
Liable, but *Parliament*.

Seven is right, but so is *even*,
Hyphen, *roughen*, *nephew*, *Stephen*,
Monkey, *donkey*, *clerk* and *jerk*,
Asp, *grasp*, *wasp*, *demesne*, *cork*, *work*.

A of *valour, vapid vapour,*
S of *news* (compare *newspaper*),
G of *gibbet, gibbon, gist,*
I of *antichrist* and *grist*,

Differ like *diverse* and *divers*,
Rivers, strivers, shivers, fivers.
Once, but *nonce, toll, doll,* but *roll*,
Polish, Polish, poll and *poll*.

Pronunciation-think of *Psyche*!-
Is a paling, stout and *spiky*.
Won't it make you lose your *wits*
Writing *groats* and saying "grits"?

It's a dark *abyss* or *tunnel*
Strewn with stones like *rowlock*, *gunwale*,
Islington, and *Isle* of *Wight*,
Housewife, *verdict* and *indict*.

Don't you think so, reader, *rather*,
Saying *lather*, *bather*, *father*?
Finally, which rhymes with *enough*,
Though, *through*, *bough*, *cough*, *hough*, *sough, tough*??

Hiccough has the sound of *sup*...
My advice is: GIVE IT UP!

But our advice is DO NOT give up! Take our course and we will try to explain to you why English spelling is THAT complicated. We will speak abour

speaking, starting with the introduction to the phonetics and phonology of the English language.

The importance of phonetics is evident since speech is the most important means of human communication. No language distinction is complete without detailed description of its spoken medium. As every person grows up learning and speaking only a particular language/languages, each language uses a subset of the full range of possible, producible and distinguishable sounds. Phonetics is concerned with the formal side of the language. Phonetics studies human noises by which people actualize the thought or give it an audible shape, the main area of interest being the nature of these noises, their combinations, and their functions in relation to the meaning.

However, phonetics takes the content level into consideration, because of the effect the expression units have on meaning: only sounds that are carriers of organized information of language can be regarded as speech. Phonetics is a prerequisite to adequate understanding of the structure of the language. Phonetics contains information on two major points (as displayed in Figure 1).

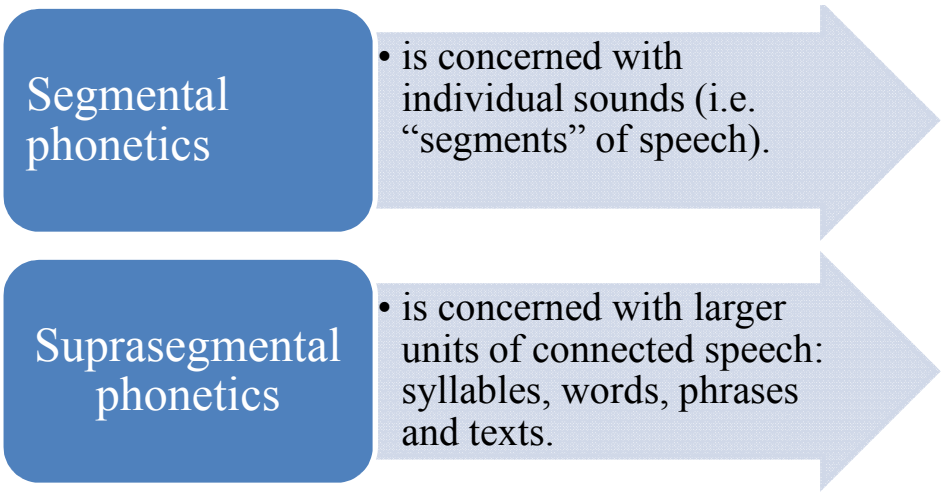


Fig. 1. Phonetics

Phonetics started as science in Ancient India to help fix and use rules for reading sacred texts – Vedas. As there were more than ten dialects used in every day communication, priests needed guides to read sacred texts properly and uniformly. Thus, uniform description the articulatory features of the sounds was invented to explain how certain combinations of letters should be read. The

oldest phonetic alphabet and articulation guides date to the ancient times. Similar descriptions were invented in Chinese and Arabian traditions.

Principles developed in Ancient India were borrowed into Europian philosophical descriptions of the language. Unlike Ancient India, or China, in Europe there was no practical need for such description of the language, outside the rhetorics which fell into the domain of philosophy. Thus, the borrowed description was included into philosophy formally and received no further development. This formal character later became more habitual, as the scientific paradigm of the Medieval Age pursued the formal path. It can be seen now in the pronunciation of the English words where spelling influenced by the French language spelling tradition does not follow the actual pronunciation.

Later, in accordance with the emerging comparative scientific paradigm two branches of phonetics appeared as shown in Figure 2.

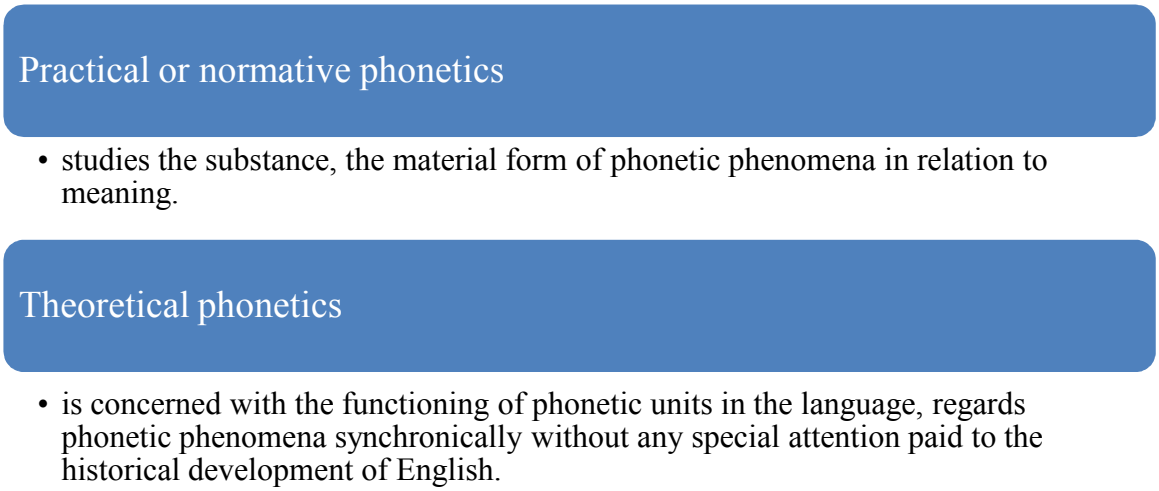


Fig. 2. Practical and theoretical phonetics

Interest to how the sound system of the language functions prompted the appearance of a new branch of studies – phonology [8]. Phonology was originated in the 30s of the XXth century by a group of linguists belonging to the Prague school of linguistics – V. Matesius, N. Trubetskoy, R. Jakobson [39; 49-51]. The theoretical background of phonology is the phoneme theory whose foundations were first laid down by I.O. Baudouin de Courtenay between the years of 1868-1881. The most important work in phonology is «The

Groundwork of Phonology» (1939) by N. Trubetskoy [39]. He stated that phonology should be separated from phonetics as it studies the functional aspect of phonetic components of language. Contemporary phoneticians hold the view that form and function cannot be separated and treat phonology as a linguistic branch of phonetics [53].

Phonology is the study of those segmental (speech sound types) and supersegmental/prosodic (intonation) features, which have a differential value in the language. It studies how speakers systematically use a selection of units – phonemes or intonemes – in order to express meaning. It investigates the phonetic phenomena from the point of view of their use. The primary aim of phonology is to discover the principles that determine the way that sounds are organized in language sound systems, to determine which phonemes are used and how they pattern. In linguistics function is understood to mean discriminatory/distinctive function: the role of the various elements of the language in the distinguishing of one sequence of sounds, such as a word or a sequence of words, from another of different meaning. Though the discriminatory function is considered the main linguistic function of any phonetic unit, the other function of phonetic units cannot be ignored: the role in the formation of syllables/words/phrases and bigger texts [82]. This functional, or social, aspect was first introduced by I.A. Baudouin-de-Courtenay.

Through study of the spoken medium of the natural languages insights can be gained into human psychology and the functioning in the society [52]. That is why phonetics has considerable social value. Now more than ever before the ability of growing numbers of people to speak one another's language really well is of great value. Training in linguistics and phonetics in general, and in the pronunciation of particular language is coming to be considered essentially important for a teacher of foreign languages in school or special faculties: knowledge of the structure of sound systems, and of the articulatory and acoustic properties of the production of speech is indispensable. The teacher has to know the starting point, which is the sound system of the student`s native

tongue, as well as the aim of his teaching – the sound system of L2 (foreign language). The teacher/instructor must be able to point out the differences between these two to arrange adequate ear and articulatory training which are both equally important in modern L2 teaching. For those who work in speech therapy, which handles pathological speech conditions, phonetics forms an essential part of the professional training syllabus. Phonetics also can be of relevance to a number of medical and dental problems.

In our technological age phonetics has become important in a number of technological fields connected with communication. On the research side much present-day work in phonetics involves the use of special equipment and is concerned with the characteristics of human speech. Much interdisciplinary research is to be done with the phonetician working alongside the psychologist on auditory perception and on the perception of speech. Further research includes mathematicians and communications engineers in designing equipment to respond to human speech: machines that will reliably distinguish and identify individual speakers, machines for reproducing human speech in audible or visible forms, machines that will produce with a high degree of intelligibility recognizable human speech synthetically. Understanding of phonetics has proved useful in investigations in the historical aspects of languages, and in the field of dialectology; designing or improving writing or spelling systems, orthographies for unwritten languages, shorthand, spelling reform.

Further point should be made in connection with the relationship between phonetics and social sciences: sociophonetics studies the ways in which pronunciation interacts with society. It is the study of the way in which phonetic structures change in response to different social functions and the deviations of what these functions are. The term «society» covers a spectrum of phenomena to do with nationality, more restricted regional and social groups, and the specific interactions of individuals within them. This sphere covers the stylistic usage of the natural language pronunciation – when people communicate as equals, superiors or subordinates, when they try to persuade, inform, agree or disagree.

In teaching phonetics the study of sociolinguistics is to be an essential part of the explanation in the functional area of phonetic units.

Psycholinguistics and cognitive linguistics as a distinct area of interest developed in the early sixties [15; 25; 29; 30]. They cover the psychological implications of phonetic units: from acoustic phonetics to language pathology. There is no denial of strong mutual bonds between linguistics (phonetics) and psychology. Acquisition of language by children, the ways language mediates or structures thinking: memory, attention, recall and constraints on perception, problems of speech production extend far over the limits originally set by purely linguistic applications.

Phonetics investigates sound-production aspect. Phonetics is the study of how speech sounds are made, transmitted, and received: the human vocal apparatus can produce a wide range of sounds; but only a small number of them are used in a language to construct all of its words and utterances. The object of study in phonetics – a speech sound – is a diverse phenomenon. It can be looked upon from several points of view (as presented in Table 1).

Table 1. Classification of branches of phonetics

Point of view	Discipline	What it studies
Phonetic systems of languages irrespectively of their relations or similarity.	General phonetics.	The domain of which defines fundamental concepts.
Phonetic systems of languages with regard to their relations or similarity.	Comparative phonetics.	Correlations between phonetic systems of languages and correspondence among their phonetic units.
Phonetic systems of specific languages.	Special phonetics.	The sound system of the specific language.
Phonetic systems of languages at different chronological periods.	Historical phonetics.	The successive changes in the phonetic system of a given language at different stages of its historical development.
Practical usage of phonetic systems of languages.	Practical phonetics.	Prescriptive character – rules and the teaching standard of the sound system of the language.
Description of phonetic systems of languages.	Theoretical phonetics.	Descriptive character – the present state of the sound system of the language.

A sound system of a language can be studied synchronically and diachronically. Synchronic study of the sound system is performed with reference to a definite period of time (descriptive phonetics). Diachronic study involves tracing the succession of changes in the sound system of a certain language at a certain time period (historical phonetics).

The description of the phonetic structure of English is based on the Received Pronunciation. Three traditional branches of the subject – articulatory phonetics, acoustic phonetics and perception phonetics – are generally recognized in accordance with the aspect of the sound (as presented in Figure 3).

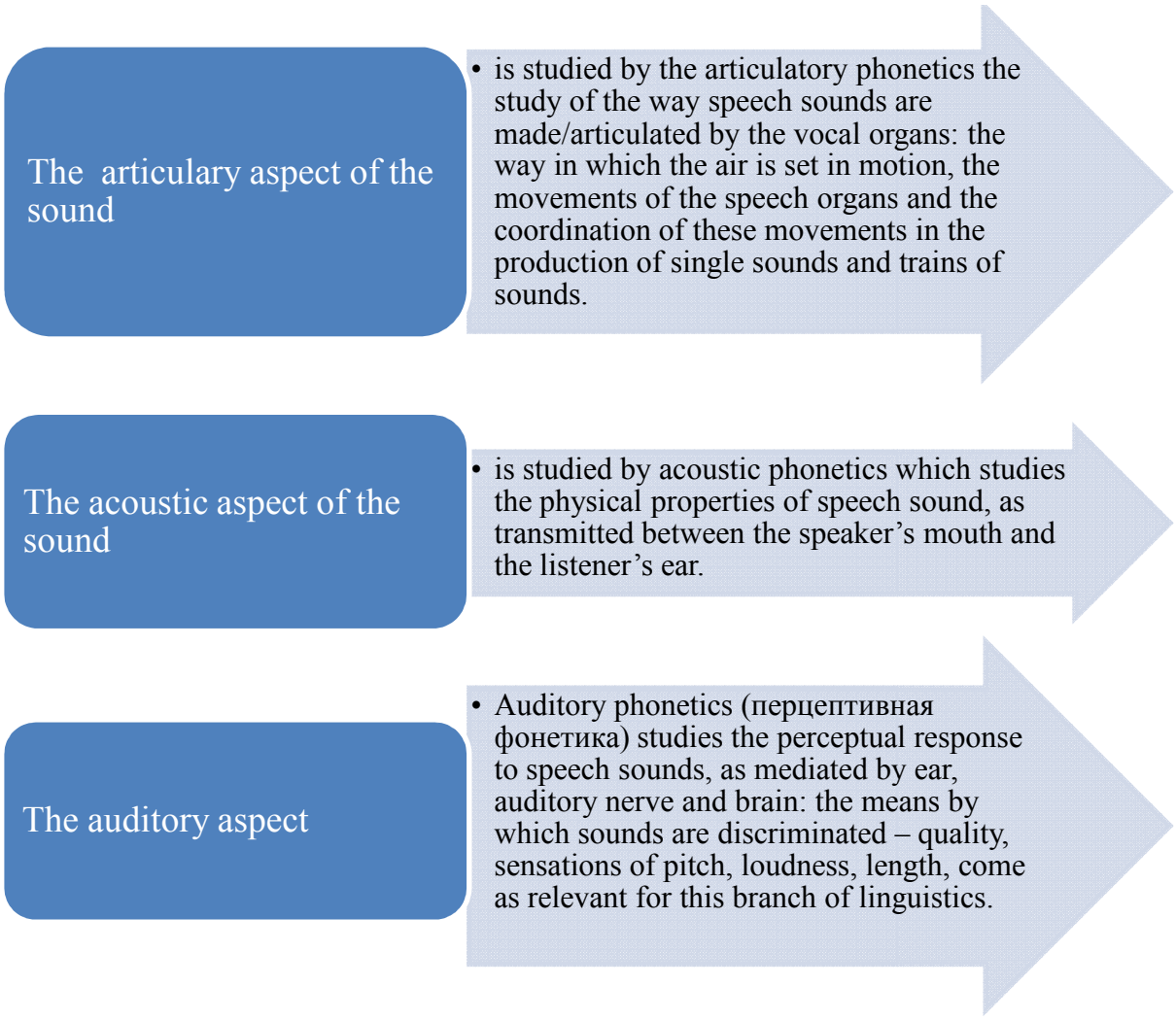


Fig. 3. Aspects of speech sounds and branches of phonetics

2 Methods of Investigating the Sound Matter of the Language

A lot of experimental research done in phonetics is descriptive, it is based on the explanation of how sounds are performed, how phonetic units are combined and how they influence each other. Some of the descriptions may acquire prescriptive character, thus becoming rules according to which the usage of the phonetic system is done. The above-mentioned means that observation, both direct and indirect, constitutes the majority of methods of investigating the sound system of the language. Direct and indirect observation involves using various instruments, thus instrumental methods are singled out. It is useful to distinguish between phonetic studies carried out without other instruments of analysis than the human senses and such as are based upon the witness of registering or computing machines and technical analysing or synthesizing devices. If controlled phonetic experiments employ the use of measuring devices and instrumental techniques, this subfield of phonetics is called instrumental phonetics. Instrumental methods deriving from physiology and physics were introduced into phonetics in the second half of the 19th century in order to supplement and indeed to rectify the impressions deriving from the human senses, especially the auditory impressions, since these are affected by the limitations of the perceptual mechanism, and in general are rather subjective. The use of instruments is valuable in ascertaining the nature of the limitations and characteristics of the human sensory apparatus by providing finer and more detailed analysis against which sensory analysis can be assessed. In a general way, the introduction of machines for measurements and for instrumental analysis into phonetics has resulted in their use for detailed study of many of the phenomena which are present in the sound wave or in the articulatory process at any given moment and in the changes of these phenomena from moment to moment. This is strictly an instrumental method of study. This type of investigation together with sensory analysis is widely used in experimental phonetics [6; 21; 44; 56; 67; 92].

Articulatory phonetics borders with anatomy and physiology and the tools for investigating just what the speech organs do are tools which are used in these fields: direct observation, wherever it is possible: lip movement, some tongue movement; combined with X-ray photography or X-ray cinematography; observation through mirrors as in the laryngoscopic investigation of vocal cord movement; palatography – recording patterns of contact between the tongue and the palate; glottography – studying the vibrations of the vocal cords, etc.

Acoustic phonetics comes close to studying physics and the tools used in this field enable the investigator to measure and analyse the movement of the air in the terms of acoustics [67; 92]. This generally means introducing a microphone into the speech chain, converting the air movement into corresponding electrical activity and analyzing the result in terms of frequency of vibration and amplitude of vibration in relation to time. The use of such technical devices as spectrograph, intonograph and other sound analysing and sound synthesizing machines is generally combined with the method of direct observation.

The methods applied in auditory phonetics are those of experimental psychology [15; 17; 25; 29; 30]. The above mentioned instrumental techniques are used in experimental phonetics, but not all instrumental studies are experimental: when a theory or hypothesis is being tested under controlled conditions the research is experimental, but if one simply makes a collection of measurements using devices the research is instrumental.

As was stated above, phoneticians cannot act only as describers and classifiers of the material form of phonetic units. They are also interested in the way in which sound phenomena function in a particular language, how they are utilized in that language and what part they play in manifesting the meaningful distinctions of the language. Thus, there appears phonological/linguistic analysis – a complex procedure that involves inductive and deductive inferences about the functions phonetic language units possess, based on observations performed with/without instrumental means.

Topic 2 CHARACTERISTICS OF SPEECH SOUNDS

1. Aspects of speech sounds. General characteristics of phonemes
2. Methods of phonological analysis

1 Aspects of Speech Sounds. General characteristics of phonemes

Human organs of speech can produce up to 400 different sounds but not all of them are speech sounds. The differentiation between sounds and speech sound can be represented in the form of a pyramid (as shown in Figure 4).

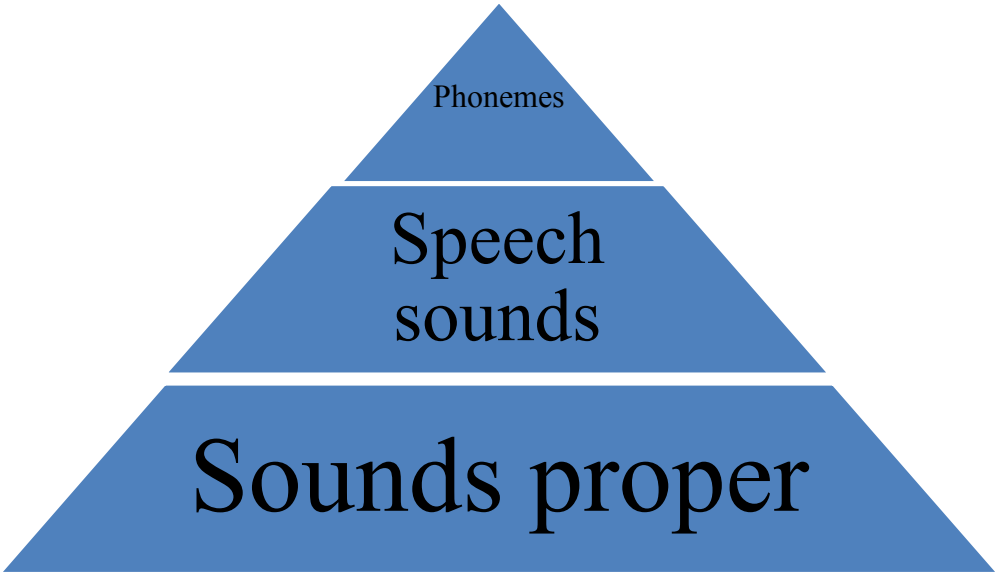


Fig. 4. The hierarchy of the segmental component of the language

Sounds proper represent all sound effects that the human body can produce; but speech sounds are different from sounds proper as the latter do not always serve as carriers of meaning. Thus the number of speech sounds is smaller than the number of sounds proper.

It follows that speech sounds differ from each other in their physical/acoustic properties, in the way they are produced by the organs of speech and in their features which take part or do not take part in differentiating the meaning, it will be possible to distinguish the following four aspects: 1)

articulatory 2) acoustic 3) auditory 4) functional (linguistic, social, phonological) of speech sounds (as we have mentioned in Topic 1) [94]. The process of production of speech sounds is characterized by the following stages (as presented in Figure 5).

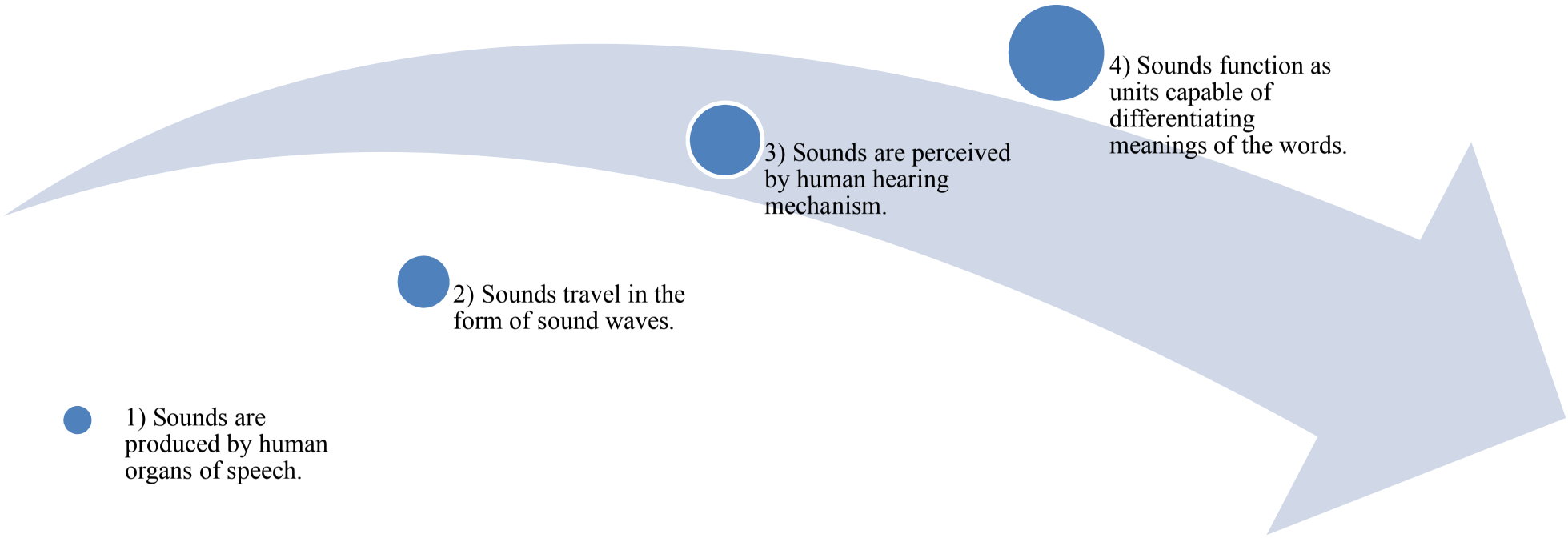


Fig. 5. The process of speech sound production

All aspects of speech spounds are inseparable in the actual process of communication (in the flow of speech), but each of them can be singled out for linguistic analysis. It is a process of materializing features relating to the system of sounds/phonemes, the syllabic structure, prosody (word stress and intonation) while speech/oral verbal message is constructed. The production of a speech sound goes through three stages: human speech is the result of a highly complicated series of events (as presented in Figure 6).

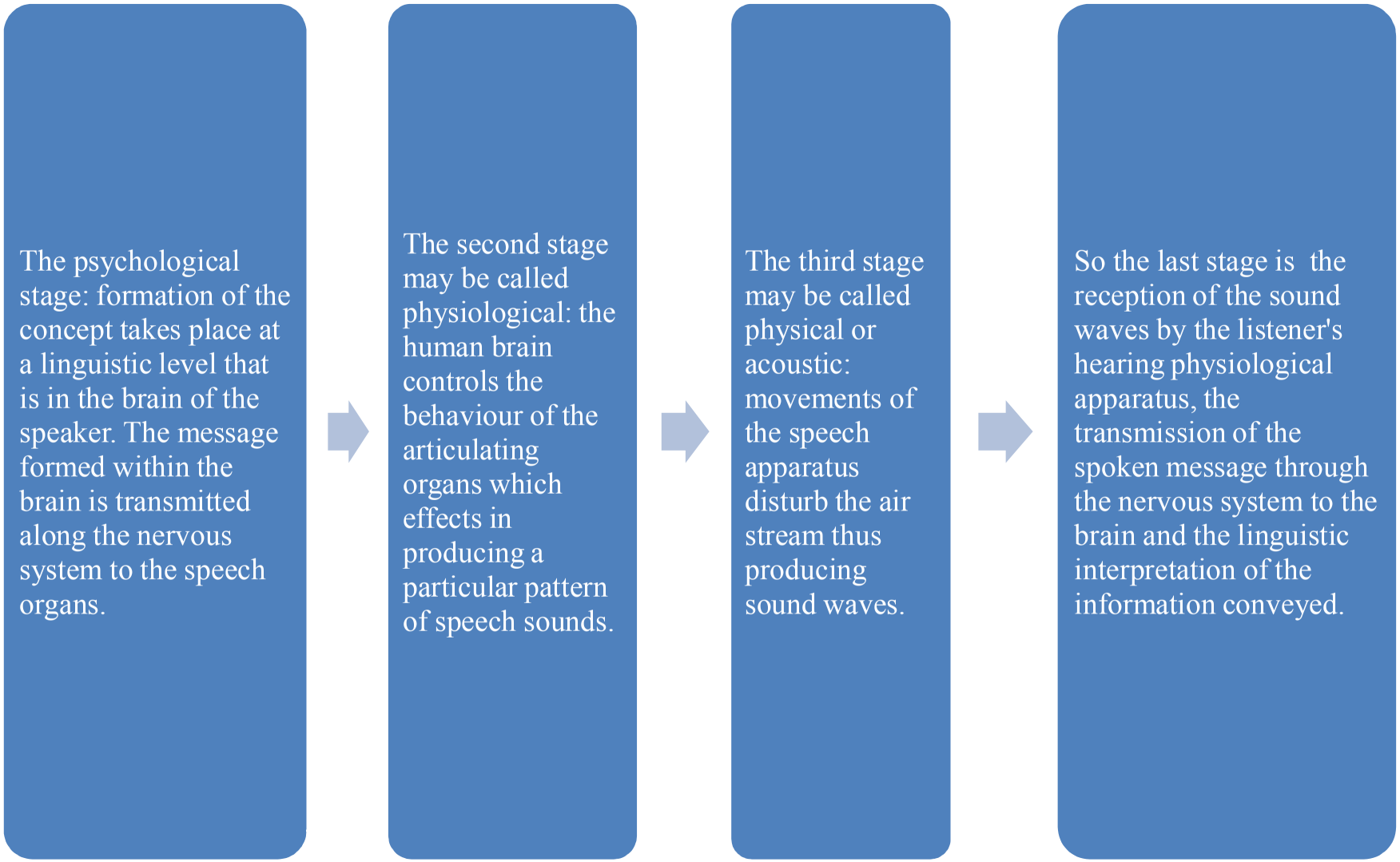


Fig. 6. Stages of speech sound production

We shall start with the second stage that involves the articulation and its features.

1. The articulatory/sound production aspect: from the articulatory point of view every speech sound is a complex of definite coordinated and differentiated movements and positions of speech organs [81]. The articulation of a speech sound is performed in three stages (as displayed in Figure 7).

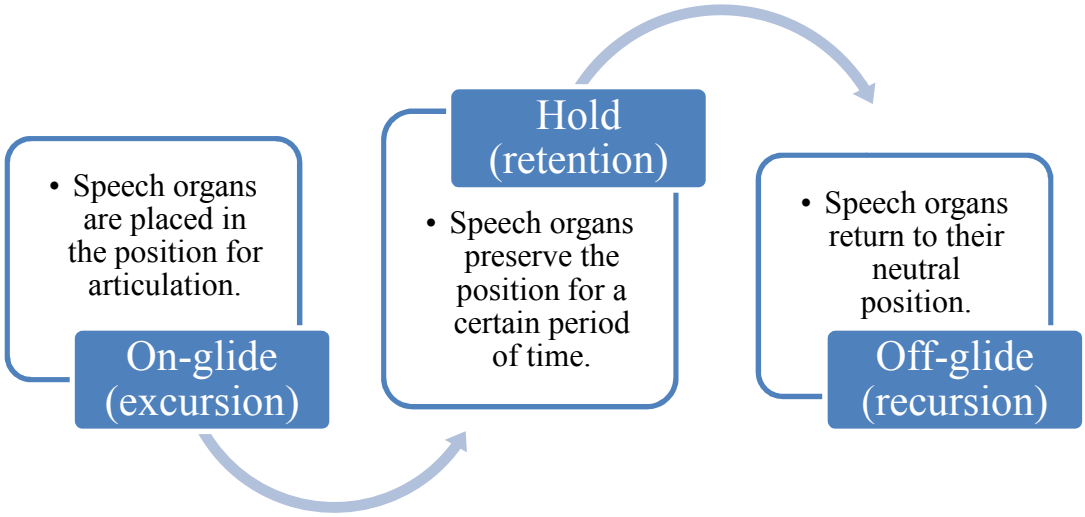


Fig. 7. Stages in speech sound articulation

The movements and positions necessary for the production of a speech sound constitute its articulation. Articulatory aspect is the first aspect to be studied in detail before analysing the linguistic function of phonetic units. We need to know how the vocal mechanism acts in producing oral speech and what methods are applied in investigating the material form of the language that is its substance. Phonic realization, the shaping of oral form in speech is called pronunciation. The concept 'pronunciation' has several meanings in present-day phonetics. In its narrow meaning it is restricted to the features manifested in the articulation of the sounds of a language. Its wide interpretation implies the entity of discourse features relating to:

– the sound system of a language (segmental phonemes in the form of their actual speech manifestations – allophones);
– the syllabic structure of a language (syllable formation/division);
– word-stress/lexical stress;
– intonation as a complex unity of pitch, force and temporal components.

Pronunciation is the primary medium through which we bring our use of language to the attention of other people.

The physiologic stage of sound production involves four mechanisms (as presented in Figure 8).

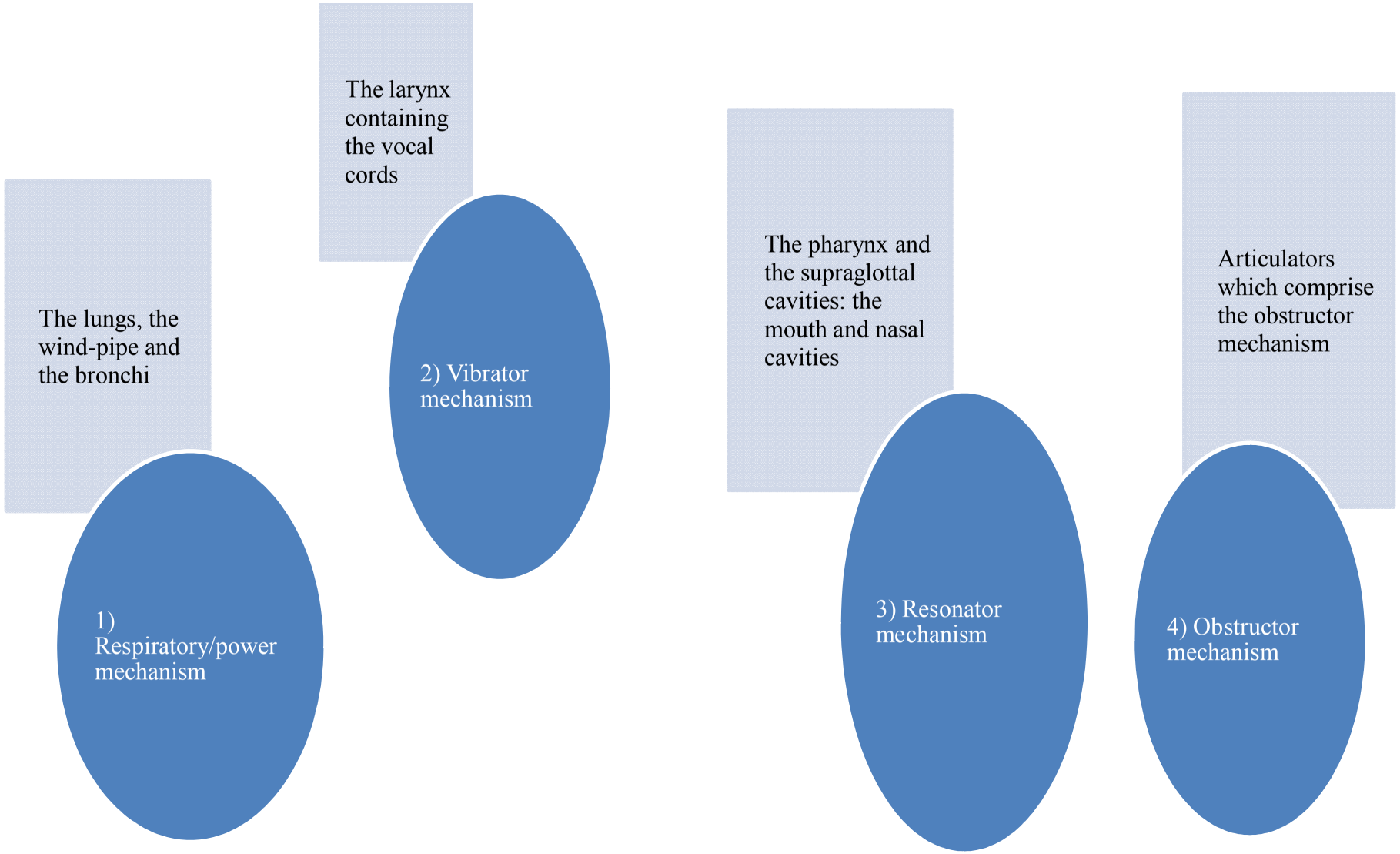


Fig. 8. Mechanisms in speech sound production

All four mechanisms are responsible for some part of the speech production. They will be discussed consequently.

1. The respiratory/power mechanism furnishes the flow of air which is the first requisite for the production of speech sounds (as displayed in Figure 9).

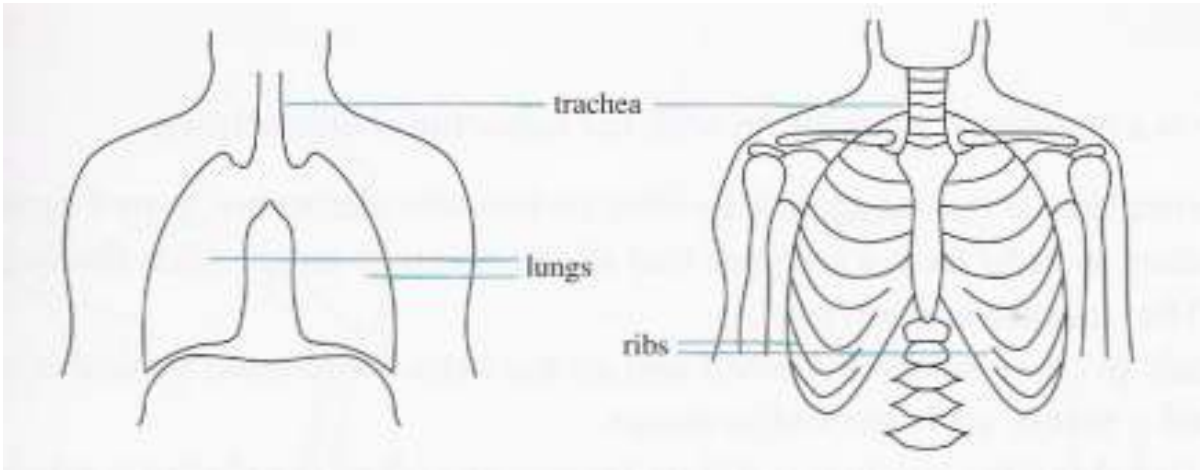


Fig. 9. Schematic position of the power/respiratory mechanism

The air-stream expelled from the lungs provides the most usual source of energy which is regulated by the power mechanism. The air is expelled from the lungs when the rib cage is compressed and it is inhaled when the rib cage is expanded. Although the lungs hold a considerable amount of air (normally several liters) only a small proportion of it is used in speech production. Speech can be regarded as controlled breathing: the air is let out slowly, under careful control. In normal respiration inhalation and exhalation take about the same amount of time, but in speech the ratio is typically 8:1 in favour of exhalation. Usually speech is produced with egressive air stream, that is the air moves out of the body (is exhaled). Usually it is done by compressing the lungs with the rib cage and the air going out through the vocal tract (a pulmonic airstream). Other types of airstream can be 1) glottalic when the airstream is produced by the larynx that moves up and down as a plunger of the pump made by closed vocal folds, 2) velaric when the back of the tongue seals the air tract by pressing against the soft palate (velum), and it moves back and forth producing air movement. Another, rarer way of creating the air stream is ingressive when speech sounds are made by drawing the air into the lungs. Regulating the force

of the air-wave the lungs produce variations in the intensity of speech sounds. Syllabic pulses and dynamic stress, both typical of English, are directly related to the behaviour of the muscles which activate this mechanism.

2. The vibrator mechanism produces necessary vibrations to make a sound. From the lungs through the wind-pipe the air-stream passes to the upper stages of the vocal tract. First of all it passes to the larynx – a valve made of cartilage, containing the vocal cords – two small lumps of muscular tissue positioned across each other with a small span between them. The male larynx is bigger than the female. There is a complex set of muscles inside the larynx, that can open and close the vocal cords or change their length and tension.

The function of the vocal cords consists in their role as a vibrator set in motion by the air-stream sent by the lungs. It is called termed phonation. These rapid vibrations that average about 1200 times per second in men and around twice that figure in women produce what is called "voice". It is not the voice in its popular meaning, it is more of a buzz one can hear and feel in vowels and some consonants. The work of this mechanism results in "voicedness/voicelessness" of the sound. The typical speaking voice of a woman is higher than that of a man because the vocal cords of a woman vibrate about twice as frequently as those of a man. This is physiologically determined by the length of the male and female vocal tracts.

At least two actions of the vocal cords as a vibrator should be mentioned. The opening between the vocal cords is known as the glottis. When the glottis is tightly closed and the air is sent up below it the glottal stop is produced. It often occurs in English when it reinforces or even replaces [p], [t], or [k] or even when it precedes the energetic articulation of vowel sounds. The most important speech function of the vocal cords is their role in the production of voice. The effect of voice is achieved when the vocal cords are brought together and vibrate when subjected to the pressure of air passing from the lungs. This vibration is caused by compressed air forcing an opening of the glottis and the following reduced air-pressure permitting the vocal cords to come together again. The

height of the speaking voice, its pitch, depends on the frequency of the vibrations. The more frequently the vocal cords vibrate the higher the pitch is. Longer and wider vocal folds produce slower vibrations – lower frequency, hence perceived as lower pitch. We are able to vary the rate of the vibration thus producing modifications of the pitch component of intonation. More than that, we are able to modify the size of the air-stream which escapes at each vibration of the vocal cords that is we can alter the amplitude of the vibration which causes changes of the loudness of the sound heard by the listener.

The part above the larynx is called the vocal tract.

3. The resonator mechanism is responsible for modifications of the "voice" – buzz produced by the previous mechanism. From the larynx the air-stream passes to the pharynx and then to either of the supraglottal cavities that are: the mouth and the nasal cavities. Usually in neutral position when no one is speaking the soft palate remains lowered. When speeh production starts, the soft palate functions as railway point`s mechanism: it can block the airstream and redirect it to either the mouth or the nasal cavity. These cavities act as resonator: shapes of these cavities modify the note produced in the larynx thus giving rise to particular speech sounds. Within these cavities the amount of voice and noise produced by obstacles within the resonator mechanism changes.

4. The obstructor mechanism is involved in further modification of "voice". The shape and the volume of the nasal and mouth cavities are modified by obstructors – articulators which comprise the obstructor mechanism. The obstructor mechanism includes active and passive articulators (as shown in Figure 10). Active articuculators themselves form different obstructions to the air-stream, passive/fixed modifiers are used to form the obstructions and they do not move or transform.

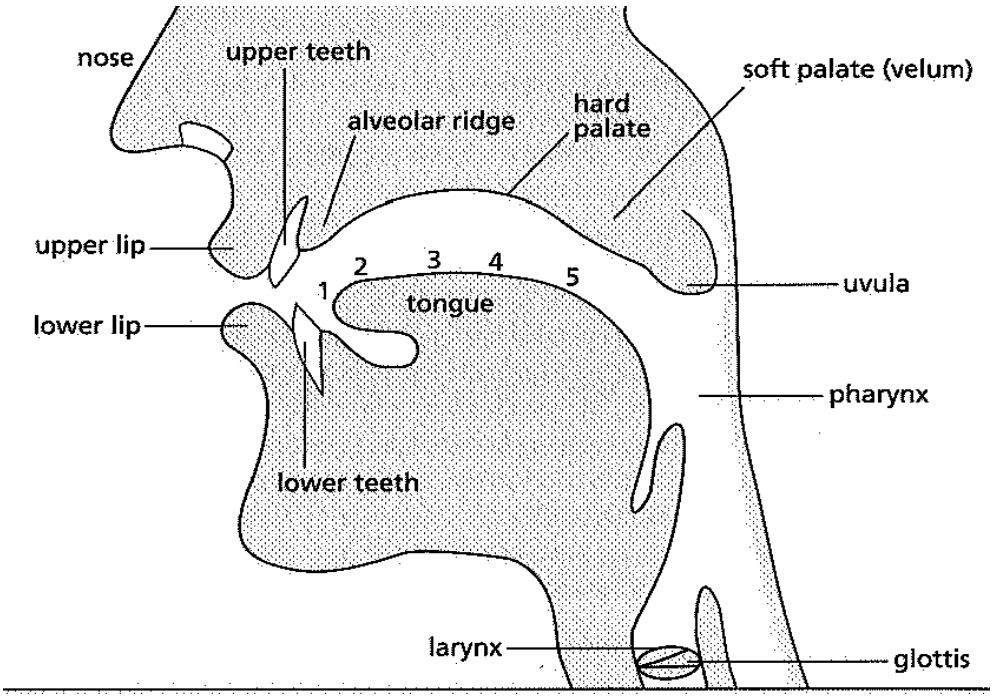


Fig. 10. Schematic positions of active and passive obstructors/articulators

Active articulators are *the tongue (1- tip, 2- front, 3- central part, 4- back, 5- root), the lips, the lower jaw, the soft palate, the uvula*. Passive/fixed articulators are *the hard palate, the teeth, and the upper jaw*. All possible movements of the articulators can be seen in Figure 11.

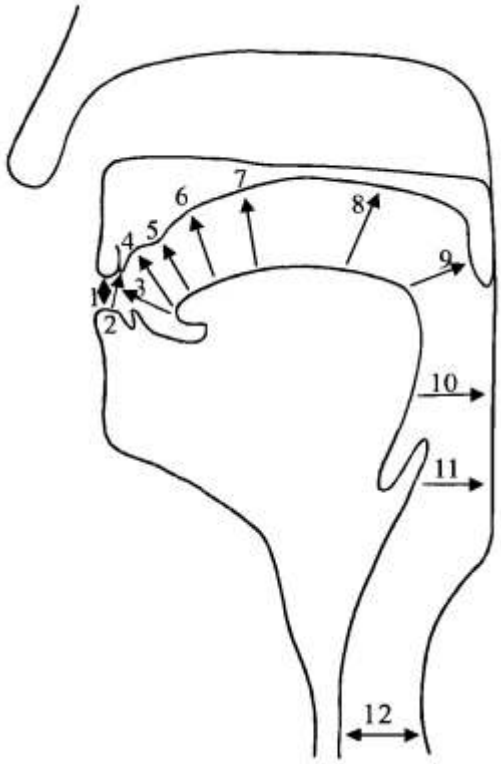


Fig. 11. Movement of articulators

Table 2 shows articulatory characteristics sounds acquire through the work of active and passive articulators.

Table 2 — Articulatory properties of sounds according to the articulators

	Place of articulation	Active articulator	Passive articulator
1	Bilabial	Lower lip	Upper lip
2	Labiodental	Lower lip	Upper teeth
3	Interdental	Tongue tip	Teeth
4	Dental	Tongue tip	Behind top teeth
5	Alveolar	Tongue tip	Alveolar ridge
6	Postalveolar	Tongue blade	Behind alveolar ridge
7	Palatal	Tongue front	Hard palate
8	Velar	Tongue back	Front of soft palate; velum
9	Uvular	Tongue back	Back of soft palate; uvula
10	Pharyngeal	Tongue root	Back of pharyngeal wall
11	Epiglottal	Vocal folds	Back of pharyngeal wall

Versatility of the articulators defines the specific character of the sound system of a particular language. This specific character is termed the *organic basis of the language*. *The organic basis of the language* is called *the setting* – the long-term muscular adjustment of the speaker`s speech apparatus. It defined the manner of speech – accent. *Setting* may vary not only between languages, but also among the varieties of one language. Sound variation conditioned by the setting is continuous, recurrent during speech of the same language or dialect group, so it is not stricktly individual. Sound peculiarities of the English language are as follow:

Consonants:

– most English consonants are alveolar-apical;

– there are no palatalized consonants in the English language;

– sounds [ʃ, ʒ, ʧ, ʤ] are articulated with ‘trumpet-shaped’ protrusion;

– voiceless consonants require larger amount of air than voiced;

Vowels:

– long English vowels are monophthongs;

– sounds [w, ɔ:] are labialized, produced with lip rounding and protrusion;

– neutral position of the mouth implies lax muscles with loose spreading and relaxed corners;

– the back of the tongue is active only for back vowels and velar consonants.

Acquisition of pronunciation of a foreign language involves learning how to produce a wide range of complex and subtle distinctions which relate sound to meaning at several different levels. Articulatory, interactional, and cognitive processes are equally involved.

2. The acoustic aspect of a speech sound deals with a complex of acoustic effects and their physical properties. It represents the third stage of speech productions. It is a physical phenomenon describing moving matter and energy of the sound wave. The physical (acoustic) properties of speech sounds consist of: 1) frequency measured in Hertz (Hz), 2) intensity (decibels (dB), 3) duration (seconds (sec). Force of the voice impulse is deretmined pro rata: the more intensive the impulse is, the greater the air pressure and the vocal fold tension becomes. Voice is a complex unity that can be represented as the sum of harmonics – simple sinusoidal waves. The first of such waves (F_o) is equal to the frequency of vocal folds` vidration. Other harmonics are called overtones. F_o is relevant for a number of voice characteristics modified by intonation, emotional or physical state of the speaker. F_o range is about 1-2 octaves. Typical F_o for male voices is about 120-130 Hz, the range being 80-200 Hz. Typical F_o for female voices 260 Hz, the range being 150-400 Hz. F_o range for children`s voices depends on the age and can vary from 200 to 500 Hz.

3. The auditory/sound-perception aspect involves the mechanism of hearing. It represents the fourth stage of sound production. It is a kind of psychological mechanism which (i) reacts to the physical properties of speech sounds, (ii) selecting from a great amount of information only the one which is linguistically relevant. Human hearing mechanism is presented in Figure 12.

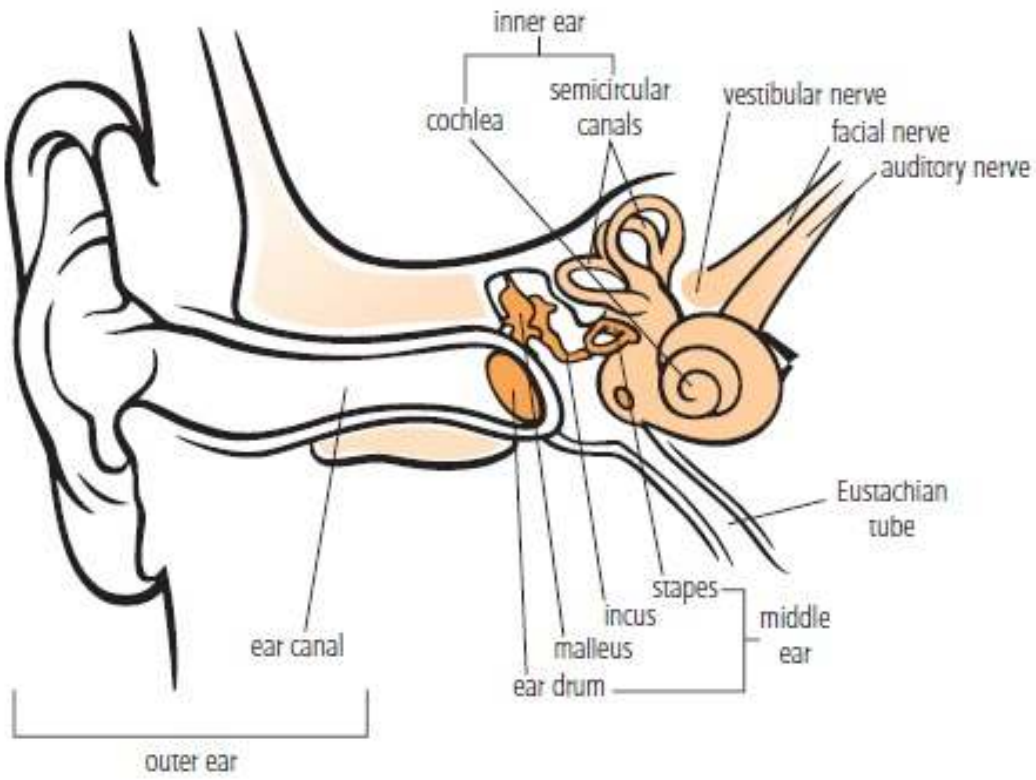


Fig. 12. Human ear

Speech perception goes through 4 stages (Figure 13).

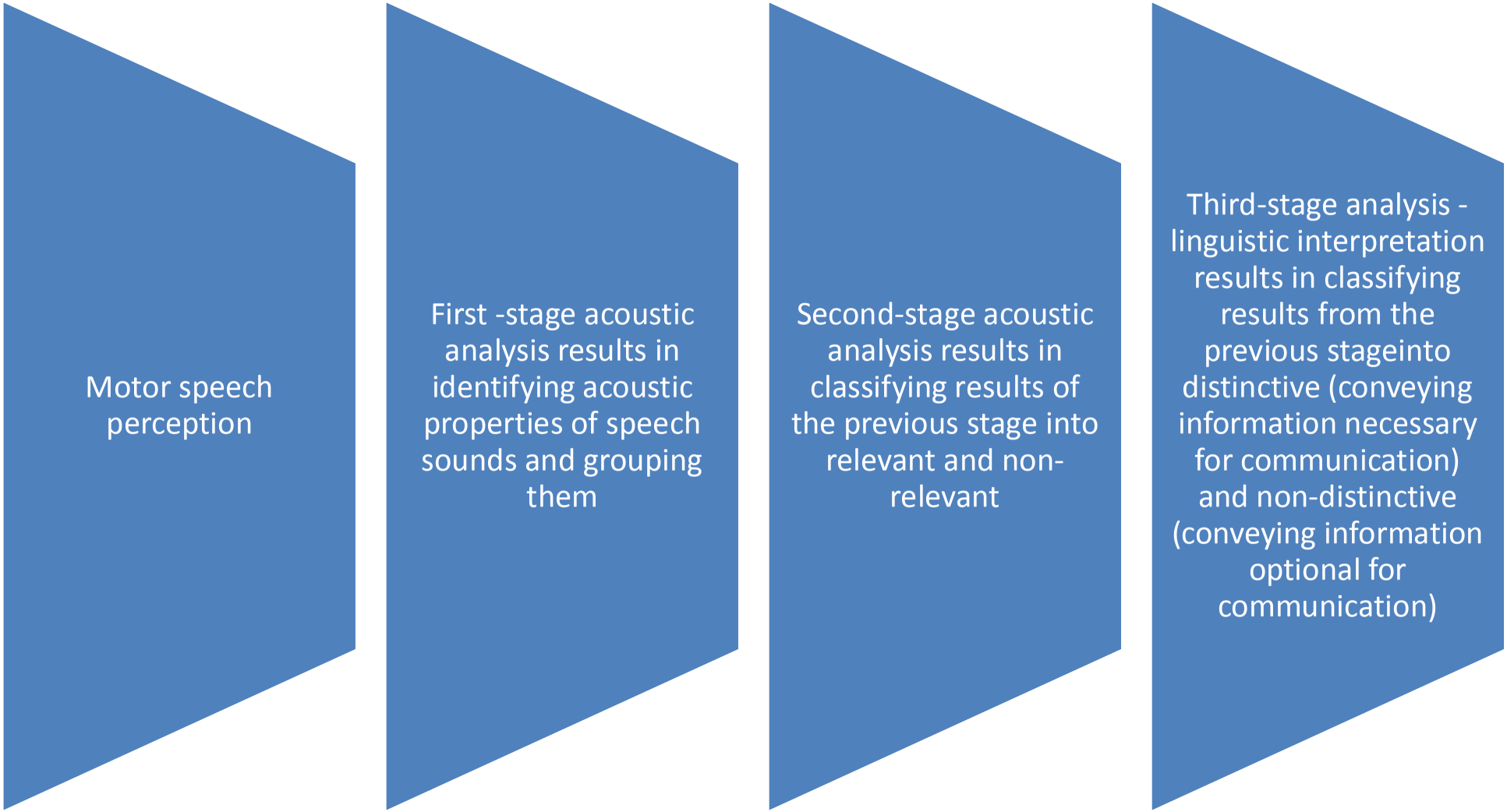


Fig. 13. Stages of speech perception

Human ear outer tract is on average 2.5 cm long, and it acts as a resonator amplifying sound frequencies about twice. Human ear is capable of perceiving very fine distinctions of acoustic properties: pitch (up to 1-4 Hz), intensity (0.3-0.7 dB) and duration (<150 mlsec). Research shows that human ear can distinguish around 300 000 variants of sounds different in intensity and pitch characteristics.

Both acoustic and auditory aspects are actualized in a set of correlated characteristics (as presented in Table 3).

Table 3 — Correlated acoustic and auditory characteristics of speech sounds

Characteristics	Acoustic characteristics	Auditory characteristics
Temporal characteristics.	Duration.	Length.
Dynamic characteristics.	Intensity.	Loudness.
Pitch characteristics.	Frequency.	Pitch.
Tamber characteristics.	Formants.	Overtones.

Correlation between acoustic and auditory sound characteristics is expressed through perception thresholds. *Duration (acoustic) – length (auditory)* correlation is expressed through modifications of duration/length which indicate emotional state of the speaker at the moment of speech, reflect the conditions of communication situations and differentiate meanings of words. Length defines another temporal feature – the tempo of speech. Three levels of speech tempo are identified: 1) slow tempo (1-4 syllables per second), 2) normal tempo (4-7 syllables per second), 3) quick tempo (7 and more syllables per second). The threshold is 12 syllables, beyond which the listeners do not distinguish meaningful segments. Average number of sounds pronounced per second at normal tempo is 14-18.

Intensity/loudness points out the relative prominence of a sound in comparison to other sounds in the same sound chain. Its communicative function is to indicate the speaker`s emotional state or attitude to the subject of speech. The loudness of usual speech varies from 45 to 70 dB. The limit of loudness is at 120-130 dB at which point the sound starts to cause physical pain (Figure 14).

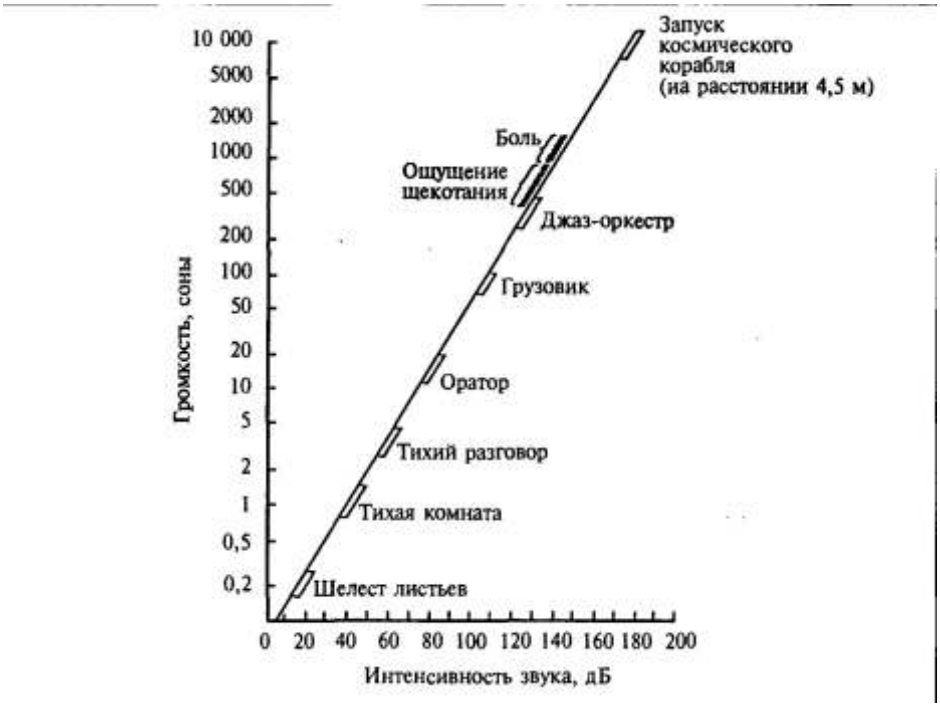


Fig. 14. Average loudness of different noises

Frequency/pitch is responsible for two voice characteristics: tone and tamber. Tone can be identified as 'high' or 'low'. The ability of the human ear to distinguish harmonics of the sound lowers as the frequency of the harmonics rises. In communication pitch is responsible for expression of a number of communicative meanings including but not restricted to emotional state/attitude of the speaker (happy/sad/annoyed), communicative message (request/invitation).

Every time we speak or listen to somebody else`s speech, we perceive an ever-changing pattern of sounds. Even when produced by the same speaker, speech sounds are not the same. Nevertheless, it should be borne in mind that there always is some invariance that is provided by the articulatory stability of the sound. This invariance is correlated with the communicative necessity. Of the complete record of all vocal effects only those that are important for differentiating meanings are sorted out in the last stage of speech perception. This is where we come to the first stage of sound production. Actually, sound production is a cyclic process, because the last stage of speech perception involves linguistic analysis – dividing perceived acoustic clues into distinctive

(conveying information necessary for communication) and non-distinctive (conveying information optional for communication).

4. The functional (linguistic, social, phonological) aspect involves identifying and classifying acoustic and correlating auditory features of sound chain segments into capable of differentiating meanings and not capable. A spoken message is, in effect, a succession of the smallest, further indivisible segments which are easily singled out in the flow of speech as separate discrete elements – speech sounds. They possess the segmental/phonemic component – the first and basic component of the phonic substance of language. The segmental/phonemic component has a systemic character. It is manifested in the following ways (as presented in Figure 15).

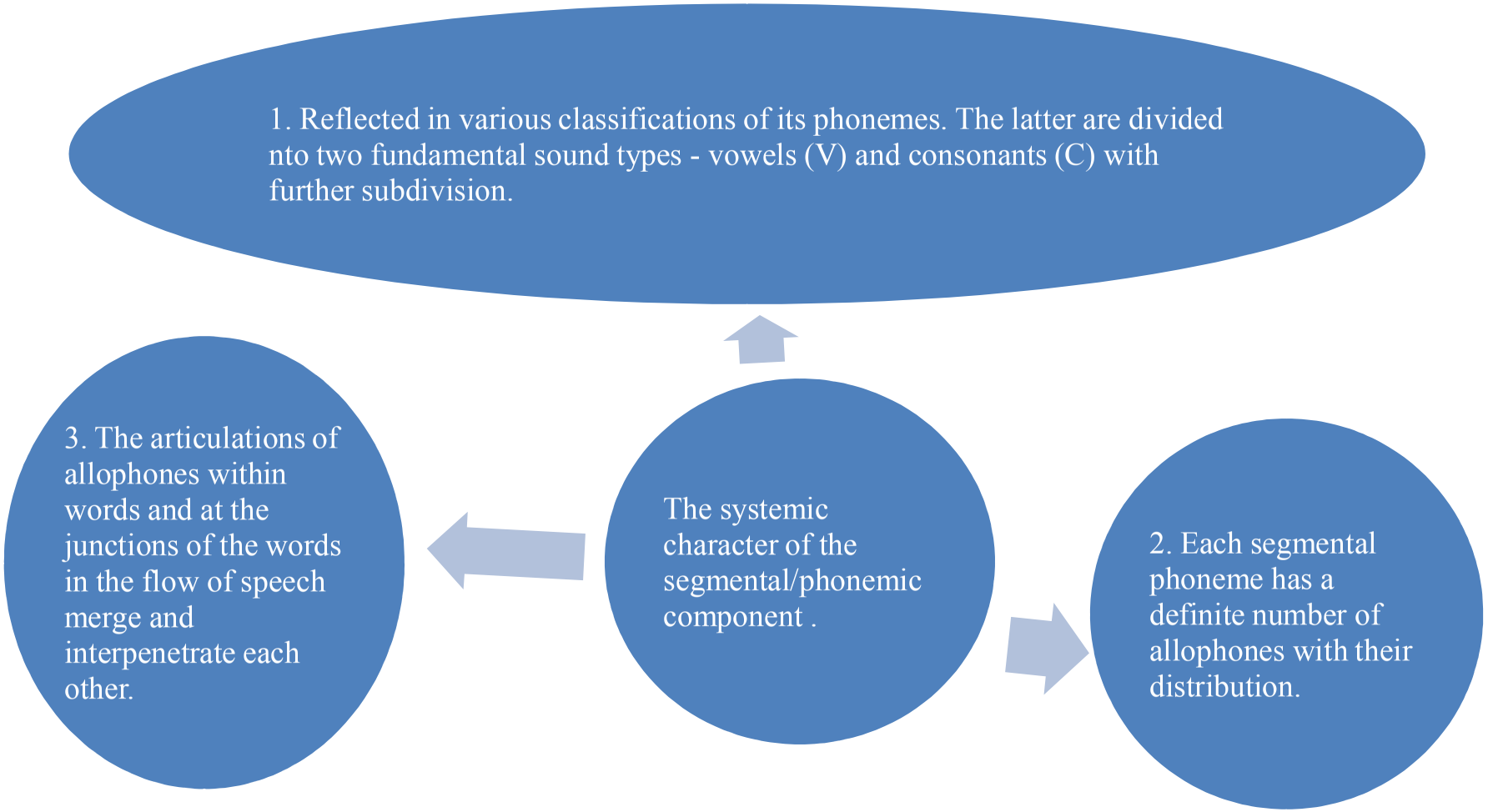


Fig. 15. The systemic character of segmental component of the language

So the segmental component of language phonic structure can be described as:

1) A system of consonantal and vowel phonemes.

2) As the distribution of segmental phonemes of a language means the occurrence of the allophones of a phoneme in different positions in a word, typical combinations or sequences of sounds are governed by certain regulations and occur in definite positions. And we discuss certain patterns of allophones and their distribution

3) The influence the allophones within words and at the junctions of the words in the flow of speech cause onto each other, there are specific rules for joining the sounds together in every language. These rules affect articulatory V+C, C+C, and V+V transitions. A set of methods of joining speech sounds/allophones together in words and at their junctions represents coarticulatory/adjustment phenomena.

The functional/linguistic/social aspect has been defined that because of the role the sounds of language play in its functioning as medium of human communication. They help to differentiate between meanings expressed by sound sequences of the same or almost the same content. These units are defined as *phonemes*. This aspect of the speech sound will be further discussed in connection with the notion of phonemes.

When we talk about the sounds of a language, the term ‘sound’ can be interpreted in two rather different ways. The first one is what we usually name ‘a speech sound’. The second one is a new linguistic term that defines an abstract idea of a speech sound that makes it possible for the speakers of the same language to understand each other – a phoneme. According to the theory involving phonemes any spoken language has a small and relatively fixed set of linguistic units which, when substituted for each other in a given context, may produce tokens with different meanings. These linguistic units are in complex contrastive relations to each other and constitute a phonemic structure of a language. The term ‘phoneme’ is invented to avoid the confusion when talking about different aspects of speech sounds.

A linguist uses two separate terms: ‘phoneme’ is used to mean ‘sound’ in its contrastive sense: *tie – die, seat – seed* and ‘allophone’ is used for sounds

which are variants of a phoneme. Phonemes are abstract representations of those speech sounds which can differentiate the meaning – 'sounds in the mind' (the term suggested by P. Roach) [89; 90]. Each language has its own set of phonemes – the ABC (alphabet) of speech sounds. Realizations of a definite phoneme in definite positions in words are called allophones/variants, 'sounds in the mouth' (the term suggested by P. Roach) [89; 90].

The segmental *phoneme* is the smallest (further indivisible into smaller consecutive segments) language unit (sound type) that exists in the speech of all the members of a given language community as such speech sounds which are capable of distinguishing one word of the same language or one grammatical form of a word from another grammatical form of the same word. The only drawback of this definition is that it is too long and complicated for practical use. The concise form of the definition could be: 'The *phoneme* is a minimal abstract linguistic unit realized in speech in the form of speech sounds (allophones). The *phoneme* is opposable to other phonemes of the same language to distinguish the meaning of morphemes and words'. We can consider the phoneme from the point of view of its aspects as presented in Table 4).

Table 4 — Aspects of the phoneme

The aspect of the phoneme	The function of the phoneme	The environment	Examples
The phoneme is a functional unit.	The phoneme can fulfil the distinctive function: the role of the various components of the phonetic system of the language in distinguishing one morpheme/word/one utterance from another.	The opposition of phonemes in the same phonetic environment differentiates the meaning of morphemes/words/phrases.	*Sai**d** – say**s**, sleep**er** –sleep**y**, **b**ath – **p**ath, li**ght**– li**k**e.* *He was hear**d** badly – He was hur**t** badly.*
The phoneme is abstract.	The phoneme is a functionally relevant set of articulatory features/	Elements stand in contrast to each other, thus becoming mutually exclusive.	
The phoneme is material, real and	The phoneme is realized in speech of all English-speaking people in the form of speech sounds,	The sets of speech sounds (the allophones belonging to the same phoneme) are not identical in their articulatory	*Beds – bets, bad – bat, absorb* [əb-ˈsȯrb, -ˈzȯrb]

objective.	its allophones.	content, though there remains some phonetic similarity between them.	

1. ‘The phoneme is a functional unit.’ The only function this linguistic unit has is to differentiate meanings. They do not describe any of these meanings; they just serve as markers of the difference in meaning occurring when the phonemes are substituted for each other.

2. ‘The phoneme is abstract.’ As it is a functional unit, it exists and can be observed only through performing the function. The abstract nature of the phoneme has given rise to the appearance of transcription – a set of symbols representing speech sounds. The International Phonetic Association (IPA) has given accepted values to an inventory of symbols, mainly alphabetic but with additions (Appendix A). The first type of notation, the broad or phonemic transcription, provides special symbols for all the phonemes of a language. The second type, the narrow or allophonic transcription, suggests special symbols including some information about articulatory activity of particular allophonic features.

The broad transcription is mainly used for practical purposes; the narrow type serves the purposes of research work. The first type was introduced by D. Jones who realized the difference in quality as well as in quantity between the vowel sounds in the words *sit* and *seat*, *pot* and *port*, the neutral vowel and the vowel in the word *earn*. According to D. Jones' notation English vowels are denoted like this: [ɪ] – [iː], [e] – [æ], [ʌ] – [aː], [ɔ] – [ɔː], [ʊ] – [uː], [ə] – [ɜː] [26]. This way of notation disguises the qualitative difference between these vowels, though nowadays most phoneticians agree that vowel length is not a distinctive feature of the vowel, but is rather dependent upon the phonetic context: in such word pairs as *hit – heat, cock – cork, pull – pool* the only difference between the opposed vowels lies in their quality which includes distinctive articulation features. The length of vowels is also subject to historical changes. The narrow or phonetic transcription incorporates as much more

phonetic information as the phonetician desires, or as he can distinguish. It provides special symbols to denote not only the phoneme as a language unit but also its allophonic modifications. The symbol [^{h}] for instance indicates aspirated articulation: [k^{h}eit] – [skeit].

3. 'The phoneme is material, real and objective.' Here we can draw the analogy with cognition. Cognition, though it can not be observed directly, is material, real and objective, because there are material, real and objective entities/actions that can be observed directly. The same with phonemes: they can not be observed directly, but through material units that indicate the change of meanings. These material units are *allophones*. Allophones are arranged into functionally similar groups of sounds, members of which are not opposed to one another, but are opposable to members of any other group to distinguish meanings in otherwise identical phonetic environment. Sounds realized in speech do not correspond exactly to the allophone predicted by this or that phonetic environment, because speech sounds are modified by phonostylistic, dialectal and individual factors. In fact, no speech sounds are absolutely alike. Allophones can be classified as 1) *typical/principal* – the most representative and free from the influence of the neighbouring elements, 2) *positional* – used in a certain position ([l] in English), 3) *combinatory* – undergoing phonetic changes (assimilation/reduction) under the influence of the neighbouring elements.

Through analysis of the allophones we can identify characteristics of a phoneme as a unit. *Allophones of different phonemes* are different in their articulatory content and they are in *contrastive distribution* to each other. *Contrastive distribution* means that they can occur in the same phonetic environment: the same position, the same combination with other speech sounds, but they necessarily mark that the meaning of the token changes as soon as the substitution of the phoneme is done. Thus, allophones of different phonemes possess *distinctive features* that tell them apart from allophones of other phonemes. That is, they are *mutually distinctive*.

Allophones of the same phoneme are not identical in their articulatory content, though there always is an obligatory degree of phonetic similarity between them. They never occur in the same phonetic environment, which means they are in *non-contrastive/complementary distribution*. Allophones of the same phoneme differ from each other and other phonemes by *non-distinctive/redundant features*.

As mentioned above, allophones of the same phoneme have similar phonetic features. This functionally relevant bundle of articulatory features is called *the invariant of the phoneme*. None of the articulatory features that form the invariant of the phoneme can be changed without affecting the meaning. All the allophones of the phoneme [d], for instance, are occlusive, forelingual, lenis. If occlusive articulation is changed for constrictive one [d] will be replaced by [z]: *breed – breeze, deal – zeal*; [d] will be replaced by [g] if the forelingual articulation is replaced by the backlingual one: *dear – gear, day – gay*. The lenis articulation of [d] cannot be substituted by the fortis one because it will also bring about changes in meaning: *dry – try, ladder – latter, bid – bit*.

The definition and function of distinctive and non-distinctive features is given in Figure 16.

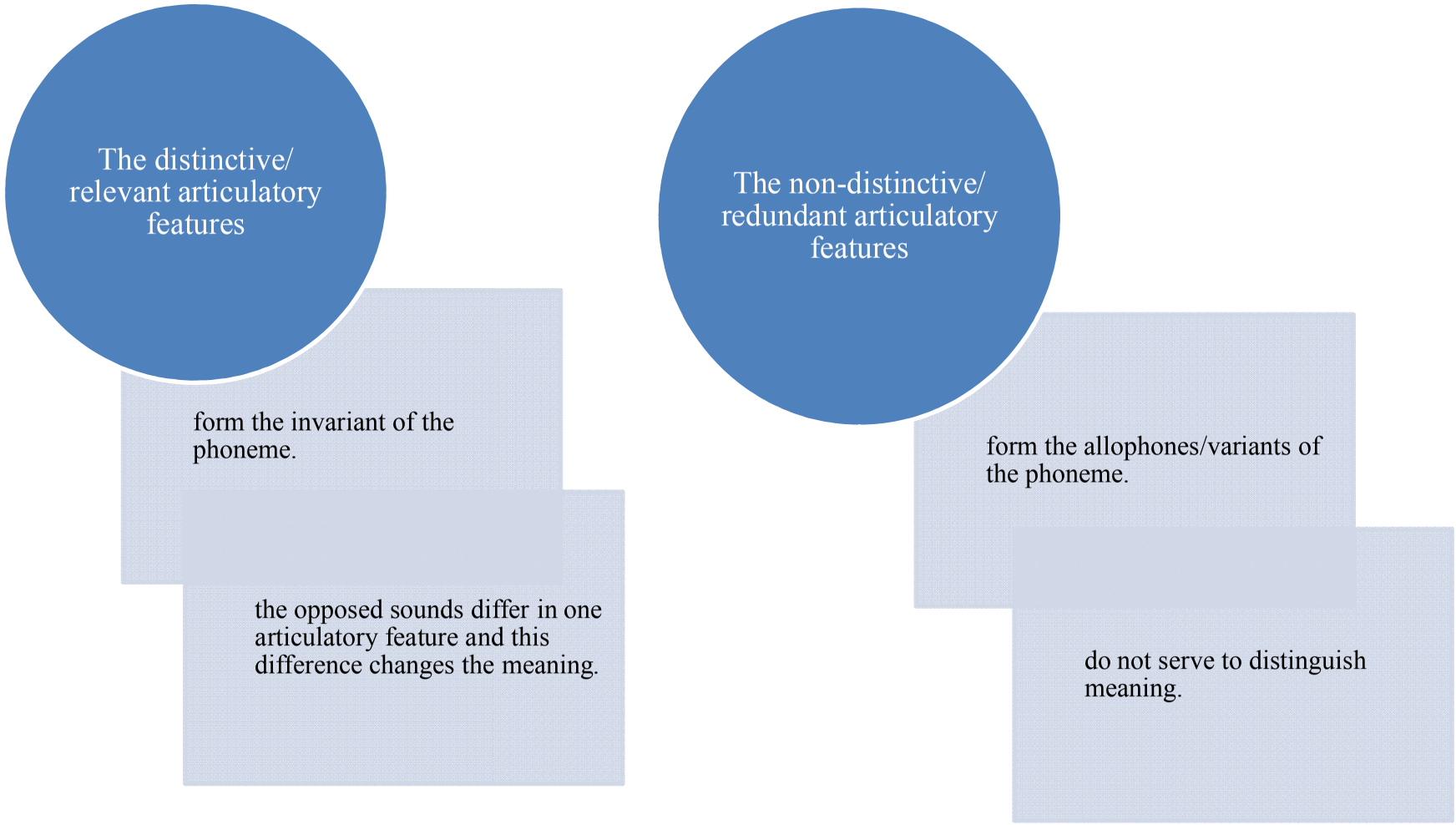


Fig. 16. Distinctive and non-distinctive features of a phoneme

Allophones of the same phoneme usually occur in different positions in the word (in different environments) and hence cannot contrast with each other, nor be used to make meaningful distinctions. For example, the English phoneme [d], when not affected by the articulation of the preceding or following sounds, is a plosive, forelingual apical, alveolar, lenis stop. This is how it sounds in isolation or in such words as *door*, *darn*, *down*, when it retains its typical articulatory characteristics. In this case the consonant [d] is called the principal allophone. At the same time there are quite predictable changes in the articulation of allophones that occur under the influence of the neighbouring sounds in different phonetic situations. Such allophones are called *subsidiary*:

– [d] is slightly palatalized before front vowels and the sonorant [j]: *deal*, *day*, *did*, *did you*;

– [d] is pronounced without any plosion before another stop: *bedtime*, *bad pain*, *good dog*;

– it is pronounced with the nasal plosion before the nasal sonorants [n] and [m]: *sudden, admit*, *could not*, *could meet*; the plosion is lateral before the lateral sonorant;

– [l]: *middle*, *badly*, *bad light*;

– the consonant [d] becomes post-alveolar followed by [r]: *dry*, *dream*;

– the consonant [d] becomes dental followed by the interdental [θ], [ð]: *breadth*, *lead the way*, *good thing*;

– the consonant [d] becomes labialized followed by the labial [w]: *dweller*;

– [d] is partially devoiced in the initial position: *dog*, *dean*;

– [d] is fully voiced in the intervocalic position or when followed by a sonorant: *order*, *leader*;

– [d] is voiceless in the word-final position: *road*, *raised, old*.

Summing up, the definition of the phoneme as a linguistic unit be as follows: ‘The *phoneme* is a minimal abstract linguistic unit – a set of distinctive features – realized in speech in the form of speech sounds (allophones). The *phoneme* is opposable to other phonemes of the same language to distinguish the meaning of bigger language units’.

Allophones of the same phoneme, no matter how different their articulation may be, function as the same linguistic unit. The native speaker is quite readily aware of the phonemes of his language but much less aware of the allophones: it is possible, in fact, that he will not hear the difference between two allophones like the alveolar and dental consonants [d] in the words *bread* and *breadth* even when a distinction is pointed out; a certain amount of ear-training may be needed. The reason is that the phonemes differentiate words like *tie* and *die* from each other. Allophones, on the other hand, have no such function. The articulatory features which do not serve to distinguish meaning are called non-distinctive, irrelevant or redundant. It is impossible in English to oppose an aspirated [p] to a non-aspirated one in the same phonetic context to distinguish meanings. That is why aspiration is a non-distinctive feature of English consonants. If an allophone of some phoneme is replaced by an allophone of a different phoneme the mistake is called phonological, because the meaning of the word is inevitably affected: *beat – bit*. If an allophone of the phoneme is replaced by another allophone of the same phoneme the mistake is called phonetic. It happens when the invariant of the phoneme is not modified and consequently the meaning of the word is not affected: when the vowel [i:] is fully long in such a word as *sheep* the quality of it remaining the same, the meaning of the word does not change.

2 Methods of Phonological analysis

Views of the phoneme seem to fall into four main classes (as presented in Table 5).

Table 5 — Major theories of the phoneme

The theory	The phoneticians	The definition of the phoneme	The statement
The 'mentalistic' or 'psychological' view	I.A. Baudouin de Courtenay, E.D. Sapir, M. Tatham.	The psychological image of a sound	Regards the phoneme as an ideal 'mental image' or a target at which the speaker aims. The speaker deviates from the ideal sound partly because an identical repetition of a sound is next to impossible and partly because of the influence exerted by neighbouring sounds. According to this conception allophones of the phoneme are its varying materializations.
The 'functional' view	N. Trubetskoy, L. Bloomfield, R. Jakobson, M. Halle.	The functional unit, which function is to differentiate meanings. The view gave rise to terms 'phonology', 'phonemics'.	Regards the phoneme as the minimal sound unit by which meanings may be differentiated without much regard to actually pronounced speech sounds. Meaning differentiation is taken to be a defining characteristic of phonemes. The functional view of the phoneme is concerned with relationships between contrasting sounds in a language. Its special interest lies in establishing the system of distinctive features of the language concerned. Phonetics is limited in this case with the precise description of acoustic and physiological aspects of physical sounds without any concern to their linguistic function.
The 'abstract' view of the phoneme	L. Hjelmslev, H.J. Uldall, K. Togby (Copenhagen Linguistic Circle)	The independent, abstract concept of a sound.	Regards phonemes as essentially independent of the acoustic and physiological properties associated with speech sounds. The view regards the phoneme as an abstract conception, existing in the human mind. Speech sounds exist as phonetic manifestations of these abstract conceptions.
The 'physical' view	D. Jones, B. Bloch, G. Trager	The unit which unites several variants of a sound with similar acoustic and articulatory features.	Regards the phoneme as a 'family' of related sounds satisfying certain conditions, notably: 1. the various members of the 'family' must show phonetic similarity to one another, be related in character; 2. no member of the 'family' may occur in the same phonetic context as any other.

The aim of the phonological analysis is, firstly, to determine which differences of sounds are phonemic (relevant for the differentiation of the phonemes) and which are non-phonemic and, secondly, to find the inventory of the phonemes of this or that language. A number of principles have been established for ascertaining the phonemic structure of a language. For an unknown language the procedure of identifying the phonemes of a language as the smallest language units has several stages.

1. The first step is to determine the minimum recurrent segments (segmentation of speech continuum) and to record them graphically by means of allophonic transcription. To do this an analyst gathers a number of sound sequences with different meanings and compares them. For example, the comparison of [stik] and [stæk] reveals the segments (sounds) [i] and [æ], comparison of [stik] and [spik] reveals the segments [st] and [sp] and the further comparison of these two with [tɪk] and [taek], [sik] and [sæk] splits these segments into smaller segments [s], [t], [p]. If we try to divide them further there is no comparison that allows us to divide [s] or [t] or [p] into two, and we have therefore arrived at the minimal segments. From what we have shown it follows that it is possible to single out the minimal segments opposing them to one another in the same phonetic context or, in other words, in sequences which differ in one element only.

2. The next step in the procedure is to arrange sounds into functionally similar groups. There are two most widely used methods – the distributional method and the semantic method. The distributional method is mainly used by structuralists who consider grouping all the sounds pronounced by native speakers into phonemes according to the two laws of phonemic and allophonic distribution (as shown in Figure 17).

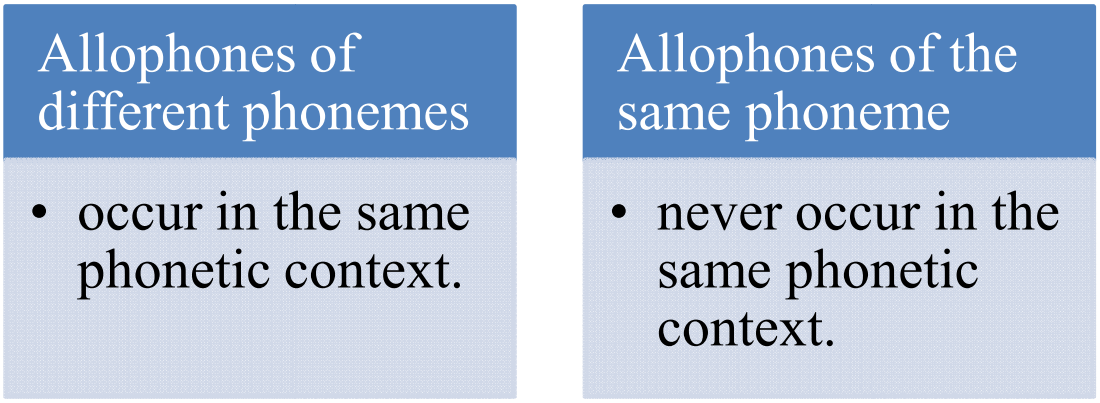


Fig. 17. Laws of phonetic and phonemic distribution

The sounds of a language combine according to a certain pattern characteristic of this language. Phonemic opposability depends on the way the phonemes are distributed in their occurrence. That means that in any language certain sounds do not occur in certain positions. If more or less different sounds occur in the same phonetic context they should be allophones of different phonemes. In this case their distribution is contrastive. If more or less similar speech sounds occur in different positions and never occur in the same phonetic context they are allophones of one and the same phoneme. In this case their distribution is complementary.

Still there are cases when two sounds in complementary distribution are not referred to the same phoneme. This is the case with the English [h] and [n]. Sound [h] occurs only initially or before a vowel while [n] occurs only medially or finally after a vowel and never occurs initially. In such case the method of distribution is modified by addition of the criterion of phonetic similarity/dissimilarity. The decisions are not made purely on distributional grounds. Articulatory features are taken into account as well. There is a third possibility, when the sounds both occur in a language but the speakers are inconsistent in the way they use them. These cases represent free variation of a single phoneme. Free variants can be explained as dialectal/sociodialectal variants of pronunciation.

The semantic method applied for phonological analysis is used to determine the phonemic status of sounds which are not easily identified from phonological point of view. This procedure is called the commutation test. It consists in finding minimal pairs of words and their grammatical forms. The method is based on the distinctive function of the phoneme and suggests systematic substitution of the sound for another in order to establish cases where the phonetic context remains the same but the substitution leads to a change of meaning. The change of meaning is stated with the help of an informant. For example, an analyst arrives at the sequence [pin]. He substitutes the sound [p] for the sound [b] or [s], [d], [w]. The substitution leads to the change of meaning: *pin, bin, sin, din, win*. This would be a strong evidence that [p], [b], [s], [d], [w] can be regarded as allophones of different phonemes.

To establish the phonemic structure of a language it is necessary to set up the system of linguistic oppositions. Prof N. Trubetskoy proposed the whole system of oppositions, classifying them according to three criteria (as presented in Figure 18) [39].

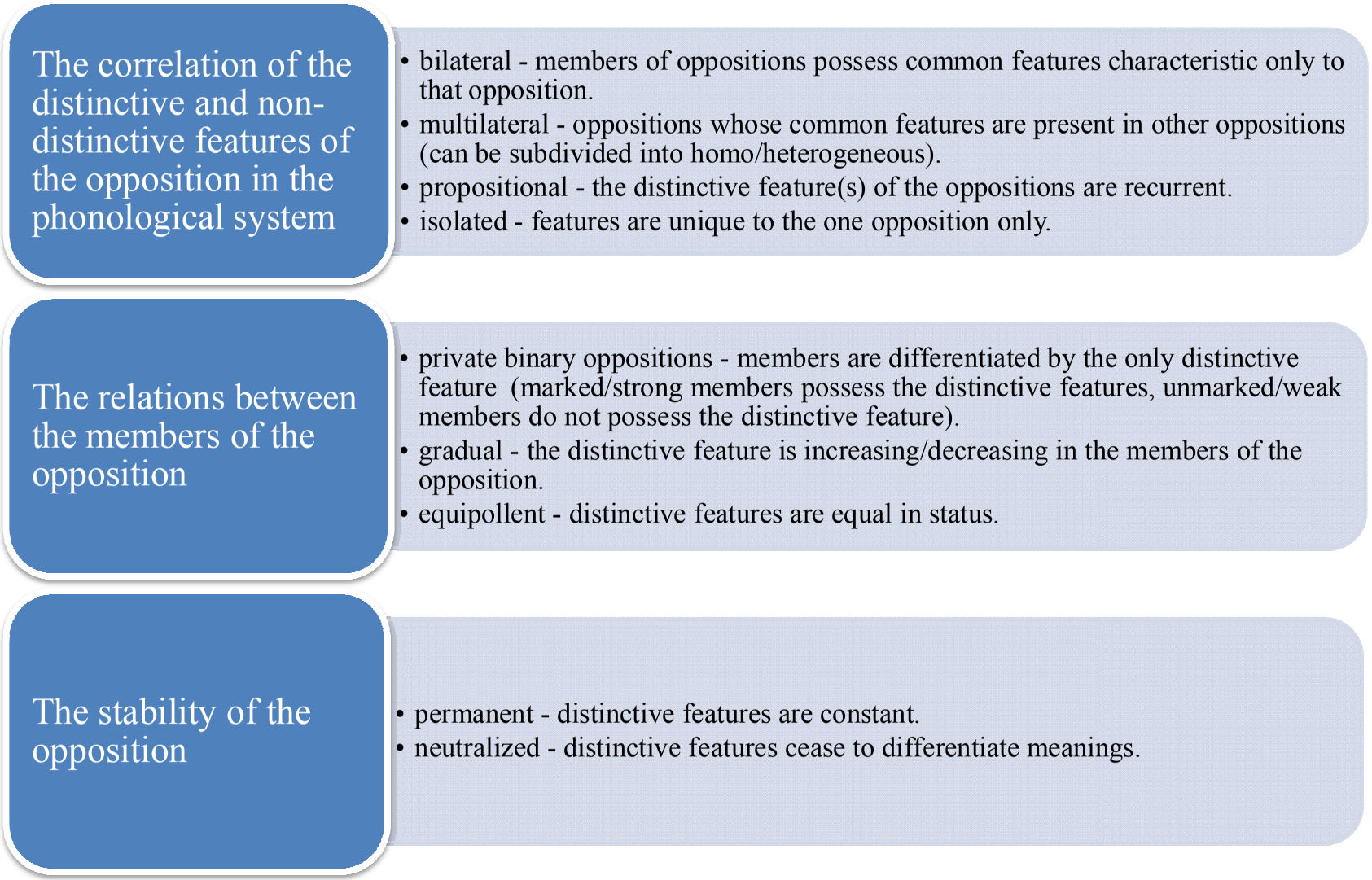


Fig. 18. Criteria of classification of oppositions

Basically the opposition used to describe linguistic units is private binary opposition. It is used because it lets the linguists to apply the formal criterion to the classification of language units and the relations between them. The opposed unit which possesses the distinctive feature is termed ‘marked’ (or strong) and the unit without this feature is called ‘unmarked’ (or weak). Unlike in the equipollent opposition the elements of the private binary opposition are identified with regard to the presence or absence of the distinctive feature, not the feature itself, thus they appear as ‘feature’ : ‘non-feature’: /m/ : /n/ are identified as labial : nonlabial, not labial : nasal. It corresponds to the cognitive processes in the human mind, when basic recognition is built on distinction between apple – non-apple, red – not red. Later, with the growth, development and increasing complexity of the cognitive processes, binary opposition evolves into gradual multilateral oppositions.

Topic 3 ENGLISH CONSONANTS AND VOWELS, THEIR MODIFICATIONS

1. The System of English Phonemes. Consonants. General Characteristics of Consonants

2. The System of English Phonemes. Vowels. General Characteristics of Vowels

3. Modifications of Consonants and Vowels in Connected Speech

1 The System of English Phonemes. Consonants. General Characteristics of Consonants

The system of English phonemes is represented in International Phonetic Association charts (Appendix A Figure 1) [73-76; 93; 105]. English consonats are shown in Figures 2-3 (Appendix A).

If speech sounds are studied from the point of view of their production by human organs of speech, it is the differences and similarities of their articulation that are in the focus of attention. A speech sound is produced as a result of definite coordinated movements and positions of speech organs, so the articulation of a sound consists of a set of articulatory features. Grouping speech sounds according to their major articulatory features is called an articulatory classification. According to the specific character of the work of the speech organs, sounds in practically all the languages are subdivided into two major subtypes: vowels (V) and consonants (C). There are 1) *articulatory*, 2) *acoustic* and 3) *functional* differences between V and C.

1) The most substantial articulatory difference between Vs and Cs is that in the articulation of a V the air passes freely through the mouth cavity, while in making a C an obstruction is formed in the mouth cavity and the airflow exhaled from the lungs meets a narrowing or a complete obstruction formed by the speech organs.

2) Consonantal articulations are relatively easy to feel, and as a result are most conveniently described in terms of place and manner of articulation.

3) Vs have no place of obstruction, the whole of speech apparatus takes place in their formation, while the articulation of consonants can be localized, an obstruction or narrowing for each C is made in a definite place of the speech apparatus.

4) The V quality depends on the volume and shape of the mouth resonator, as well as on the shape and the size of the resonator opening. The mouth resonator is changed by the movements of the tongue and the lips.

5) The quality of Cs depends on the kind of noise that results when the tongue or the lips obstruct the air passage. The kind of noise produced depends in its turn on the type of obstruction, on the shape and the type of the narrowing. The vocal cords also determine the quality of Cs.

6) From the acoustic point of view, Vs are called the sounds of voice, they have high acoustic energy, Cs are the sounds of noise – they have low acoustic energy

7) Functional differences between Vs and Cs are defined by their role in syllable formation: Vs are syllable-forming elements, Cs are units which function at the margins of syllables, either singly or in clusters.

These differences make it logical to consider each class of sounds independently.

Consonants as phoneme representatives can be defined with the help of four main distinctive features pertaining to producing noise: I) *type of obstruction and manner in which the obstruction is overcome*; II) *place of obstruction*; III) *work of the resonator*; IV) *quantity of speech energy and degree of muscular tension in sound production*.

I. Type of obstruction and manner in which the obstruction is overcome.

1. Complete obstruction to the air-stream: *occlusives* are divided into *plosives (stops)*, in the production of which a complete obstruction is formed and broken; *nasal sonorants*, in the production of which a complete obstruction is formed and stays unbroken.

2. Incomplete obstruction to the air-stream: *constrictives*, in the production of which an incomplete obstruction is formed; *fricative* sonorants, in the production of which an incomplete obstruction is formed.

The phonological relevance of this feature could be exemplified in the following oppositions:

[ti] – [si]	tea – sea (occlusive – constrictive)
[si:d] – [si:z]	seed – seas (occlusive – constrictive)
[pul] – [ful]	pull – full (occlusive –constrictive)
[bəut] – [vəut]	boat – vote (occlusive –constrictive)

1. Complete obstruction is formed and partially broken in the production of the sound: *affricates*.

2. Complete obstruction is regularly formed and broken in the production of the sound: *trills*. There are no 'trills' in English, there is such a sound in Russian [p].

II. Place of obstruction. The place of articulation is determined by the active organ of speech against the point of articulation. According to this principle the English consonants are classed into: *labial*, *lingual*, *glottal*. The class of labial consonants is subdivided into: a) *bilabial*; b) *labio-dental*; and among the class of lingual consonants three subclasses are distinguished; they are: a) *forelingual*, b) *mediolingual* and c) *backlingual*. In the system of English consonants there could be found oppositions based on the active organ of speech and the place of obstruction.

[pæn] – [taen]	pan – tan (bilabial – forelingual)
[wai] – [lai]	why – lie (bilabial – forelingual)
[weil] – [jeil]	weil – yale (bilabial – mediolingual)
[pik] – [kik]	pick – kick (bilabial – backlingual)
[les] – [jes]	less – yes (forelingual – mediolingual)
[dei] – [gei]	day – gay (forelingual – backlingual)
[sai] – [hai]	sigh – high (forelingual – glottal)
[fi:t] – [si:t]	feet – seat (labio-dental – forelingual)

III. Work of the resonator. According to the position of the soft palate consonants can be *oral* and *nasal*. There are relatively few consonantal types in English which require the lowered position of the soft palate. They are the *nasal occlusive sonorants* [m], [n] and [ŋ]. They differ from *oral plosives* in that the

soft palate is lowered allowing the escape of air into the nasal cavity. *Orals*: sounds in the production of which the air escapes through the mouth. *Nasals*: sounds in the production of which the softpalate is lowered, and the air escapes through the nose.

IV. Lenis (weak) and fortis consonants. *Lenis* Cs are characterized by less energy and muscular tension than the *fortis* Cs. All voiced consonants are weak (*lenis*) and all voiceless consonants are strong (*fortis*). That brings about the main phonetic difference between English and Russian – no devoicing of Cs in word-final position.

2 The System of English Phonemes. Vowels. General Characteristics of Vowels

The system of English vowel phonemes is shown in Figure 4 (Appendix A). The quality of a vowel is known to be determined by the size, volume, and shape of the mouth resonator, which are modified by the movement of active speech organs: the tongue and the lips. Besides that, the quality of a vowel depends on a lot of other articulatory characteristics, such as the relative stability of the tongue, the position of the lips, physical duration of the segment, the force of articulation, the degree of tenseness of speech organs. So vowel quality could be thought of as a set of articulatory features which are sometimes intricately interconnected and interdependent. Such features as the vowel end type, the length of the vowel, its tenseness are easily neutralized so they cannot be considered distinctive. Another property of English vowel sounds – checkness – depends on the character of the articulatory VC transition; as a result all English short vowels are checked when stressed. The degree of checkness may vary with regard to the following consonant. Before fortis voiceless consonant it is more perceptible than before a lenis voiced consonant or sonorant. All long vowels are free. The analysis of the articulatory constituents of the quality of vowels

allowed phoneticians to suggest the criteria which are conceived to be of great importance in the description of vowels. Distinctive features to be considered are as follow: I. Stability of articulation; II. Tongue position; III. Lip position.

I. Stability of articulation. It specifies the actual position of the articulating organ in the process of the articulation of a vowel. There are two possible varieties: a) the tongue position is stable; b) it changes – the tongue moves from one position to another. In the first case the articulated vowel is relatively pure, in the second case a vowel consists of two clearly perceptible elements. There exists in addition a third variety, an intermediate case, when the change in the tongue position is fairly weak. So according to this principle the English vowels are subdivided into: 1) *monophthongs*; 2) *diphthongs*; 3) *diphthongoids*.

Diphthongs are complex entities just like affricates, so essentially similar complications are known to exist with them. V.A. Vasilyev and L.R. Zinder consider them single phonemes on the basis of articulatory, morphonological and syllabic indivisibility and the criteria of duration and commutability [20; 99]. It could be proved that there can be made neither morpheme nor syllable boundary to separate the nucleus and the glide in the diphthong/triphthong: [ˈsei-iŋ] *saying*, [ˈkrai-iŋ] *crying*, [in-ˈʤɔ-iŋ] *enjoying*, [ˈslɜu-ə] *slower*, [ˈplɜu-iŋ] *ploughing*, [ˈkliə-rə] *clearer*, [ˈɛə-riŋ] *airing*, [ˈpuə-rə] *poorer*. The present study shows that the length of diphthongs is the same as that of the English long monophthongs in the same phonetic context: [sait – si:t], [кɜut – kɔ:t]. The commutation test proves the monophonemic status of diphthongs because any diphthong could be commutated with practically any vowel:

[bait – bit] *bite – bit*

[bait–bʌt] *bite – but*

[bait – bɔ:t] *bite – bought*

II. Tongue position. While producing speech sounds the tongue moves in two directions. So, the position of the tongue in the mouth cavity is characterized from two aspects: the horizontal and vertical movements.

According to the horizontal movement Russian phoneticians distinguish five classes of English vowels. They are presented in Table 6.

Table 6 — Vowels according to the tongue position

Tongue position	Vowels
front	[iː], [e], [ei], [æ], [ɛ(ə)]
front-retracted	[ɪ], [ɪ (ə)]
central	ʌ] [ɜː] [ə], [ɜ(u)], [ɛ(ə)]
back	[ɒ], [ɔː], [uː], [aː]
back-advanced	[u], [u(ə)]

British phoneticians do not single out the classes of front-retracted and back-advanced vowels. So both [iː] and [i] vowels are classed as *front*, and both [uː] and [u] vowels are classed as *back*.

As to the tongue position in its vertical movement British scholars distinguish three classes of vowels: *high* (or *close*), *mid* (or *half-open*), and *low* (or *open*) vowels. Russian phoneticians made the classification more detailed distinguishing two subclasses in each class, *broad* and *narrow* variations of the three vertical positions of the tongue. Thus the following six groups of vowels are distinguished (as shown in Table 7).

Table 7 — Adjusted classification of English vowels according to the tongue position

Tongue position	Variations of the vertical position of the tongue	Vowels
close	*narrow*	[iː] [uː]
	broad	[i], [u], [i(ə)], [u(ə)]
mid	*narrow*	[e], [ɜː], [ə], [e(i)], [ɜ(u)]
	broad	[ə], [ʌ]
open	*narrow*	[ɛ(ə)], [ɔː], [ɒ (i)]
	broad	[æ], [a(i, u)], [ɒ], [aː]

III. Lip position. Another feature of English vowels is lip rounding. Traditionally three lip positions are distinguished: spread, neutral and rounded. For the purpose of classification it is sufficient to distinguish between two lip positions: rounded and unrounded, or neutral. Every back vowel in English is produced with rounded lips, the degree of rounding is different and depends on the height of the raised part of the tongue; the higher it is raised, the more

rounded the lips are. So lip rounding is a distinctive, phoneme-constitutive indispensable feature.

3 Modifications of Consonants and Vowels in Connected Speech

Language in everyday use is not conducted in terms of isolated, separate units; it is performed in connected sequences of larger units, in words, phrases and longer utterances. Modification of sounds in connected speech is conditioned by structural behavior of segmental phonemes in speech and the type of combinations sounds make in connected speech.

Structural behavior of phonemes is studied by phonotactics. Structural behavior of phonemes is provided for by their distinctive features. The manner of production of allophones defines their distribution in relation to other allophones in a bigger language unit, frequency of their occurrence in speech. Consonants are not syllable-forming units and they do not make monosyllabic words. The following ten vowels make monosyllabic words: [iː, ɜi, aɪ] as names for letters *E*, *A*, *I*; [ə] – *a* (as an article), [ɑː] – *are*, [ɔː] – *or*, [ɜː] – *err*, [əʊ] – *owe*, [ɪə] – *ear*, [eə] – *air*, [ɔɪ] – *Oy!* Sounds [iː, uː] occur as reduced forms for *he* and *who*. The frequency of occurrence for vowels is presented in the following sequence from the most to the least frequent: [ə, ɪ, e, aɪ, ʌ, eɪ, iː, əʊ, æ, ɒ, ɔː, uː, ʊ, ɑː, aʊ, ɜː, eə, ɪə, ɔɪ, ʊə] from 10.74% to 0.06%. The frequency of occurrence for consonants is falling into five groups: 1) [n, t, d, s, l, r], 2) [θ, k, m, w, z], 3) [p, b], 4) [f, v, h, j, g, ŋ], 5) [θ, ʃ, ʒ, ʧ, ʤ] from 7.58% to 0.1%. There are evident discrepancies between the occurrence of ‘voiceless’ and ‘voiced’ paired consonants, e.g. [s, θ, k] occur more frequently than their ‘voiced’ counterparts. It is conditioned by the functional load of phoneme oppositions, with rare minimal pairs: *ether* : *either*.

Phonotactics of English allophones in initial/final positions is presented in Tables 8-9.

Table 8 — English allophones in connected speech (initial position)

Position in a bigger language unit	Consonants				Vowels
Initial position		There may be from 0 to 3 consonants. [ʧ, ʤ] never collocate with other consonants in non-zero initial position.			All vowels occur initially. [ʊ, ʊə] occur in foreign proper names as *Uppsala*, *Urdu*.
	Initial CV	[ŋ] never occur in initial position.			
		[ʒ] occurs in foreign word before [iː, ɪ, æ, ɒ, ɑː] in words like *genre, Zhivago, jabot*.			
	Initial CCv	[s] + [l, r, j, w, p, t, k, m, n, f, v]			
		[ʃ] + [l, r, w, m, n]			
		[k]	+ [l, r, j, w]		
		[g]			
		[p]	+ [l, r, j]		
		[b]			
		[f]			
		[v]			
		[t]	+ [r, j, w]		
		[d]			
		[θ]			
		[h]	+ [j]		
	Initial CCCV	[s]	+ [p]	+ [l, r]	
			+ [t]	+ [r, j]	
			+ [k]	+ [l, r, j, w]	
			+ [m]	+ [j] as in *smew*	

Table 9 — English allophones in connected speech (final position)

<table>
<tr><td>Position in a bigger language unit</td><td colspan="4">Consonants</td><td>Vowels</td></tr>
<tr><td rowspan="14">Final position</td><td rowspan="3">Final VC</td><td colspan="3">[r, h, j, w] never occur finally, or combine with other consonants finally.</td><td>[e, æ, ʌ, ɒ] never occur finally.</td></tr>
<tr><td colspan="3">[ʒ] occurs finally only after [iː, ɑː, uː, eɪ] in words recently borrowed from French.</td><td rowspan="12">[ʊ] occurs in to.</td></tr>
<tr><td colspan="3">[ŋ] occurs only after [ɪ, æ, ʌ, ɒ], and does not combine with other consonants.</td></tr>
<tr><td rowspan="11">Final VCC</td><td colspan="3">[g] does not combine in final position with other consonants.</td></tr>
<tr><td colspan="3">[θ] is of limited occurrence: 1) [-pθ] occurs only after [e]; 2) [-mθ] occurs only after [ɔː]; 3) [-fθ] occurs only after [ɪ].</td></tr>
<tr><td colspan="3">[-ln] occurs only after [ɪ].</td></tr>
<tr><td colspan="3">[-lʃ] occurs only after [e].</td></tr>
<tr><td>[l]</td><td colspan="2">+ [p, t, k, b, d, tʃ, dʒ, m, n, f, v, θ, s, z, ʃ]</td></tr>
<tr><td>[n]</td><td colspan="2">+ [t, d, tʃ, dʒ, θ, s, z]</td></tr>
<tr><td>[m]</td><td colspan="2">+ [p, d, f, θ, z]</td></tr>
<tr><td>[ŋ]</td><td colspan="2">+ [k, d, z]</td></tr>
<tr><td>[s]</td><td colspan="2">+ [p, t, k]</td></tr>
<tr><td>[t]</td><td colspan="2">+ [θ, s]</td></tr>
<tr><td>[d]</td><td colspan="2">+ [z]</td></tr>
<tr><td>[ʒ]
[dʒ]
[ʒ]
[ð]
[b]
[g]</td><td>+ [d]</td><td>[redacted]
+ [z]</td></tr>
</table>

		[v]				
		[ʃ]	+ [t]			
		[ʧ]				
		[θ]		+ [s]		
		[k]				
		[p]			+[θ]	
		[f]				
	Final VCCC	1) [t] +	[p]	+ [s]		Eleven of the 49 CCC final clusters occur only after one vowel: 5 after [ɪ], 4 after [e], 1 after [ʌ], 1 after [ə].
			[k]			
			[d]			
			[n]		+ [ʧ]	
			[ŋ]		+[k]	
			[l]		+ [p, k, ʧ]	
			[m]	+ [p]		
			[p]		[k]	
		2) [d] +	[n]	+ [ʤ]	+ [z]	
			[l]		+ [m, v]	
		3) [s] +	[k]	+ [t]	+ [θ]	
			[p]			
			[n]			
			[f]			
			[l]			+ [p, t, k, f]
			[t]	+ [θ]		
			[m]	+ [p, f]		
			[ŋ]	+ [k]		
		4) [z] +	[n]	+ [d]		
			[l]		+ [b, m, n, v]	

		5) [θ] +	[k]	+ [s]	
			[n]	+ [t]	
			[ŋ]	+ [k]	
			[l]	+ [f]	
	Final VCCCC	Occur only rarely, as a result of the suffixation to VCCC of a –ed or –s/es/ies. These clusters are regularly reduced from CCCC to CCC by omission of the third element of the cluster.			

As sounds in medial position appea in combination with other sounds, word-medial consonant sequences are longer than word-initial or word-final consonant sequences. In medial position vowels and consonants contribute to the word-syllabic division which is defined by one or all of the following criteria: 1) morphemic (syllable boundaries correspond with morpheme boundaries), 2) phonotactic (syllable division accords with syllable onsets and codas –stages of articulation), 3) allophonic (syllable division predicts correct allophonic variation). The specifics of the third criteria is discussed further.

Modifications of sounds.

Linguistic variation happens in all languages. It is always conditioned by social factors, because it is connected with people using languages in chronologically specific discourse environments. Spoken forms usually change faster and easier than written forms, which accounts for the differences between written forms of English words and their pronunciation.

Several competing variants can exist synchronically, and when one of them wins the unanimous usage, linguistic change is performed. This process can take from several months to several centures. Competing variants can coexist peacefully, or be opposed and judged as inappropriate in certain discourses. When used as opposed, variants become indexical markers: they characterize co-communicants as belonging to a certain social group, or possessing specific social traits. Indexical markers serve to facilitate identification of co-communicants in discourse [47, p. 183-184].

Sound system of any language does not exist in the same state from its formation, it constantly changes. Its changes could be long-lasting to be codified in dictionaries and literature, or individual and fast to disappear. The first type of changes is called *historical/established*, the second can be classified into *functional* – more or less stable, serving specific phonotactic/communicative purposes, sometimes fixed in the dictionaries, and *occasional/accidental*. The problem of explaining linguistic changes, including sound changes, involved discussing three separate questions: 1) the origin of the variation that lies at the

bottom of a change, 2) the spread of the variation, 3) the regularity of the variation. Any variation appears as an individual occurrence, and, it its existence follows any of the language tendencies, those tendencies being *simplification*, *regularization*, it becomes a characteristic feature of a social group. If the originating group possesses *overt* (public official), or *covert* (unofficial) *prestige*, the variation spreads further onto other social groups and becomes more and more popular. There are no variations that do not follow the rules of the language in which they exist.

Variations appear in connected speech, when segmental units come in contact to each other [17; 18; 38]. The point of contact is called '*juncture*'. As we know now about stages of articulation, we know that the last stage of the preceding sound may coincide with the first stage of the following sound. It can be seen on the character of juncture. Juncture can be *sharp/open* (clear) when the passage from sound to sound is easy to hear. Juncture exists as *muddy transition* when the passage from sound to sound is not easy to hear. In case of the muddy transition we can encounter variations/sound modifications.

Sound modifications in connected speech can be summarized as follows (as presented in Table 10).

Table 10 — Sound adjustments in connected speech

Types of adjustments	Kinds of adjustments
I. Adjustments related to C-C linking	Assimilations = modifications of a C under the influence of a neighboring C.
II. Adjustments related to 1) V-V, 2) C-V, 3) V-C linking	1. Liaison = connecting of the final sound of one word or syllable to the initial sound of the next. 2. Accommodation (adaptation) = modifications of C under the influence of the adjacent V or vice versa: *two* = labialized [t] under the influence of the rounded [u]; *let* = more open [e] after [l]. 3. Glottal stop / hard attack
III. Adjustments related to sound deletion /insertion	1. Elisions (elipsis or omission) = deletion of a sound in rapid or careless speech. 2. Epenthesis = inserting of a V or C segment within an existing string of segments. 3. Dediphthongization (smoothing) = a diphthong optionally loses its second element before another vowel, or it is monophthongized: *fire* ['faiə -'faə - 'fa:].
IV. Adjustments on the syllable level	Compression when two syllables, usually both weak, optionally become one. Applies only to [ɪ], [ʊ], syllabic consonants: [i] becomes like [j]: *lenient* ['li:niənt] - ['li:njənt].
V. Weakening (for Vs)	Weak forms are alternate forms of words so reduced in their articulation that they consist of a different set of phonemes. Weak forms differ from strong forms by containing a weak vowel resultant from reduction or by elision of one or more of its phonemes: *can* [kən], [kn].

MODIFICATIONS OF CONSONANTS.

I. Adjustments related to C-C linking.

Assimilation. Assimilation is a universal feature of spoken language. In English it occurs frequently, both within words and between words. Several types of assimilation can be recognized. 1) Consonants are modified according to the place of articulation. It involves four types of processes. These processes can be characterized by 1) direction of the process (progressive/regressive/reciprocal), 2) degree of the process (complete/partial), 3) time of the process (historical/functional (established/accidental). 2) According to the degree the assimilating C takes on the characteristics of the neighbouring C, assimilation may be 1) *partial* or 2) *total*. In the phrase *ten bikes*, the normal form in colloquial speech would be [tem baɪks], not [ten baɪks]. In this case, the assimilation has been *partial*: the [n] has fallen under the influence of the following [b] and has adopted its bilabiality, becoming [m]. It has not, however adopted its plosiveness. The phrase [tebbaɪks] would be likely if one had a severe cold. The assimilation is *total* in *ten mice* [tem maɪs], where the [n] is identical with [m].

During assimilation a C (the assimilating C) takes on the characteristics of a neighboring C (the conditioning C). There are three possibilities:

1. *Regressive* (or *anticipatory*) assimilation: the sound changes due to the influence of the following sound: *ten bikes*. This is particularly common in English in alveolar consonants in word-final position. Another example of *regressive historical* assimilation is reflected in the English spelling – namely in the four variants of the negative suffix in- which occurs in all the cases except when the subsequent sound is a bilabial or a liquid [l] or [r]: *in- im- il- ir*

indifferent	immeasurable
inexcusable	illogical
inflexible	illegal
impossible	illegible
imbalanced	irregular

irrelevant irresponsible

In rapid native speaker speech, sequences of sibilants having the form s] or [z] + [j] are particularly susceptible to this type of *regressive* assimilation: [s] + [j] = [ʃ]: *horseshoe*, *one's shadow*, *his shirt* [z] + [j] = [ʒ]: *hosier*. With a stop C, a final /t/ or /d/ may assimilate to a following initial [p], [k], or [b], [g] respectively, the place of articulation changes but the voiced or voiceless quality of the segment remains: *good boy, good girl, at peace, pet kitten* [b] [g] [p] [k]. A final nasal C, especially /n/, may also adjust the place of articulation according to that of a following conditioning C: *He is in pain. They're in Korea. It rains in May. Be on guard!* [m] [n]. Changes in place of articulation or in voicing are the most common types of *regressive* assimilation in English. *Regressive* assimilation with a change in manner of articulation tends to occur in informal speech: *Could you give me a call? Let me do that for you*.

2. *Progressive* (*perseverative*) assimilation: the C changes because of the influence of the preceding C: *lunch score* articulated with [s] becoming [ʃ] under the influence of [ʧ]. But these assimilations are less common in English. They occur in some contractions: *it's, that's*.

3. *Coalescent* (*reciprocal*) assimilation is a type of *reciprocal* assimilation: the first C and the second C in a cluster fuse and mutually condition the creation of a third C with features from both original Cs. This assimilation occurs most frequently when final alveolar Cs [t], [d] are followed by initial palatal [j]. Then they become affricates [ʧ], [ʤ], and this assimilation is called affricatization. Final alveolar Cs [s], [z] before [j] can become palatalized fricatives or sibilants [ʃ] and [ʒ] respectively (the assimilation is then called *assibilation*):

t + j= [ʧ]	Is that your dog?, virtue, statue
d + j = [ʤ]	Would you mind moving? education, during
s + j = [ʃ]	issue, He is coming this year.
z + j = [ʒ]	Does your mother know?

The amount of assimilation that occurs in native speaker pronunciation will depend on the formality of the situation, the rate of speech, and the style of the speaker. Most frequent cases of assimilation that occur in English speech are as follows: assimilation takes place when a sound changes its character in order to become more like a neighbouring sound. The varying feature is nearly always the place of articulation, and the sounds concerned are commonly those which involve a complete closure at some point in the mouth that is plosives and nasals which may be illustrated as follows:

– The dental [t], [d], followed by the interdental [θ], [ð] sounds (*partial regressive* assimilation when the influence goes backwards from a 'latter' sound to an 'earlier' one): *eigth, at the, breadth, said that*.

– The post-alveolar [t], [d] under the influence of the post-alveolar [r] (*partial regressive* assimilation): *free, true, that right word, dry, dream, the third room*.

– The post-alveolar [s], [z] before [ʃ] (*complete regressive* assimilation): *horse-shoe* ['hoːʃʃuː], *this shop* [ðɪʃʃˇʃɔp], *does she* ['dʌʃʃiː].

– The affricative [t + j], [d + j] combinations (*incomplete regressive* assimilation): *graduate* ['grædʒueit], *congratulate* [kən'grætʃuleit], *did you* ['didʒuː], *could you* ['kudʒuː], *what do you say* ['wɔtʒuː'sei].

The manner of articulation is also changed as a result of assimilation which includes:

– Loss of plosion. In the sequence of two plosive consonants the former loses its plosion: *glad to see you, great trouble, and old clock* (*partial regressive* assimilation).

– Nasal plosion. In the sequence of a plosive followed by a nasal sonorant the manner of articulation of the plosive sound and the work of the soft palate are involved, which results in the nasal character of plosion release: *sudden, nor now, at night, let me see* (*partial regressive* assimilation).

– Lateral plosion. In the sequence of a plosive followed by the lateral sonorant [l] the noise production of the plosive stop is changed into that of the lateral stop: *settle, table, at last* (*partial regressive* assimilation). It is obvious that in each of the occasions one characteristic feature of the phoneme is lost.

The voicing of a consonant may also change through assimilation. This type of assimilation affects the work of the vocal cords and the force of

articulation. In particular voiced lenis sounds become voiceless fortis when followed by another voiceless sound:

– Fortis voiceless/lenis voiced type of assimilation is best manifested by the *regressive* assimilation in such words as *newspaper* (news [z] + paper); *gooseberry* (goose [s] +berry). In casual informal speech *voicing* assimilation is often met: *have to do it* ['hæf tə'du:], *five past two* ['faif past 'tu:]. The sounds which assimilate their voicing are usually, as the examples show, voiced lenis fricatives assimilated to the initial voiceless fortis consonant of the following word. Grammatical items, in particular, are most affected: [z] of *has, is, does* changes to [s], and [v] of *of, have* becomes [f]: *She's five. Of course. She has fine eyes. You've spoiled it. Does Pete like it?*

– The weak forms of the verbs is and has are also assimilated to the final voiceless fortis consonants of the preceding word thus the assimilation is functioning in the progressive direction: *Your aunt's coming. What's your name?* (*partial progressive* assimilation)

– English sonorants [m, n, r, 1, j, w] preceded by the fortis voiceless consonants [p, t, k, s] are partially devoiced: *smart, snake, tray, quick, twins, play, pride* (*partial progressive* assimilation).

II. Adjustments related to C-V, V-C linking.

1. Liaison. The ability to speak English smoothly, to appropriately connect words or syllables can be realized as linking (or liaison) – the connecting point of the final sound of one word or syllable to the initial sound of the next. The amount of linking that occurs in native-speaker speech will depend on a number of factors, such as the informality of the situation, the rate of speaking, and of course the individual speech profile (or idiolect) of the speaker. Thus, the amount of linking that occurs is not entirely predictable. However this phenomenon occurs with regularity in the following environments:

1.1 Linking *r*. In BrE (RP) (other non-rhotic accents) a word in isolation never ends in [r]. In connected speech an [r] may be pronounced in some cases. This typically happens with a word (syllable) that ends in one of the vowels, when the following word (syllable) begins with a vowel sound: *far* [fa:], [fa:$_r$]. In isolation, or before a consonant sound, this word is, in RP, pronounced [fa:]. But in a phrase such as *far away*, *far out* it is usually pronounced [fa:$_r$]. In GA it

is always [fa:$_r$], whatever the environment it occurs in near [niə]. In isolation, the RP form is [niə]. But in a phrase such as near enough it is usually pronounced [niə$_r$].

1.2 Resyllabification. When a word or syllable ending in a single C is followed by a word or syllable beginning with a V, the C is often produced intervocalically as if it belonged to both syllables: *black and gray, Macintosh apple, dog eat dog*. When or word or syllable terminating a consonant cluster is followed by a word or syllable commencing with a vowel, the final consonant of the cluster is often pronounced as part of the following syllable: *lef/t arm, fin/d out, push/ed up, adap/table*.

1.3 Consonant elongation. When two identical consonants come together as a result of the juxtaposition of two words, there is one single, elongated articulation of the consonant which means native speakers do not produce the consonant sound twice:

stop pushing [p:]	big gap [g:]
bad dog [d:]	quick cure [k:]
short time [t:]	less serious [s:]

2. Accomodation. Lip position may be affected by the accommodation, the interchange of consonant+vowel type. Labialisation of consonants is traced under the influence of the neighbouring back vowels (accommodation): *pool, moon, rude, soon, who, cool*, etc. It is possible to speak about the spread lip position of consonants followed or preceded by front vowels [i:], [i]: *tea – beat; meet – team; feat – leaf, keep – leak; sit – miss* (accommodation). The position of the soft palate is also involved in the accommodation. Slight nasalization as the result of prolonged lowering of the soft palate is sometimes traced in vowels under the influence of the neighbouring sonants [m] and [n]: *and, morning, men, come in*.

3. A glottal stop. A glottal stop, symbolized [ʔ], is a plosive made at the glottis by the vocal folds. It has several different functions in English.

3.1 It is optionally used as a way of adding emphasis to a syllable that begins with a vowel sound.

3.2 It is optionally used to separate adjacent vowel sounds in successive syllables. In BrE this can be a way of avoiding r, as in one pronunciation of *underexpose* [ˌʌndəik'spəuz] – [-əʔik-].

3.3 It forms an essential part of certain interjections: AmE *uh-uh*. In these uses [ʔ] does not represent any phoneme of the language.

3.4 It may be used as an allophone of the phoneme [t] in certain positions. This is known as 'glottalling', or 'glottal replacement'. This use of [ʔ] is condemned by many speakers. Nevertheless, it is increasingly heard, especially in BrE. [ʔ] is found as an allophone of [t] ONLY: 1) at the end of a syllable; 2) when the preceding sound is a sonorant/vowel.

In both BrE and AmE, it is widely used where the following syllable begins with a nasal: atmospheric [ˌætməs'ferik] – [ˌæʔməs-], button ['bʌtən] – ['bʌʔn]. In BrE, it is often used in informal speech at the end of a word: 1) where that word is at the end of a sentence; 2) where the following word begins with a consonant.

What's that? [ˌwɔʔs'ðæʔ], *quite wrong* [ˌkwaɪʔ'rɔŋ]

It is sometimes used, especially in BrE, to strengthen [p], [t], [ʧ], [tr], [k] at the end of a syllable, when followed (in the case of p, t, k) by a consonant in the next syllable (glottal reinforcement). There may be a resyllabification: *accurate* ['ækjurət] – ['æʔkjurət], *teaching* ['ti: ʧɪŋ] – ['ti: ʔʧɪŋ].

III) Adjustments related to sound deletion/insertion.

1. <u>*Elision (ellipsis, omission, deletion*).</u> *Elision* (*ellipsis, omission, deletion*) is the process of deleting or not nearly articulating of sounds in certain contexts. English spelling is sensitive to this phenomenon, representing deletion in the contracted forms of auxiliary verbs plus *not* (*isn't, mustn't*). In other cases, however, *elision* occurs without any change in the spelling system.

1.1 Some types of *elision* typically occur within a single syllable and therefore within word. In English they include:

– the elision of [t] in [ntʃ] and of [d] in [ndʒ]. Thus *lunch* [lʌntʃ] may be pronounced [lʌntʃ] or, less commonly, [lʌnʃ]; *strange* [streindʒ]; may be [streindʒ] or, less commonly, [streinʒ].

– loss of [t] when [nt] is between two vowels or before a syllabic [l]: *winter*, *Toronto*, *mantle.*

– loss of /t/ or /d/ when they occur in a sequence or cluster of three consonants: *[t] – restless, listless, exactly; [d] – windmilll, kindness, hands.*

– the *elision* of [p] in [mps], [mpt], of [t] in [nts], and of [k] in [ŋks], [ŋkt]. Thus *jumped* [dʒʌmpt] may be pronounced [dʒʌmpt] or, less commonly, [dʒʌmt], *lynx* [liŋks] may be [liŋks] or, less commonly, [liŋs].

1.2 Other types of *elision* occur only at syllable boundaries both within words and between words: 1) the *elision* of [t] and [d] when surrounded by other consonants, and 2) the elision of [ə] before a liquid C. *Elision* of [t] or [d] is usually possible when it is preceded by a certain consonants at the end of a syllable, if the next syllable (or word) starts with a consonant, under these conditions:

[t] may be elided in [ft], [st], and less commonly in [pt], [kt], [tst], [θt], [ʃt].

[d] may be elided in [ld], [nd], and less commonly in [bd], [gd], [dʒd], [vd], [ðd], [td], [md].

Additionally, [t] is sometimes omitted in the contracted negative – *n't* no matter what follows. For example, *next* [nekst] in isolation or before a vowel sound is pronounced [nekst], but in a phrase, such as *next thing*, *next question*, it is often pronounced [neks], with elision of the [t]; *stand* [stænd] in isolation, or before a vowel sound, is pronounced [stæend], but in a phrase such as *stand clear*, *stand firm* it is often pronounced [stæn], with elision of the [d]. When *didn't* ['dɪdnt] is followed by another word in a phrase, it is sometimes pronounced ['dɪdn], with elision of the [t]. Deletion of the word-final [t] or [d] occurs in clusters of two consonants at a word boundary when the following word begins with a consonant: *Eas(t) side blin(d) man wil(d) boar.* However, when the following word begins with a vowel, there is no deletion. Instead resyllabification occurs: *Eas/t end blin/d eye wil/d ass.* Loss of the final [v] in *of*

(reduction to schwa) before words with initial consonants: *lots of money, waste of time, hearts of palm*. Loss of initial /h/ and [ð] in pronomial forms in connected speech: *ask her, help him, tell them.*

2. Insertion. The inserted r sound is then known as linking *r*. It corresponds to a historical [r], now lost before a consonant or pause. In RP (other non-rhotic accents) speakers tend to add an intrusive [r] to V+V sequence, even when there is no *r* in the spelling of the preceding word. This is called intrusive [r] which does not correspond to historical *r*: *comma* ['kɔmə], ['ka:mə]. In isolation, the RP form is ['kɔmə]. But in a phrase such *put a comma in*, it is often pronounced ['kɔmər]. In GA it is always ['ka:mə$_r$], whatever the environment; *thaw* [θɔ:], [θa:]. In isolation, RP *thaw* is [θɔ:]. In the phrase *thaw out*, intrusive *r* may be added. Some more examples of intrusive *r*: *vanilla* [r] *ice cream*, *media* [r] *event*, *formula* [r] *A*, *the idea* [r] *of it*, *Asia* [r] *and Africa*.

3. Compression. Sometimes a sequence of sounds in English has two possible pronunciations: either as two separate syllables, or compressed into a single syllable: the word *lenient* [‘li:nɪənt] two pronunciations are possible: a slower one [‘li:nɪənt], and a faster one [‘li:njənt]. *Diagram* [‘daiəgræm] – two pronunciations are possible: a slower one [‘daiəgræm], and a faster one [‘daəgræm]. Generally the uncompressed version is more usual in rarer words, in slow or deliberate speech the first time the word occurs in a discourse. The compressed pronunciation is more usual in frequently-used words in fast or casual speech if the word has already been used the discourse. These compressions are commonly used in RP but not in GA.

MODIFICATIONS OF VOWELS.

When sounds are used in connected speech they cannot help being influenced by one another. A vowel like any sound has physical duration – time which is required for its production (articulation). Duration is one of the characteristics of a vowel which is modified by and depends on the following factors:

1) its own length,

2) the accentuation of the syllable in which it occurs,
3) phonetic environment,
4) the position of the sound in a syllable,
5) the position in a rhythmic structure,
6) the position in a tone group,
7) the position in a phrase,
8) the position in an utterance,
9) the tempo of the whole utterance,
10) the type/style of pronunciation.

Different scholars attach varying significance to vowel quantity. D. Jones believed in the phonological relevance of vowel quantity which means that words in pairs like [bid] – [biːd], [sit] – [siːt], [fʊl] – [fuːd], [ˈfɒːwəːd] (foreword) – [ˈfɔːwəd] (forward) are distinguished from one another by the opposition of different length [26-28]. The difference in quantity is considered to be decisive, and the difference in quality (the position of the active organ of speech) is considered to be subordinate to the difference in quantity. Another articulatory feature – tenseness which characterizes the state of the organs of speech at the moment of production of a vowel is connected with the vowel modification. Historically long vowels are tense while historically short vowels are lax. Summarizing we could say that phonological analysis of articulatory features of English vowels allows considering functionally relevant the following two characteristics: a) stability of articulation, b) tongue position.

The modifications of vowels in a speech chain are traced in the following directions: they are either *quantitative* or *qualitative* or both. These changes of vowels in a speech continuum are determined by a number of factors such as the position of the vowel in the word, accentual structure, tempo of speech, rhythm, etc. The decrease of the vowel quantity or in other words the shortening of the vowel length is known as a *quantitative* modification of vowels.

I. Quantitative vowel modifications may be illustrated as follows:

1. The shortening of the vowel length occurs in unstressed positions: *blackboard* [ɔː], *sorrow* [ɜu] (reduction). A vowel in an unstressed syllable is

perceived as very short, weak, and indistinct. The unstressed syllables are usually associated with vowels of central or centralized quality [ə], [i], sometimes [u] and the diphthongs [ɜu], [ai] (or a syllabic consonant): *among* [ə'mʌŋ], *before* [bi'fɔ:], *useful* ['ju:sful], *tomato* [tə'ma:tɜu], *exercise* ['eksəsaiz], *sudden* ['sʌdn]. Also vowels of full quality sometimes occur in unstressed positions, often in borrowed Latin and Greek words: *architect* ['a:kɪtekt], *paragraph* ['pærəgra:f], *canteen* [kaen'ti:n]. Partially reduced sounds are found in unstressed positions. They appear in more formal and careful style of pronunciation instead of the neutral sound used in informal casual speech: *phonetics* [fɜu'netiks – fɜ'netiks – fə'netiks].In these cases reduction affects both the length of the unstressed vowels and their quality. Form words often demonstrate quantitative reduction in unstressed positions: *Is →he or ˛she to blame*? – [hi:]. But: *At →last he has ˛come*. – [hɪ].

2. The length of a vowel depends on its position in a word. It varies in different phonetic environments. English vowels are said to have positional length: *knee – need – neat* (accommodation). The vowel [i:] is the longest in the final position, it is obviously shorter before the lenis voiced consonant [d], and it is the shortest before the fortis voiceless consonant [t].

II. *Qualitative* modification of most vowels occurs in the following phonetic environment:

1. Slight degree of nasalization marks vowels preceded or followed by the nasal consonants [n], [m]: *never, no, then, men* (accommodation).

2. Weakening/reduction.

2.1 In unstressed syllables vowels are usually subjected to qualitative changes: *man* [mæn] – *sportsman* ['spɔ:tsmən], *conduct* ['kɒndəkt] – *conduct* [kən'dʌkt]. The quality of the vowel is reduced to the neutral sound [ə]. (It illustrates the frequency of the neutralized (reduced) allophones of the same phonemes as the same morphemes are opposed. Nearly one sound in five is either [ə] or the unstressed [i]. This high frequency of [ə] is the result of the

rhythmic pattern: if unstressed syllables are given only a short duration, the vowel in them which might be otherwise full is reduced). It is common knowledge that English rhythm prefers a pattern in which stressed syllables alternate with unstressed ones. The effect of this can be seen even in single words, where a shift of stress is often accompanied by a change of vowel quality; a full vowel becomes [ə], and [ə] becomes a full vowel. Compare: *analyse* ['ænəlaiz] – *analysis* [ə'nælisis].

In some circumstances a strong vowel becomes weak:

– in related words: *anatomic* [ænæ'tɔmik] – *anatomy* [ə'nætəmi];
– in affixes: *president* ['prezidənt] – *preside* [pri'zaid];
– variant pronunciations: *Monday* ['mʌndei] – ['mʌndi];
– in function words: *from* [frɔm] – [frəm].

Weak form words are alternate forms of words so reduced in their articulation that they consist of a different set of phonemes. These are of vital importance to the L2 user because those are the words important for the syntactical purposes. Though there are many such words in English, there are only about forty with obligatory variants: such weak form words with stylistically distinctive variants can in one or the other of their forms seriously affect the style or meaning of an expression. The importance of weak forms lies in the fact that their use, universal for all forms of English worldwide, makes significant contribution to the rhythm of English. Failure to use them can result in a foreign accent, make speech unnatural or even unintelligible.

2.2 Smoothing. A diphthong may lose its second element before another vowel in rapid, negligible speech:

[ai], [au] become [a] try again [tra ə'gein], how about [ha ə'baut]

[ei] becomes [e] stay around [ste ə'raund]

[əu] becomes [ə] going [gəiŋ]

The realization of *reduction* as well as assimilation and accommodation is connected with the style of speech. In rapid colloquial speech reduction may result in vowel elision, the complete omission of the unstressed vowel, which is

also known as *zero reduction*. Zero reduction is likely to occur in a sequence of unstressed syllables: *history, factory, literature, territory*. It often occurs in initial unstressed syllables preceding the stressed one: *correct, believe, suppose, perhaps*. The example below illustrates a stage-by-stage reduction (including zero reduction) of a phrase. *Has he done it?* [hæz hiˑ ˌdʌn it] [həz hɪ ˌdʌn it] [əz i ˌdʌn it] [z i ˌdʌn it]. The neutral sound [ə] possesses autonomous phonemic status. Phonological analysis marks the opposition of the neutral sound to other unstressed vowels, the most common among them being [ɪ]. In the minimal pairs: *officers* [ˈɒfɪsəz] – *offices* [ˈɒfɪsiz]; *accept* [əkˈsept] – *except* [ikˈsept], *armour* [ˈa:mə] – *army* [ˈa:mɪ] the neutral sound is phonologically opposed to the phoneme [ɪ] with its own distinctive features capable of differentiating the meaning of lexical units. So the neutral sound [ə] in *officers, accept, armour* is an independent phoneme opposed to the [ɪ] phoneme of the minimal pairs.

3. Accomodation. Slight nasalization as the result of prolonged lowering of the soft palate is sometimes traced in vowels under the influence of the neighbouring sonants [m] and [n]: *and, morning, men, come in*.

4. Elision (ellipsis, omission, deletion). Elision of [ə] is often (though not always) possible when it is followed by a liquid ([1] or [r]) and then a weak vowel. This has the effect of making the liquid syllabic, unless compression also occurs (in which case all trace of the [ə] disappears).

camera: the full form is ['kæmərə]. When [ə] is elided, in the first instance it makes the [r] syllabic: ['kæmrə]. This is usually compressed to *give camera* ['kæmrə]. All three possibilities occur in casual speech [ə] is also sometimes elided in the first syllable of a word in which the second syllable is stressed and begins with a liquid. The initial syllable then undergoes compression. Thus *terrific* [tə'rifik] sometimes becomes [t'rifik], or *collide* [kə'laid] – [k'laid]. They belong only in casual style of pronunciation. Sometimes a pronunciation that was originally the result of elision has become the only possibility for some speakers. Some people have ['kæmrə] as the only pronunciation for *camera*, or [pli:s] as the only form for *police*. For many English people it would feel very artificial to pronounce a [t] in *postman* ['pəusmən].

5. Sound Alternations. The sound variations in words, their derivatives and grammatical forms of words are known as *sound alternations*. It is perfectly obvious that *sound alternations* as phonetic changes result from complex involvement of *assimilation*, *accommodation* and *reduction* in speech. Alternations of consonants are mainly due to contextual *assimilations*: the dark [ł] in spell alternates with the clear [l] in spelling. Vowel alternations are the result of the *reduction* in unstressed positions: *combine* ['kɒmbain] (N) – *combine* [kəm'bain] (V) where [ɒ] in the stressed syllable of the noun alternates with the neutral sound in the unstressed syllable of the verb. Some sound alternations are traced to the phonetic changes in earlier periods of the language development and are known as historical. The following list of vowel alternations presents the most common types of historical alternations.

1. Distinction of irregular verbal forms:

[ɪ – ʌ– ʌ]: dig – dug – dug.

[ɪ – æ – ʌ] : sing – sang – sung

[ɪ – eɪ – ɪ]: give – gave – given

[ɪ – æ – æ]: sit – sat – sat

[ɪ – ɔ: – ɔ:]: think – thought – thought

[i: – e – e]: mean – meant – meant

[i: – ɜu – ɜu]: speak – spoke – spoken

[i: – ɔ: – ɔ:]: teach – taught – taught

[i: – ɔ: – i:]: see – saw – seen

[e – ɒ – ɒ]: get – got –got

[e – ɜu – ɜu]: tell – told – told

[u: – ɒ – ɒ]: shoot – shot – shot

[u: – ɜu – ɜu]: choose – chose – chosen

[ʌ – eɪ – ʌ]: become – became – become

[æ – u – u]: understand – understood – understood

[aɪ – ɜu – ɪ]: write – wrote – written

[aɪ – i – ɪ]: hide – hid – hidden

[aɪ – ɜu – ɪ]: rise – rose – risen

[aɪ – u: – ɜu]: fly – flew – flown

[aɪ – ɔ: – ɔ:]: fight – fought – fought

[aɪ – au – au]: find – found – found

[eɪ – u – eɪ]: take – took – taken

[eɪ – ɜu – ɜu]; wake – woke – woken

[ɜu – u: – ɜu]: know – knew – known

[ɜu – u: – ɜu]: grow – grew – grown

[ɛə – ɔ: – ɔ:]: wear – wore – worn

[ɪə – ɜ: – ɜ:]: hear – heard – heard.

2. Distinction of causal verbal forms:

[ɪ – e]: sit – set

[aɪ – eɪ]: rise – raise

[ɔ: – e] fall – fell

3. Distinction of singular and plural forms of nouns:

[æ – e]: man – men

[u – i:]: foot – feet

[u: – i:]: tooth – teeth

[au – aɪ]: mouse – mice

[u – ɪ]: woman – women

[aɪ – ɪ]: child – children

4. Distinction of parts of speech in etymologically correlated words:

[i: – e]: feast – festive

[a: – æ]: class – classify

[ɒ – e]: long – length

[ɔ: – e]: broad – breadth

[eɪ – æ]: nation – national

[aɪ – ɪ]: wise – wisdom

[ɒ – i:]: hot – heat

This type of *alternation* is often strengthened not only by suffixation but also by the shifting of stress like in: *part– particular, 'climate – cli'matic*.

5. V + C *Alternations* (often supported by suffixation and the shifting of stress)

[ɪ – aɪ] + [v – f]: live – life

[a: – eɪ] + [θ – ð]: bath – bathe

[e – i:] + [θ – ð]: breath – breathe

[ɒ – u:] + [s – z]: loss – lose

6. Contextual sound alternations are also frequent in present-day English. Speech may vary in numerous ways. The first thing that counts in the stylistic modifications of sounds is the character of relationship between the speaker and the listener and the degree of formality in their discourse. Speech continuum reflects the amount of attention the speakers give to their speech. Formal speech suggests dispassionate information on the part of the speaker. It is characterized by careful articulation and relatively slow speed. Informal speech (rapid colloquial speech, conversational style) implies everyday conversation. It is assumed that in formal situations the participants will monitor their linguistic behavior: when the speakers want to be clearly understood they should sound

explicit and clear. In informal situations, where speakers are more relaxed, less attention will be given to speech foe it to sound more natural and simplified. Consequently, the degree of simplification of speech (assimilation, reduction, elision) may be looked upon as a style forming means. The interaction of the extralinguistic factors may arrange the opposite situation: the speaker's highly excited narration of some critical situation will become full of slurring while a dialogic discussion of problems between colleagues will be phonetically most precise. Typical character of sound simplifications in relation to the degree of formality is the great qualitative stability of vowels in slow formal speech and more frequent sound variability in informal spoken English. Both front and back vowels in less explicit articulation tend to be changing towards neutralized sounds, especially in grammatical words. These sequences never occur in speech where the words are uttered clearly and explicitly but in the stream of informal speech in the least prominent parts of the utterance. The degree of formality or in other words the character of relationship between participants of the discourse proves to be most significant in the stylistic modifications of sounds. The tendencies in vowel modifications are presented in Tables 11-23.

Table 11 — Vowel modifications I

Spelling	Formal	Informal
it's not	its 'nɒt	əts 'nót
because	bi'kɒz	bikəz
according to	ə'kɔ:diŋ tə	əkədiŋ tə
I think he was	ai'θiŋk hi· wəz	ʌ 'θiŋk i wz

The historically long vowel [i:] tends to lose its diphthongization; as the next stage it undergoes quantitative reduction and finally changes its quality as well.

Table 12 — Vowel modifications II

Spelling	Formal	Informal
I don't believe it	ai 'dɜunt bi'li:v it	ʌ dɜun(t) bə'liv it
it seems to be	it 'si:mz tə bi·	it 'simz tə bi

The similar process of reduction is likewise observed in [u:] simplified to [u].

Table 13 — Vowel modifications III

Spelling	Formal	Informal
a few more words	ə 'fju: 'mɔ: 'wɜ:dz	ə fju mɔ· 'wɜ:dz
a new aspect	ə 'nju: 'æspekt	ə 'n(j)u 'æspekt

As to labialization of vowels the amount of rounding varies greatly between the individual speakers. The vowel [ɔ:] seems to retain lip rounding as a rule. The vowels [ɒ] and [ɒI] have very little, if any, rounding at all in informal speaking. The vowels [u:], [u] seem to lose the rounding altogether.

Diphthongs are very often monophthongized in informal speech. The diphthong [ɛə] tends to be simplified to [ɛ(:)].

Table 14 — Vowel modifications IV

Spelling	Formal	Informal
where	wɛə	wɛ
here and there	'hiər ənd 'ðɛə	'hi (ə)r ən 'ðɛ

In an unstressed position it is further modified to [e]: there is an opinion [ðer ɪz ən ə'pɪnjən]. The diphthong [iə] often gets a sort of central vowel realization [ɜ].

Table 15 — Vowel modifications V

Spelling	Formal	Informal
really strange	'riəli 'streindʒ	'rɜli 'streindʒ
serious action	'siəriəs 'ækʃn	'sɜri(ə)s 'ækʃn
experienced worker	iks'piəriənst 'wɜ:kə	iks'pɜrənst 'wɜ:kə

The [u] ending diphthongs [au] and [ɜu] are simplified into [a] and [ɜ] accordingly. The various stages of their realizations are found both in stressed and unstressed positions. The quality of the initial element is retained and the second element, the glide, is obscured or lost.

Table 16 — Vowel modifications VI

Spelling	Formal	Informal
now they	'nau ðei	'na ðe(i)

south of Italy	'sauθ əv 'itəli	'saθ əv 'itəli
going ahead	'gɜuiŋ ə'hed	'gɜŋ ə'hed
. yes or no	'jes ɔ·'nɜu	'jes ə'nɜ

Unstressed positions are sometimes marked by the next stage of qualitative reduction. The diphthong [au] is realized as some kind of [ʌ].

Table 17 — Vowel modifications VII

Spelling	Formal	Informal
and now we've	ənd 'nau wi·v	ən nʌwi·v
come to	'kʌm tə	'kʌm tə
mark how different	'ma:k hau 'difərənt	'mak hʌ 'difrənt
it is	it iz	it iz

The diphthong [ɜu] is sometimes completely neutralized in the unstressed position.

Table 18 — Vowel modifications VIII

Spelling	Formal	Informal
so we've discussed	sɜu wi·v dis'kʌst	sə wiv dis'kʌst
hope to settle	it hɜup tə 'setl	it hə tə 'setl it

Vowel elision is very frequent in informal conversational style. It often goes with other processes involving assimilation and elision of consonants. Elided neutral sound [ə] is very common in the unstressed syllables of polysyllabic words.

Table 19 — Vowel modifications IX

Spelling	Formal	Informal
collective	kə'lektiv	'klektiv
different	'difərənt	'difrənt
prisoner	'prizənə	'priznə
political	pə'litikl	'plitikl
phonetically	fə'netikəli	'fnetikəli

In the last three examples the loss of [ə] in the initial unstressed syllable of a word causes the initial consonant form a cluster with the consonant of the stressed syllable.

Table 20 — Vowel modifications X

Spelling	Formal	Informal

next to Liverpool	'nekst tə 'livəpu:l	'nekst 'tlivəpu:l
back to London	'bæk tə 'lʌndən	'bæk 'tlʌnd(ə)n
to see them	tə 'si: ðəm	'tsi: ðəm
future situation	'fju:tʃə ˌsitju'eiʃn	'fju:tʃə 'sitjueiʃn
this afternoon	ðis 'a:ftə'nu:n	ðis 'a:ftnu:n
after all	'a:ftər 'ɔ:l	'a:ft'rɔ:l

Vowel reduction mostly occurs in extended utterances in sequences of words. The loss of the neutral sound [ə] in the preposition *to* or the particle *to* preceded by a consonant is a very common pattern.

Table 21 — Vowel modificationsXI

Spelling	Formal	Informal
it's paid well	its 'peid wel	ts 'peid wel
it's necessary	its 'nesəsəri	ts 'nesəsəri
it's counted as	its 'kauntid	əz ts' kauntid əz

In the majority of spoken utterances beginning with *it`s* the initial [ɪ] is elided when the phrase runs on without a marked pause after the previous saying.Likewise in polysyllabic words beginning with the unstressed ex- it is often simplified to [ks].

Table 22 — Vowel modifications XII

Spelling	Formal	Informal
extremely	iks'tri:mli	'kstri:mli
extraordinary	iks'trɔ:dnri	'kstrɔ:dnri
excluded	iks'klu:did	'ksklu:did

As it has already been mentioned vowel reduction often results in regular consonant clusters like [tr], [fr], [pl], [kl] typical for the English sound system: *tram, try, tree and interesting, aft(e)r all; please, play and p(o)litical; clay, cloud, circle and collective; friend, from and diff(e)rence*.

Table 23 — Vowel modifications XIII

Spelling	Formal	Informal
it's not exact	its 'nɒt ig'zækt	ts 'nɒt ig'zækt
it's close to	its 'klɜus tə	ts 'klɜus tə
it's perhaps you	its pəhæps 'ju:	ts pəhæps 'ju:

Alongside with regular clusters in informal careless speech we find phonetic facts which seem impossible for the English pronunciations namely consonant sequences [tsn], [tsk], [tsp] and others.

Topic 4 SYLLABIC AND ACCENTUAL STRUCTURE OF ENGLISH WORDS

1. Syllabic structure of English words
2. Accentual structure of English words

1 Syllabic Structure of English Words

Speech is a continuum. It can be broken into minimal pronounceable units into which sounds show a tendency to cluster. These smallest phonetic groups are generally given the name of syllables. A unit of spoken message larger than a single sound and smaller than a word is a syllable. Articulatorily a word may be pronounced 'syllable at a time': *un-der-'stand*; so the syllable is the smallest further indivisible unit of speech production. Auditorily the syllable is the smallest unit of perception: the listener identifies the whole of the syllable and only after that the sounds contained. The notion of syllable is very real to native speakers, and is used in everyday conversation. The syllabic structure of words has two inseparable aspects: 1) syllable formation; 2) syllable division/separation [18; 26; 36; 77; 83].

The syllable is one or more speech sounds forming a single uninterrupted unit of utterance which may be a commonly recognized subdivision of a word or the whole of a word. Being the smallest pronounceable units, the syllables form bigger language: morphemes, words and phrases. Each of these units is characterized by a certain syllabic structure. Consequently, a meaningful language unit has two aspects: syllable formation and syllable division which form a dialectical unity. The syllable is a fairly complicated phenomenon and like the phoneme it can be studied on four levels: acoustic, articulatory, auditory

and functional, which means that the syllable can be approached from different points of view.

Talking about the analysis of articulatory or motor aspect of the syllable we could start with the expiratory, or chest pulse or pressure theory which was experimentally based by R.H. Stetson (1951). This theory is based on the assumption that expiration in speech is a pulsating process and each syllable should correspond to a single expiration so that the number of the syllables in an utterance is determined by the number of expirations made in the production of the utterance. This theory was strongly criticized by linguists. G.P. Torsuev (1960), for example, argues that in a phrase a number of words and, consequently, syllables can be pronounced within a single expiration [36]. This makes the validity of the pulse theory doubtful.

Another theory most often referred to is the theory of syllable put forward by O. Jespersen (1921). It is generally called the sonority theory / the prominence theory and is based on the concept of sonority. Danish linguist O. Jespersen, has proved that the least sonorous sounds which have the least carrying power, are those for which the mouth is closed (voiceless oral stops), while the most sonorous sounds are those for which the mouth is wide open (low vowels). All other sounds are ranked in between these two extreme points of the sonority scale: (from the highest degree to the lowest as shown in Figure 19).

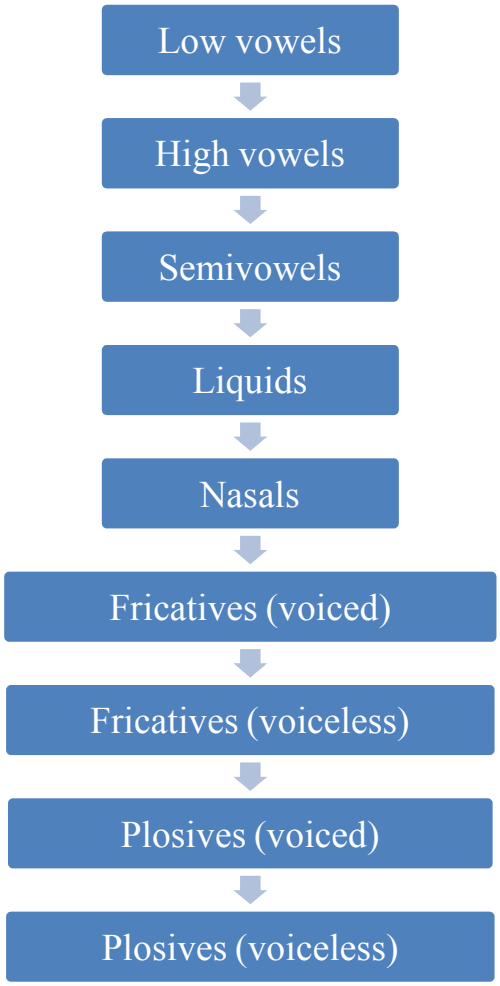


Fig. 19. The hierarchy on sonority scale

By this theory the syllable is treated as the combination of a more sonorous sound with a less sonorous one. All the sounds with the greatest degree of sonority (vowels and sonorants) are at the peak of the syllable, by which the syllable may be marked as a unit, because the rest of the sounds surrounding the peak cling to it. According to V.A. Vassilyev (1970), the most serious drawback of this theory is that it fails to explain the actual mechanism of syllable formation and syllable division [99]. Besides, the concept of sonority with which the theory operates is not very clearly defined, which makes it still less consistent.

The theory of muscular tension was put forward by the French linguist Michaelle Grammont and supported and further developed by the Russian linguist Lev V. Scherba (1963). Scherba explained syllable formation by muscular tension impulses and three types of consonants. In speaking, muscular

tension imputes follow one another [48]. Each impulse has its strongest point – the peak of prominence – and its weakest prominence – the valley of prominence. Valleys of prominence correspond to points of syllabic division. The end of one syllable and the beginning of the next one can be ascertained by determining the type of consonants which take part in forming the syllables.

Consonants may be pronounced:

1) as initially strong – the beginning of a consonant may be more energetic, while the end may be weaker;

2) as finally strong – the beginning of the consonant may be weak, and its end more energetic;

3) as geminate/double – both the beginning and the end are energetic with a weakening of muscular tension in the middle, acoustically, they give the impression of two consonants.

The more energetic part of a consonant is attached to a vowel, so that an initially strong C occurs at the end of a close syllable, while a finally strong C occurs at the beginning of a syllable. This theory, though, does not give a complete explanation of the syllable division mechanism. The theory has been modified by V.A. Vassilyev [99]. The point is that the syllable like any other pronounceable unit can be characterized by three physical parameters: pitch, intensity and length. Within the range of the syllable these parameters vary from minimum on the prevocalic consonants to maximum on the centre of the syllable, and then there is another decrease within the postvocalic consonants. So the conclusion follows: if we take into consideration the tension of articulation and the above-mentioned acoustic data on the speech production level the syllable can be treated as an arc of articulatory effort, for example.

The above-mentioned theories try to define the syllable on either of the two levels of production or perception. The linguist and psychologist N.I. Zhinkin (1954) has suggested the loudness theory which seems to combine both levels [9; 19; 24; 27; 46; 47]. The experiments carried out by N.I. Zhinkin showed that the arc of loudness on perception level is formed due to variations of the volume of pharyngeal passage which is modified by contraction of its

walls. The narrowing of the passage and the increase in muscular tension which results from it reinforce the actual loudness of a vowel thus forming the peak of the syllable. So according to this theory the syllable could be thought of as the arc of loudness which correlates with the arc of articulatory effort on the speech production level since variations in loudness are due to the work of all the speech mechanisms.

There exist two points of view on the syllable: 1) some linguists consider the syllable to be a purely articulatory unit which lacks any functional value. This point of view is defended on the grounds that the boundaries of the syllable do not always coincide with those of the morphemes; 2) however the majority of linguists treat the syllable as the smallest pronounceable unit which can reveal some linguistic function. The definition of the syllable from the functional point of view existing in modern linguistics tends to single out the following features of the syllable: a) a syllable is a chain of phonemes of varying length; b) a syllable is constructed on the basis of contrast of its constituents (which is usually of vowel-consonant type); c) the nucleus of a syllable is a vowel, the presence of consonants is optional; there are no languages in which vowels are not used as syllable nuclei, however, there are languages in which this function is performed by consonants; d) the distribution of phonemes in the syllabic structure follows the rules which are specific enough for a particular language. The syllable is the unit within which the relations between the distinctive features of the phonemes and their acoustic correlates are revealed. Prosodic characteristics of speech are realized within a syllable (or a sequence of syllables); they form the stress-pattern of a word and the rhythmic and intonation structures of an utterance. In sum, the syllable is a specific minimal structure of both segmental and suprasegmental features.

Syllable formation and syllable division/separation must be considered according to the aspects described in Topic1: articulatorily, the syllable is the minimal articulatory unit of the utterance; auditorily, the syllable is the smallest unit of perception: the listener identifies the whole of the syllable and after that

the sounds which it contains; phonologically it is a structural unit which consists of a sequence of one or some phonemes of a language in numbers and arrangements permitted by the given language.

Syllable formation in English is based on the phonological opposition vowel – consonant. In English the syllable is formed by several phonetic environments: 1) by any vowel alone or in combination with one or more consonants – not more than three preceding and not more than four following it: *are* [ɑː], *we* [wi:], *it* [ɪt], *sixths* [sɪksθs]; 2) by a word final sonorants [n], [1], [m] immediately preceded by a consonant: *rhythm* ['rɪðəm], *garden* ['gɑːdən]. There are certain rules that syllable formation follows. They are called phonotactics. Phonotactics distinguish different sound clusters for initial and medial positions [60, p. 253-259].

1) The initial position. The English sonorants [w], [j] are never syllabic as they are always syllable-initial. Thus vowels and sonorants are syllable-forming elements and every word, phrase or sentence has as many syllables as it has syllabic elements.

2) Medial position. Every English syllable has a center or peak – a vowel or a sonorant. The peak may be preceded by one or more non-syllabic elements which constitute the onset of the syllable, and it may be followed by one or more non-syllabic elements which constitute the coda: *cat* [kæt], *tree* [tri:], *ice* [ais].

According to the placement of vowels and consonants the following types of syllables are distinguished (as presented in Table 24).

Table 24 — The placement of vowels and consonants

Type of syllable	Placement of vowels	Placement of consonants
Open syllable	The V is at the end, such a S is articulated with the opening of the mouth by the end: *they, wri-ter.*	–
Covered syllable	–	The C is at the beginning of the syllable: *tie.*
Closed syllable	–	The C is at the beginning of the syllable which also ends in C: *hun-dred, hat*.
Syllable covered at the end	The V is at the beginning of the S.	the C is at the end of a S: *on.*

The presentation of a syllable structure in terms of C and V (canonical forms) gives rather numerous combinations which can be grouped into 4 structural types of syllables:

1) Fully open V: *ore, or.*

2) Fully closed (V between C): CVC *fat* CCVC *place* CVCC *fact* CCCVCC *street* CVCCC *facts* CVCCCC *sixths.*

3) Covered at the beginning (one C or a sequence of Cs precede a vowel): CV *too* CCV *spy* CCCV *traw*.

4) Covered at the end (one C or more complete the syllable): VC *on* YCC *act* VCCC *acts.*

Structurally, the commonest types of the syllable in English are VC; CVC. CV is considered to be the universal structure. CV syllabic types constitute more than half of all structural types in Russian. The characteristic feature of English is monosyllabism: it contains between four and five thousand monosyllabic words. Most of the words of old English origin are of one syllable, the limit for the number of syllables in a word in English is 8: *incomprehensibility*. Syllables can be also designated:

1) By the position in the word: from the beginning – initial, medial, final, or from the end – ultimate, penultimate, antepenultimate;

2) By the position in relation to stress: pretonic, tonic, posttonic (Any syllable which is not tonic is atonic): *tre - men – dous*.

The division of a word into syllables is called syllabification. The question of syllabification in English is controversial: different phoneticians hold different views about it. The linguistic importance of syllable division in different languages is in finding typology of syllables and syllabic structure of meaningful units of a language that is morphemes and words. It is the syllable division that determines the syllabic structure of the language, its syllabic typology. Syllabic structure of a language like its phonemic structure is patterned. It means that the sounds of language can be grouped into syllables according to certain rules, the first of those rules being morphemic. According to this criterion syllable boundaries correspond to those of a morpheme – the

smallest semantic unit. A most general rule says that division of words into syllables in writing follows the formal morphological principle: the separated part of a word should be either a prefix, or a suffix or a root (morphograph): *pic-ture* ['pik ʧə]. Compound words can be divided according to their meaning: *hot-dog*; *spot-light* It is not possible to divide a word within a phonetic syllable. A suffix of two syllables such as *-able*, *-ably*, *-fully* cannot be divided in writing: *reli-able, lov-ably, beauti-fully*. If there are two or three consonants before *-ng*, these consonants may be separated in writing: *gras-ping, puz-zling*. With the exception of *-ly*, a word cannot be divided so that an ending of two letters such > *-ed*, *-er*, begins the next line: *worked, teacher, hectic*, but: *cold-ly, bold-ly*. A word of one phonetic syllable, a word of less than five letters cannot be divided into syllables: *piece* [pi:s], *time* [taim].

The second principle is phonotactics that determines the rules of syllable division. Each syllable contains exactly one vowel. This vowel may be preceded or followed by one or more consonants. The vowel itself may be a short vowel, a long vowel or a diphthong; or if it is the weak vowel [ə], it may be combined with a nasal [n], [m]or a liquid [l] to give a syllabic consonant. It is generally agreed that phonetic syllable divisions must be such as to avoid (as far as possible) creating consonant clusters which are not found in words in isolation. This is called the phonotactic constraint on syllabification.

The following rules of phonetic (spoken) syllable division:

1) A syllable boundary is found wherever there is a word boundary, and also coincides with the morphological boundary between elements in a compound: *displace* [ˌdis 'pleis] *become* [bi 'kʌm] *countless* ['kaunt ləs] *hardware* ['ha:d weə] CVC-CSVC CV-CVS CVSC-SVC CVC-SV.

2) Consonants are syllabified with whichever of the two adjacent vowels is more strongly stressed: *farmer* ['fa:m ə], *agenda* [ə 'ʤəndə]. It they are both unstressed, it goes with the leftward one: *cinema* ['sin əmə], *delicious* [di 'lisəs], *deliberate* [di'lib ər ət].

3) The English diphthongs are unisyllabic, they make one vowel phoneme, while the triphthongs are disyllabic, because they consist of a diphthong + the neutral vowel/schwa: *table, science, flower* CV-CS CV-VSC CSV-V

4) The English affricates [ʧ], [ʤ] cannot be split: *catching* ['kæʧɪŋ].

5) Sometimes a syllable consists phonetically only of a consonant or consonants. If so, a consonant (or one of them) is nasal (usually [n]) or a liquid (usually [1] or [r] in AmE), for instance, in the usual pronunciation of *suddenly* ['sʌd n li]. Such a consonant is a syllabic consonant. The IPA provides a special diacritic [.] to show syllabicity, thus syllabic consonants may be shown [n̩] [l̩]. Instead of a syllabic consonant, it is possible to pronounce a vowel [ə] plus an ordinary (non-syllabic) consonant. Thus it is possible, though not usual, to say ['s ʌ d ən l ɪ]. When followed by a weak vowel, a syllabic consonant may lose its syllabic quality, becoming a plain non-syllabic consonant: threatening ['θret ənɪŋ] may be pronounced with three syllables including syllabic [n̩]: ['θretn̩ɪŋ] or compressed into two syllables with plain [n]: ['θretnɪŋ].

The syllable is a functional unit. Its functions cover both word and phrase. There are three functions of the syllable (as presented in Figure 20).

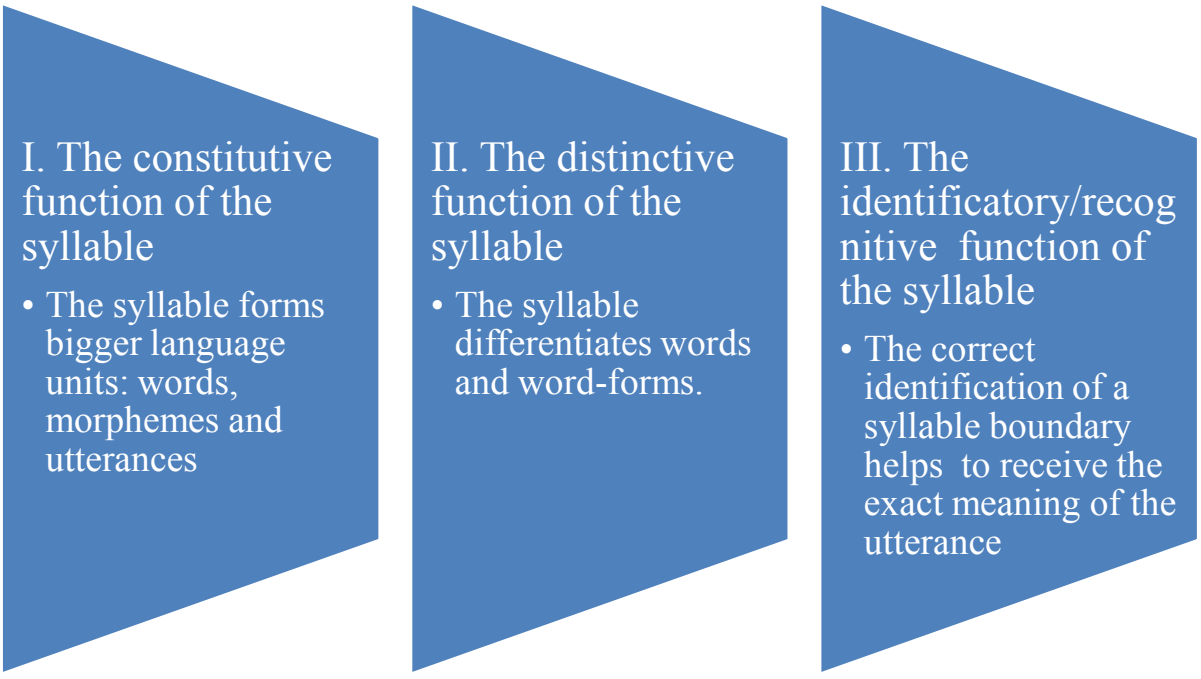


Fig. 20. Functions of the syllable

I. The syllable performs the constitutive function in a phrase: sound continuum becomes a phrase when it is divided into units organized by word stress into words.

II. The syllable alone can differentiate meanings of words or their forms. To illustrate the distinctive function of the syllable a set of minimal pairs should be found so that qualitative and/or quantitative features of allophones should

indicate the beginning or the end of the syllable: ['nai-treit] *nitrate* – ['nait-reit] *night-rate*. The distinction here lies in:

1) the degree of aspiration of [t] sounds which is greater in the first member of the opposition than in the second;

2) allophonic difference of [r]: in the first member of the opposition it is slightly devoiced under the influence of the initial [t];

3) the length of the diphthong [ai]: in the second member of the opposition it is shorter because the syllable is closed by a voiceless plosive [t].

III. Correct accentuation helps the listener to make the process of communication easier, whereas the distorted accentual pattern of words, misplaced word stresses prevent normal understanding.

an aim – a name
mice kill – my skill
an ice house – a nice house
peace talks – pea stalks
plate rack – play track

Sometimes the difference in syllabic division might be the basic ground for differentiation sentences in such minimal pairs as:

I saw her eyes. – I saw her rise.
I saw the meat. – I saw them eat.

2 Accentual Structure of English Words

The syllable, or syllables, which are uttered with more prominence than other syllables of the word are said to be stressed or accented. The amount of effort or energy expended in producing a syllable is called stress. For the hearer, stress is manifested as perceptual prominence, or strength. In other words, a stressed syllable seems more prominent or stronger than the other syllables in a word, it stands out.

– Speaker's perspective on stress
– Amount of effort expended
– Listener's perspective on stress
– Degree of perceptual prominence

Stress is an umbrella term for three main features, any of which may result when extra effort is expended in producing a syllable and any of which

may give an impression of perceptual prominence. These are: duration, or length; intensity, or loudness; and pitch, or fundamental frequency. The English stressed syllable – especially its vocalic nucleus – tends to have a greater degree of length, loudness and pitch associated with it than the unstressed syllable. Traditionally, the word 'stress' denotes prominence referring to die syllables in words as items of vocabulary, pronounced in isolation, but not in phrases and sentences – word stress/lexical stress which constitutes the third component of phonic structure of language. The problem of word stress has three aspects:

– the physical nature of word stress;
– the position of the word stress in disyllabic and polysyllabic words;
– the degrees of word stress.

Languages differ in all these aspects of word/lexical stress. Word stress can be defined as the singling out of one or more syllables in a word, which is accompanied by the change of the force of utterance, pitch of the voice, qualitative and quantitative characteristics of the sound which is usually a vowel. The correlation of varying prominences of syllables in a word is understood as the accentual structure of the word or its stress pattern. According to the most salient feature the following types of word stress are distinguished in different languages:

1) *dynamic* or *force stress* if special prominence in a stressed syllable(syllables) is achieved mainly through the intensity of articulation;

2) *musical* or *tonic stress* if special prominence is achieved mainly through the range of pitch, or musical tone.

3) *quantitative stress* if special prominence is achieved through the changes in the quantity of the vowels, which are longer in the stressed syllables than in the unstressed ones.

4) *qualitative stress* if special prominence is achieved through the changes in the quality of the vowel under stress. Vowel reduction is often used as manipulation of quality in unstressed syllables.

According to A.C. Gimson, the effect of prominence is achieved by any or all of four factors: force, tone, length and vowel colour [60]. The *dynamic* stress implies greater force with which the syllable is pronounced. In other words in

the articulation of the stressed syllable greater muscular energy is produced by the speaker. European languages such as English, German, French, Russian are believed to possess predominantly *dynamic* word stress. In Scandinavian languages the word stress is considered to be both *dynamic* and *musical*. The *musical* (or *tonic*) word stress is observed in Chinese, Japanese, Vietnamese. It is affected by the variations of voice pitch in relation to neighbouring syllables.

Recent investigations of lexical stress in English show the existence of a hierarchy of acoustic cues to the stressed status of a syllable in English: the perceptually most influential cue is (higher) pitch, the second most important cue in the hierarchy is (longer) duration, the third is (greater) intensity and the last is segmental (sound) quality. The English linguists (D. Crystal (1969), A.C. Gimson (1970) agree that in English 'word stress' or 'accent' is a complex phenomenon, marked by the variations in force, pitch, quantity and quality [60; 61]. The dynamic and the tonic features of English word stress prevail over the others. It should be noted that when the tonic or musical component of word stress is involved it is the change of pitch level that is significant in making the syllable prominent, but not the type of tone direction.

As to the *quantitative* and *qualitative* components of word stress they are also significant. Certain distinctions of the vowel length and colour are reduced or lacking in unstressed syllables. The fact strengthens the idea that the accentuation is influenced by the vowel length and quality. The vowel of the stressed syllable is perceived as never reduced or obscure and longer than the same vowel in the unstressed syllables. Thus, the word 'stress' or 'accent' is also defined as *qualitative* where the vowel colour or quality is a means of stress and quantitative with relatively increased length of the stressed vowel.

The term 'prominence' seems to cause some ambiguity when related to word stress. The stressed syllables are often said to be the most prominent syllables in the word. Prominence in speech is a broader term than stress. It is obtained by the components of word stress, such as the loudness, the length, the quality of the vowel plus the inherent sonority of the vowel and its historical

length. In a discourse the effect of prominence may be strengthened by the melody which is the component of intonation.

Languages are also differentiated according to the placement of word stress. The traditional classification of languages concerning place of stress in a word is into those with a fixed stress and those with a *free stress*. In languages with a *fixed stress* the occurrence of the word stress is limited to a particular syllable in a multisyllabic word. For instance, in French the stress falls on the last syllable of the word (if pronounced in isolation), in Finnish and Czech it is fixed on the first syllable, in Polish on the one but last syllable. In languages with a *free stress* its place is not confined to a specific position in the word. The word stress in English is not only *free* but it may also be *shifting*, performing the semantic function of differentiating lexical units, parts of speech, grammatical forms. It is worth noting that in English word stress is used as a means of word-building, in Russian it marks both word-building and word formation: *'contrast – con'trast, 'habit – ha'bitual, 'music – mu'sician*.

The opinions of phoneticians differ as to how many degrees of stress are linguistically relevant in a word. The majority of British (D. Jones, A.C. Gimson) [60; 77] and Russian linguists (V.A. Vassilyev, J. Shakhbagova) [99; 41; 42] usually distinguish three degrees of stress in the word. The primary stress is the strongest, the secondary stress is the second strongest. All the other degrees are termed weak stress. Unstressed syllables are supposed to have weak stress. The American scholars B. Bloch and G. Trager (1942) find four contrastive degrees of word stress, namely: loud, reduced loud, medial and weak stresses. Other American linguists also distinguish four degrees of word stress but term them: primary stress, secondary stress, tertiary stress and weak stress. The difference between the secondary and tertiary stresses is very subtle and seems subjective. The criteria of their difference are very vague. Secondary stress differs from tertiary in that it usually occurs on the 3rd or 4th pretonic syllable, and tertiary is always posttonic. The second pretonic syllables of such words as *,libe'ration, ,recog'nition* are marked by secondary stress in RP, in

General American they are said to have a tertiary stress. In GA a tertiary stress also affects the suffixes *-ory, -ary, -ory* of nouns and the suffixes *-ate, -ize, -y* of verbs, which are considered unstressed in RP: *'terri,tory, 'cere,mony, 'dictio,nary*; *'demonst,rate, 'orga,nize, 'simpli,fy*.

Basic stress rules are similar to those of phonotactics. There are three tendencies of stress/word accent distribution. The accentual structure of English words is liable to instability due to the different origin of several layers in the Modern English word stock. In Germanic languages the word stress originally fell on the initial syllable or the second syllable, the root syllable in the English words with prefixes. This tendency was called *recessive*. This tendency is present in old, usually short words of Germanic origin and in assimilated borrowed words consisting of 2-3 syllables, as it will be shown later.

The rhythm of alternating stressed and unstressed syllables gave birth to the *rhythmical* tendency in the present-day English which caused the appearance of the secondary stress in the multisyllabic French borrowings: *ˌrevo'lution, ˌorgani'sation, asˌsimi'lation*, etc. It also explains the placement of primary stress on the third syllable from the end in three- and four-syllable words: *'cinema, 'situate, ar'ticulate*. This tendency is very productive in multisyllable words. The *rhythmic* tendency becomes operative when such words occur in sentences and the first stress of a double-stressed English word disappears when n immediately or closely preceding word requires stress: *a 'very good-looking 'girl*.

The *retentive* tendency consists in the retention of the primary stress on the parent word: *'person – 'personal*, or more commonly the retention of the secondary stress on the current word: *'personal – personality*. The difference between constant accent and the *retentive* stress consists in that the former remains on the same syllable in all the grammatical forms of a word or in all the derivatives from one and the same root, whereas *retentive* stress in a derivative falls on the same syllable on which it falls in the parent word, while in her

derivatives from the same root it may be shifted: *'person ~ 'personal – per'sonify*.

Word stress/accent is a functional unit (as shown in Figure 21).

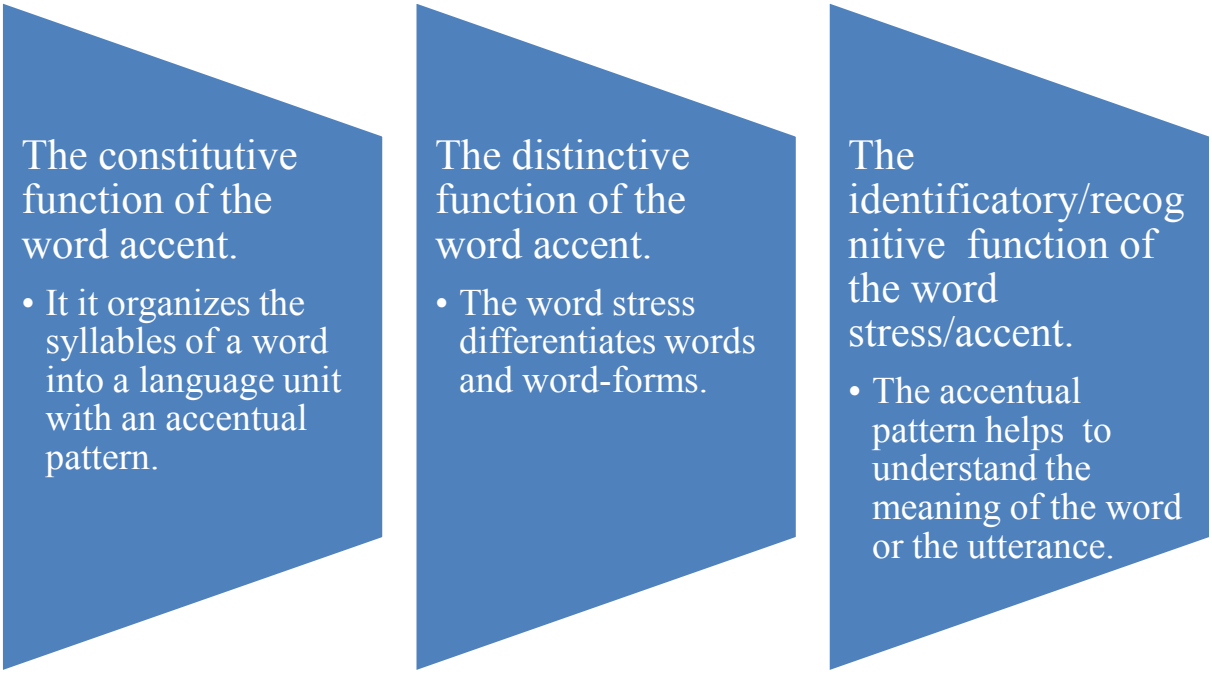


Fig. 21. Functions of the word stress

I. Word stress constitutes a word, it organizes the syllables of a word: a pattern of relationship among the syllables; a word does not exist without the word stress. Thus the word stress performs the constitutive function in a phrase: sound continuum becomes a phrase when it is divided into units organized by word stress into words.

II. Word stress alone can differentiate meanings of words or their forms. The accentual patterns of words or the degrees of word stress and their positions form oppositions.

III. Word stress makes it possible for a person to identify a succession of syllables as a definite accentual pattern of a word. This function of word stress is known as identificatory (or recognitive). Correct accentuation helps the listener to make the process of communication easier, whereas the distorted accentual pattern of words, misplaced word stresses prevent normal understanding.

an aim – a name
mice kill – my skill

an ice house – a nice house
peace talks – pea stalks

There are English words – compound words and words with the separable prefixes, accentual patterns of which are determined by the semantic factor. They generally have two equally strong stresses, both stressed parts are considered to be of equal semantic importance. The semantic factor thus cancels the *rhythmic* tendency in word stressing:

– compound adjectives: *hard-working, blue-eyed*,
– verbs with post positions: *sit down, take off*,
– numerals from 13 to 19: *fourteen, sixteen*.

The numerous variations of English word stress are systematized in the typology of accentual structure of English words worked out by G.P. Torsuev (1960) [36]. He classifies them according to the number of stressed syllables, their degree or character (the main and the secondary stress). The distribution of stressed syllables within the word accentual types forms accentual structures of words. Accentual types and accentual structures are closely connected with the morphological type of words, with the number of syllables, the semantic value of the root and the prefix of the word. The accentual types are as presented in Table 25.

Table 25 — AQccentual patterns of English words [36]

	Accentual structure	Type of words	Examples
1	[˩ –]	simple and compound words	*'father, 'possibly, 'mother-in-law, 'gas-pipe*
2	[˩˩]	compound words, most of them are with separable prefixes	*'radio-'active, 're'write, 'diso'bey*
3	[˩˩˩]	initial compound abbreviations	*U'S'A*
4	[˩˩˩˩]	initial compound abbreviations	*R'S'V'P*
5	[˩˥ –]	simple and compound words	*'hair-,dresser, 'sub,structure*
6	[˥˩ –]	simple and some compound words	the prefix and the root: *,maga'zine*
			the root and the suffix: *,hospi'tality*
			the prefix and the suffix: *,disorgani'zation*
7	[˩˥˩ –]	a small number of simple words with the separable prefixes	*'mis,repre'sent*
8	[˥˥˩ –]	a very small number of words, usually simple words with the stresses on the prefix, the root and the suffix	*,indi,viduali'zation*
9	[˩˩˥–]	rare instances of compound words with separable prefixes	*'un'sea,worthy*
10	[˩ –˥˥]	rare instances of simple and compound words	*'soda-,water ,bottle*
11	[˥˩˥]	rare instances of compound words consisting of the three components	*,ginger'beer-,bottle*

Orthographically identical word-pairs in English differentiated by word-stress as nouns/adjectives (stress on the initial syllable) or verbs (stress on the last syllable):

abstract	digest	perfume
accent	discard	pervert
addict	discharge	present
address	discount	project
affect	discourse	produce
affix	escort	progress
annex	envelope	protest
collect	exploit	rebel
combat	export	recess
commerce	extract	record
commune	fragment	refill
compound	import	refuse
compress	impact	segment
confine	impress	survey
conflict	incline	subject
contest	increase	suspect
contrast	insert	torment
convict	insult	transfer
defect	intern	transport
desert	object	
detail	outrage	

(The author suggests that you use the dictionary while working with this list)

A.C. Gimson establishes three groups of words with identical spelling representing different parts of speech which are opposed by means of shifting of the stress (Verb-Noun oppositions as presented in Tables 3-5) [60].

1. A small group of words where the noun is differentiated from a verb by the opposition of the accentual pattern of the word alone (as presented in Table 26).

Table 26 — Verb-Noun opposition I

increase	['inkris]	[in'kri:s]
insult	['insʌlt]	[in'sʌlt]
impress	['impres]	[im'pres]
inlay	['inlei]	[in'lei]

2. The second group where the shifting of the stress which means the change of the accentual pattern of the word may be or may not be accompanied

by the reduction of the vowel in the unstressed syllable of the verbs (as presented in Table 27).

Table 27 — Verb-Noun opposition II

transport	['trænspɔ:t]	[træns'pɔ:t]	[trəns'pɔ:t]
torment	['tɔ:ment]	[tɔ:'ment]	[tə'ment]

3. The largest group of such pairs of words manifests the change of their accentual pattern together with the qualitative reduction of the unstressed vowel (as presented in Table 5).

Table 28 — Verb-Noun opposition III

combine	['kɒmbain]	[kəm'bain]
conduct	['kɒndʌkt]	[kən'd ʌ kt]
contrast	['kɒntra:st]	[kən'tra:st]

Oppositions of accentual types of words are also observed as a concomitant factor in word-formation in addition to suffixation (as presented in Table 29).

Table 29 — Stress shift in derived words

'organize	,organi'zation	'solemn	'solemni'zation
'substitute	,substi'tution	,incon'siderable	'incon,side'ration
're'organize	're,organi'zation	'palatalize	'palatali'zation
'predis'pose	'pre,dispo'sition		

There is also a group of accentuation oppositions where compound nouns are opposed to free word combinations (as presented in Table 30).

Table 30 — Stress shift in compound noun-word combination oppositions

a 'blackboard	a 'black 'board
a 'dancing-girl	a 'dancing 'girl

The accentual structure of words is actually very closely interrelated with their semantic value. A fairly large class of words in English is marked by two primary stresses. They are either compounds consisting of two semantically important stems or words with semantically relevant separable prefixes or the suffix -teen. The accentual pattern of this group of words is regulated by the meaningful weight of the elements of the compounds. Word stress establishes

contrastive relationship of the elements and often creates opposition to comparable words. Most of compound adjectives have two equal stresses as both elements in them are semantically important: *'absent-'minded, 'left-'handed, 'good- 'looking*. As soon as the significance of one of the elements of a compound adjective is weakened, its accentual pattern is changed: *'spring-like, 'nymph-like, 'powder-like; 'oval-shaped, 'bow-shaped*. The same tendency is observed in compound nouns: if their elements are semantically important both elements are equally stressed: *'north- 'east, 'north- 'west, 'south-'west*. At the same time most of compound nouns have one stress on the first element which is more significant than the second one: *'dining-room – 'bedroom – 'bathroom – 'livingroom; 'shop-girl – 'ballet-girl*. The last, more productive element functions as the semisuffix, getting somewhat delexicalized. Compound verbs have two equal stresses as their postpositions change the actual meaning of the verb itself.

Words with meaningful prefixes are likewise semantically opposed to those without prefixes (as presented in Table 31).

Table 31 — Stress shift in words with lexicalized prefixes

'educated	'un'educated
'regular	'ir'regular
'please	'dis'please
'cyclone	'anti'cyclon
.understand	‘misunder’stand

Compound numerals have naturally two equal stresses, making both elements significant: ‘*twenty-three, ‘sixty-‘five*. Numerals with the –teen suffix are marked by two stresses to oppose them to the numerals with the unstressed suffix –ty. If the suffix –teen is not stressed the vowel [i:] in it is shortened and obscured, the sonant [n] is weakened, there is consequently a danger of misunderstanding.

Basic stress rules are similar to those of phonotactics. Thus, in order to decide on stress placement, it is necessary to make use of some or all of the following information:

1) whether the word is morphologically simple, or whether it is complex containing one or more affixes (prefixes or suffixes) or a compound word;

2) the grammatical category to which the word belongs (noun, verb, adjective, etc.)

3) the number of syllables in a word;

4) the phonological structure of the syllables;

5) the historical origin of a word.

Table 32 presents the stress placing in words with different number of syllables and sound quality.

Table 32 — Accent placing in words with regard to the number of syllables

Number of syllables	Grammatical category	The location of the accent	Examples
Two-syllable words	Verbs	The second syllable is stressed if it contains a long vowel or a diphthong, or if it ends with more than one consonant.	*Apply, attract, arrive.*
		If the final syllable contains a short vowel and one final consonant, the first syllable is stressed.	*Open, enter.*
		The final syllable is also unstressed if it contains *–ow.*	*Follow, borrow.*
	Simple adjectives	Behave like two-syllable verbs of Germanic origin.	*'Lovely, 'even, 'hollow, 'honest, 'perfect.*
	Nouns	The first syllable is stressed if the second syllable contains a short vowel.	*Dinner, money, colour.*
		The first syllable is not stressed if the second syllable contains any other than a short vowel.	*De'sign, balloon.*
Three-syllable words	Verbs	If the last syllable contains a short vowel and ends with not more than one consonant, it will be unstressed, and the stress will be placed on the preceding syllable.	*De'termine, en'counter.*
		If the last syllable contains a long vowel or a diphthong, or ends with more than one consonant, it will be stressed.	*Enter'tain, under'stand.*
	Nouns	If the final syllable contains a long vowel or a diphthong and/or ends with more than one consonant, the stress will usually be placed on the first syllable.	*'Intellect, 'marigold.*
		If the final syllable contains a short vowel and the middle syllable contains a short vowel and ends with not more than one consonant, the first syllable will be stressed.	*'Quantity, 'cinema.*
		If the final syllable contains contains a short vowel or [əu] and if the penultimate syllable contains a long vowel or a diphthong, or if it ends with more than one syllable, that penultimate syllable will be stressed.	*Po'tato, di'saster, sy'nopsis.*

Words with four or more syllables	Verbs/nouns/adjectives/ adverbs	The stress is placed on the third from the end syllable.	*E'mergency, hi'storical, ca'lamity.*

Words with complex morphological structure containing affixes (prefixes and / or suffixes) follow a different set of stress placement rules (as shown in Table 33).

Table 33 — Stress placement in word with affixes

Affixes	Affix type	Stress placement	Examples
Prefixes	Prefixes of Germanic origin. Prefixes of Latin origin	Words with prefixes tend to be stressed on the first syllable of the base/root, with the prefix either unstressed or having secondary stress.	*Awake, believe, forgive, foresee, mistake, outrun, overdo, untie, understand, uphold, withdraw.* *Admix, complain, discard, exclude, entreat, inhale, oppose, persuade, remember, subside, surmount.*
	Exception: a word with a prefix functions as a noun and has the same pattern as a noun compound (esp. words with prefixes of Latin origin).	The prefix or its first syllable tends to have primary stress.	*Foresight, outlook, overdose, underwear*, *upstart.* *BUT Fresh `PROduce (N) is expensive in winter.* *The company will PRO'duce (V) new brands.*
Suffixes	Stress-neutral suffix	The stress is in the base/stem of the word (for the most part, stress-neutral suffixes are Germanic in origin: *-hood, -less, -ship, -ful*).	*Childhood, tasteless, beautiful, friendship.*
		The stress is in the base/stem (derivational suffixes not all of Germanic origin) ending in *-ment*, and most of those ending in -y: *ary,-ery,-ory, -cy-, -acy, -ty*; diminutive *-y; -ish, -ism, -ist, -er, -ess, -ness, -dom.*	*Disagreement, infirmary, delicacy, foolish, separatist, lioness.*
		The stress is on the syllable immediately preceding the suffix *-eous*; *-graphy*; *-ial*; *-ian; -ic*; *-ical*; *-ious*; *-ity*; *-ion*.	*Advantageous*; *photography*; *proverbial*; *Parisian*, *climatic*; *ecological*; *injurious*; *ability*; *education*.
		If the base and the suffix have different origin, the suffix determines the English stress pattern: Germanic suffixes *-ly* and *-ness* added to the words of Romance origin cause no shift in stress: but the shift occurs on adding the Latin suffix *–ity*.	*PASsive, PASsively, PASsiveness* BUT *PASsive – pasSIVity*.
		2. Some suffixes can be stress-neutral or	*Adore – adorable*, *question – questionable*,

		stress-fixing in particular cases: *–able*. However, in some disyllabic roots with stress on the final syllable, the stress may be shifted to the first syllable of the root.	*reconcile – reconcilable.* *Admire – admirable.*
Stress-imposing/stress-attracting suffix – the suffix causes the stress to fall on a particular syllable of the stem.	Suffixes that have come into English via French *-aire*; *-eer*; *-ese*; *-esque*; *-ique*; *-oon*; *-ette*.	Often cause the final syllable of a word to receive primary stress.	*Questionnaire*; *volunteer*; *Vietnamese*; *grotesque*; *antique*; *balloon*; *cassette*.
Stressed/stress-fixing suffix – the suffix itself is stressed.		Stressed/stressfixing suffix – the suffix itself is stressed.	

Stress in compounds and phrases. Compounds function grammatically and/or semantically as a single word. Compounds may be written as one word: *dishwasher*, or with a hyphen: *user-friendly*, or with a space between the two elements: *season ticket*. There is no systematic practice, although there is a tendency for compounds with primary stress on the first element to be written as one word: *'firewood, 'homework, headline, 'screwdriver, 'laptop, 'setup, 'lifestyle*;or with a hyphen: *'ear-splitting, 'job-sharing, 'burn-out, 'lay-off, 'melt-down*, and for those with the primary stress on the final element to be written as two words: *'library book, 'running shoes, correspondence course*. Tha latter are usually represented by the following patterns: N+N: *'Figure frame, 'child abuse, 'theme park, 'tape measure*; expressions consisting of A(djective)+N, N's+N, N+V, N+Ving: *'batting average, 'bull'seye, 'crow'snest, 'landfill.*

Late stress is usual in the following compounds as if they were phrases: when the first element is the material or ingredient out of which the thing is made: *cherry 'pie, pork 'chop, pee 'pudding, panana 'split*, except for *cake, juice and water*: these have normal early stress: *'carrot cake, 'orange juice, 'mineral water*; the first element is a proper name: *,Euston 'Road, the ,Hilton 'Hotel, ,Oxford 'Circus*, except for *street*: these have normal early stress: *'Oxford Street, 'Euston Street*; the first element names a place or time: *,city 'centre, ,town 'hall, ,summer 'holidays, ,Easter'bunny, ,Christmas 'pudding, ,morning 'paper, ,office 'party, ,kitchen 'sink*; when both N_l and N_2 are equally referential: *acid 'rain, aroma 'therapy, fridge-'freezer*; when Nl is a value: *100 per cent 'effort, dollar 'bill, pound 'note*.

Compound adjectives divide fairly evenly between those with initial primary stress: *'seasick, 'hen-pecked, 'ladylike, and those with final stress: deep-'seated, rent-'free, skin-'deep, sky-'blue*. When an adjective modifies the following noun, they make a phrase, and typically, they have a late stress, the second word has more stress than the first: *,polished 'wood, ,interesting 'book, ,funning 'water, ,hard 'work, ,difficult 'course*.

Sometimes the same sequence of words can make a phrase or a compound. Here the late or early stress distinguishes them as presented in Table 34.

Table 34 — Stress placement in compounds

Compounds = early stress	Phrases = late stress
a 'darkroom = a room for developing photographs.	a ,dark 'room = a room which is dark because there is little light in it.
a 'moving van = to carry furniture when one moves house.	a ,moving 'van = a van that is in motion.
a blackbird = a kind of bird: Turdus merula.	a ,black 'bird = any bird that is black.
an 'English teacher = a teacher of English.	an ,English 'teacher = a teacher who is English.

There is free variation of stress location in some English words due to some rhythmic and analogical pressures, both of which entail in addition considerable changes of sound pattern in words: 1) in some words of three syllables, there is variation between '- - - and -'- - patterns: *deficit, integral (adj), exquisite*; 2) similarly, in words of four syllables, there is variation between first and second syllable stressing: *hospitable, formidable, despicable*.

There are also often differences between the stressing of compounds in RP and General American (as displayed in Table 35).

Table 35 — Difference in stress distribution in BrE and GA

RP	GA
'season ,ticket	,season 'ticket
,Adam's 'apple	'Adam's ,apple
,peanut 'butter	'peanut ,butter
,vocal 'cords	'vocal ,cords

The variability of the word accentual structure is multiplied in connected speech. The accentual structure of words may be altered under the influence of rhythm:

An 'unpolished 'stone. But: The 'stone was un'polished.

'Find 'page four'teen. But: We 'counted 'fourteen 'birds.

The tempo of speech may influence the accentual pattern of words. With the quickening of the speed the carefulness of articulation is diminished, the

vowels are reduced or elided, the secondary stress may be dropped: *The 'whole organi'zation of the 'meeting was 'faulty*.

The word stress is closely interrelated with sentence stress. The difference between the word stress and sentence stress is very important. Word stress and sentence stress are first of all different in their sphere of application as they are applied to different language units: Word stress is naturally applied to a word, as a linguistic unit, sentence stress is applied to a phrase. Sentence stress usually falls on the very syllable of the word which is marked by word stress. Thus the accentual structure of the word predetermines the arrangement of stresses in a phrase. At the same time the stress pattern of a phrase is always conditioned by the semantic and syntactical factors. The notional words usually become stressed in a phrase. They convey the main idea of the phrase, though any word may be marked by sentence stress, if it has semantic value in the sentence. The word stress and sentence stress help to organize the speech rhythm by alternating stressed and unstressed syllables and pronouncing them at approximately equal intervals. The distinction of the rhythmic structure of a word and a phrase is clearly observed in the cases when the word stress in notional words is omitted in a phrase: *I 'don't think he is 'right*. Or when the rhythmic structure of the isolated word does not coincide with that of a phrase: *'Fifteen. 'Room Fif'teen. 'Fifteen 'pages*. So in the speech chain the phonetic structure of a word obtains additional characteristics connected with rhythm, melody, and tempo. Though the sentence stress falls on the syllable marked by the word stress it is not realized in the stressed syllable of an isolated word, but in a word within the speech continuum. Sentence stress organizes a sentence into a linguistic unit, helps to form its rhythmic and intonation pattern, and performs its distinctive function on the level of a phrase.

Topic 5 GENERAL CHARACTERISTICS OF ENGLISH INTONATION

1. Structure and function of intonation
2. Notation and meaning of intonation patterns

1 Structure and Function of Intonation

Intonation is a language universal [68]. There are no languages which are spoken as a monotone, without any change of prosodic parameters. But intonation functions in various languages in a different way. Variations in pitch, prominence/stress, and tempo are considered to be supra-segmental or prosodic. They are traditionally termed ‘intonation’. Words in speech are not used in isolation but in phrases and sentences where they are organized according to grammar rules, get a different degree of prominence, pitch and loudness, tempo. The most important intonation/suprasegmental effects in a language are provided by (as presented by Figure 22):

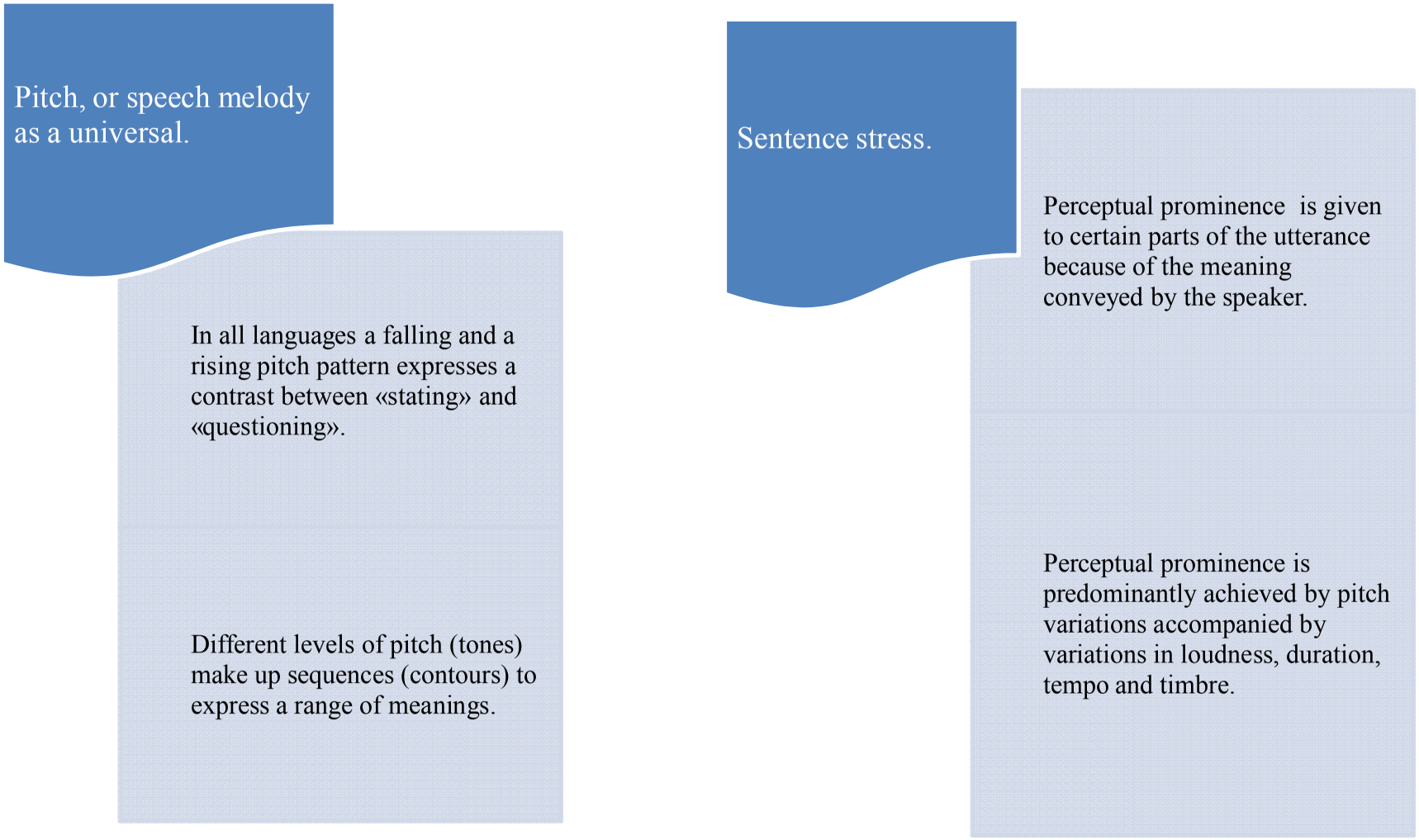


Fig. 22. Suprasegmental/prosodic means

The speakers choose to make certain words in an utterance more or less prominent and the intonation contour made of varying prosodic components designs the the meaning of the utterance. The speakers can also increase or decrease the pronunciation rate to convey different meanings. In many languages, greater speech speed conveys urgency, rapidly pronounced, clipped speech – irritation, slowly uttered phrases – personal involvement, etc. The linguists agree that on perception level prosody is a complex, a whole, formed by significant closely related variations of pitch, loudness, tempo, and speech timbre. On the perception level a complex unity is formed by significant variations of 1) pitch, 2) loudness (force) and 3) tempo (the rate of speech and pausation) is called intonation. It corresponds to the aspects of speech sounds discussed in Topics 1 and 2. Variations in pitch range occur within the normal range of the human voice. Three pitch ranges and levels are generally distinguished. Pitch ranges are normal, wide, narrow. Pitch levels may be high, medium and low. The rate of speech can be normal, slow and fast. The parts of the utterance which are particularly important sound slower. Unimportant parts are commonly pronounced at a greater speed than normal.

On the acoustic level pitch correlates with the fundamental frequency of the vibration of the vocal cords; loudness correlates with the amplitude of vibrations; tempo is a correlate of time during which a speech unit lasts. The boundaries of an intonation pattern may be marked by stops of phonation – temporal pauses. Intonation patterns serve to actualize syntagms – groups of words which are semantically and syntactically complete. In phonetics actualized syntagms are called intonation groups.

Within intonation groups not all stressed syllables are of equal importance. One of the syllables forms the nucleus (focal point, semantic centre, focus, prominence) of an intonation pattern as it has greater prominence. An intonation pattern contains one nucleus and may contain other stressed or unstressed syllables preceding/following the nucleus. In oral English the

smallest piece of information is associated with an intonation group: a unit of intonation containing the nucleus.

The nucleus may be preceded or followed by stressed and unstressed syllables. Stressed syllables preceding the nucleus together with the intervening unstressed syllables form the Head of a tone unit. Initial unstressed syllables make the Prehead. Unstressed and half-stressed syllables following the nucleus are called the Tail. After a falling tone, the rest of the intonation pattern is usually realized at a low pitch. After a rising tone the rest of the intonation pattern moves in an upward pitch direction: the nucleus and the tail form what is called terminal tone.

The Head and the Prehead form the pre-nuclear part of the intonation pattern and; like the Tail, they may be looked upon as optional elements. Variation within the pre-nucleus does not usually affect the grammatical meaning of the utterance, though it often conveys meanings associated with attitude or phonetic styles. There are three common types of pre-nucleus: a descending type in which the pitch gradually descends (often in ‘steps’) to the nucleus; an ascending type in which the syllables form an ascending sequence and a level type when all the syllables stay more or less on the same level. As the examples show, the different types of pre-nucleus do not affect the grammatical meaning of the sentence but they can convey something of the speaker's attitude. The intonation pattern is divided into functional parts (as presented in Figure 23).

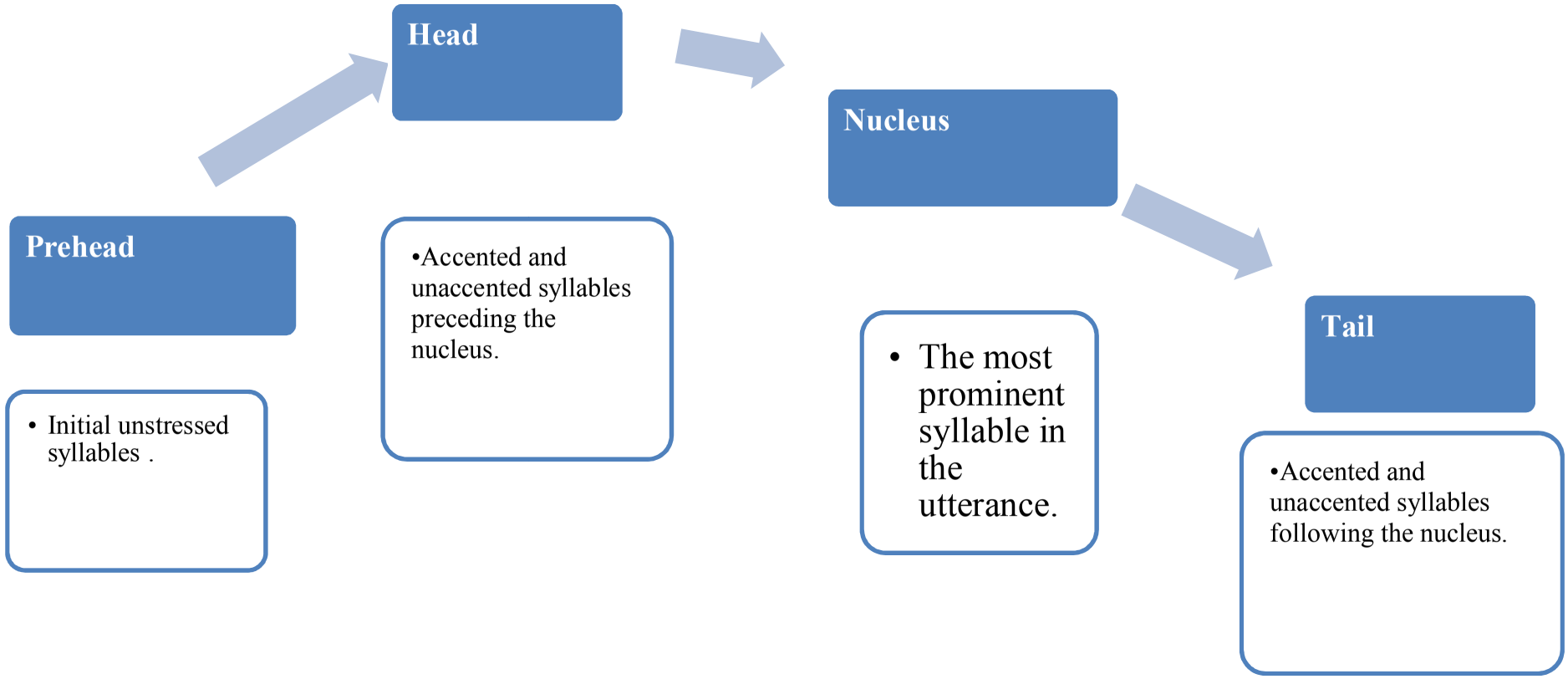


Fig. 23. Functional parts of the intonation group

There is no exact match between punctuation in writing and intonation groups in speech. Speech is more variable in its structuring of information than writing. A single phrase may have just one intonation group; but when the length of phrase goes beyond a certain point (say roughly ten words), it is difficult not to split it into two or more separate pieces of information:

The man told us we could park it here.

The man told us | we could park it at the railway station.

The man told us | we could park it | in the street over there.

The nucleus marks the focus of information or the part of the pattern to which the speaker especially draws the hearer's attention. The focus of information may be concentrated on a single word or spread over a group of words. Formally the nucleus can be defined as the syllable with the highest degree of phonetic prominence. It is normally the last accented syllable of a notional word in the syntagm. The pitch movement changes direction significantly: the pitch goes distinctly up or down. The nuclear tone is the most important part of the intonation pattern. Out of the possible positions of the nucleus in an intonation group, there is one position which is normal or unmarked, while the other positions give a special or marked effect. In the example: ‘He's gone to the office’ the nucleus in an unmarked position would occur on ‘office’. The general rule is that, in the unmarked case, the nucleus falls on the last lexical item of the intonation group and is called the end-focus. In this case sentence stress is normal. But there are cases when you may shift the nucleus to an earlier part of the intonation group. It happens when you want to draw attention to an earlier part of the intonation group, usually to contrast it with something already mentioned, or understood in the context. In the marked position we call the nucleus contrastive focus or logical sentence stress. Here are some examples:

– Did your sister STUDY in Moscow?

– No, she was ˌBORN in Moscow.

In this example contrastive meaning is signalled by the falling tone and the increase of loudness on the word born. Sometimes there may be a double contrast in the phrase, each contrast indicated by its own nucleus: *Her ˌmother | is ˌPolish | but her ˌfather | is ˌGerman*.

In a marked position, the nuclei may be on any word in an intonation group or a phrase. Even words like personal pronouns, prepositions and auxiliaries, which are not normally stressed at all, can receive nuclear stress for special contrastive purposes: the widening of the range of pitch of the nucleus, the increase of the degree of loudness of the syllable, the slowing down of the tempo make sentence accent emphatic.

The pitch can change either in one direction (a simple tone) or more than one direction (a complex tone). Pitch movements with the change in direction are termed 'kinetic'. Static tones in which the pitch of the voice changes its direction insignificantly or not at all, are represented by the *High Level* tone, the *Low Level* tone.

In English speech there is often clear evidence of an intonation-group boundary, but no audible nuclear tone movement preceding. In these cases the speakers may take two courses: either to classify the phenomenon as a further kind of Head or to consider it the Level nuclear tone. Usually the second course is taken because:

1) The final *Level* tone is always more prominent. The syllable on which it occurs is lengthened substantially, and there is a clear rhythmic break between what precedes and what follows.

2) The *Level* tone nearly always occurs on the last lexical item (not necessarily always in spontaneous speech) before a phonetic boundary and this is distributionally similar to a nuclear tone.

3) In subordinate structures the *Level* tone may be replaced by a rising-type tone.

4) In non-subordinate structures this tone has a range of meaning (boredom, sarcasm, etc.) which is very similar in force to other nuclear semantic functions. *Low Level* tone is very characteristic of reading poetry. Though occasionally heard in reading *Mid Level* tone is particularly common in spontaneous speech functionally replacing the rising tone.

The meaning of the intonation group is the combination of the 'meaning' of the terminal tone and the pre-nuclear part combined with the 'meaning' of pitch range and pitch level. The parts of the intonation pattern can be combined in various ways manifesting changes in meaning. The bigger the pitch contrasts within the intonation pattern are, the more emphatic the intonation group sounds.

Pausation is another aspect of intonation patterns. Speech continuum can be split into smaller portions by means of pauses. Pauses are complete stops of phonation. There are three kinds of pauses classified according to their length (as shown in Figure 24).

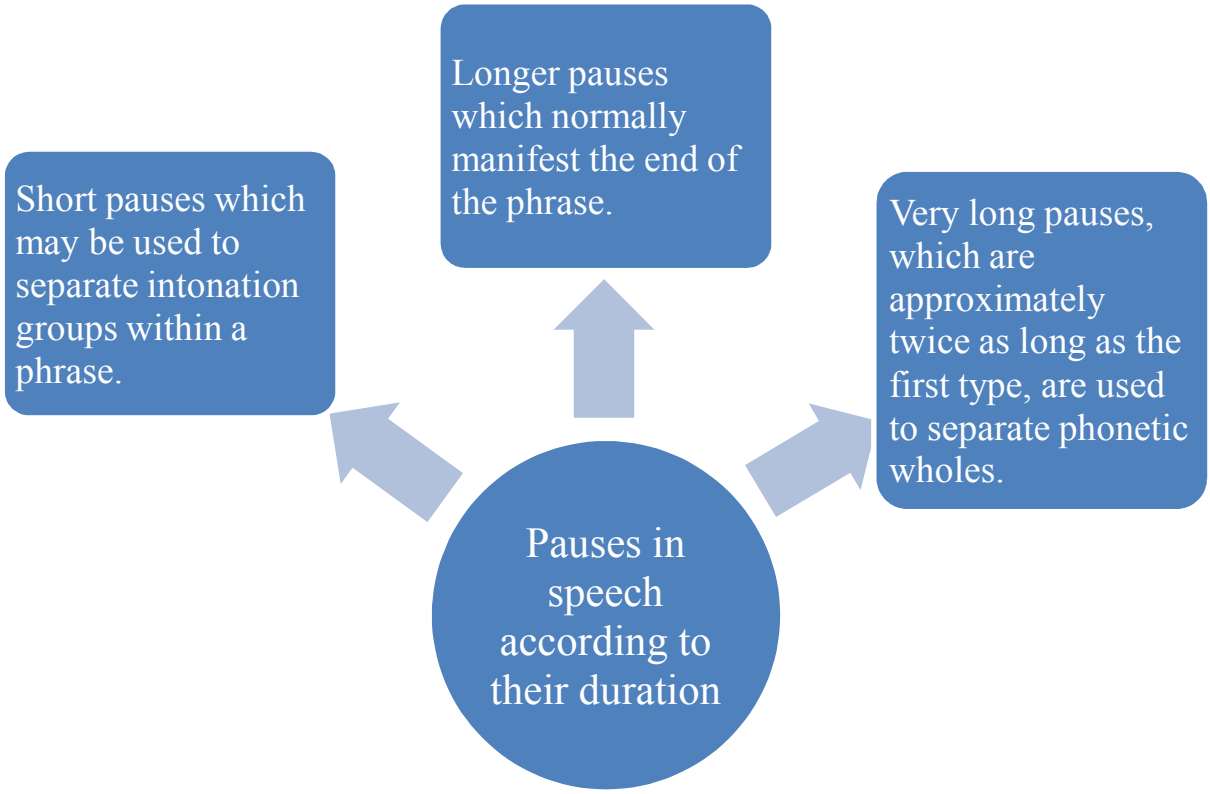


Fig. 24. Types of pauses in speech chain

Another classification of pauses is done according to their function (as presented in Figure 25).

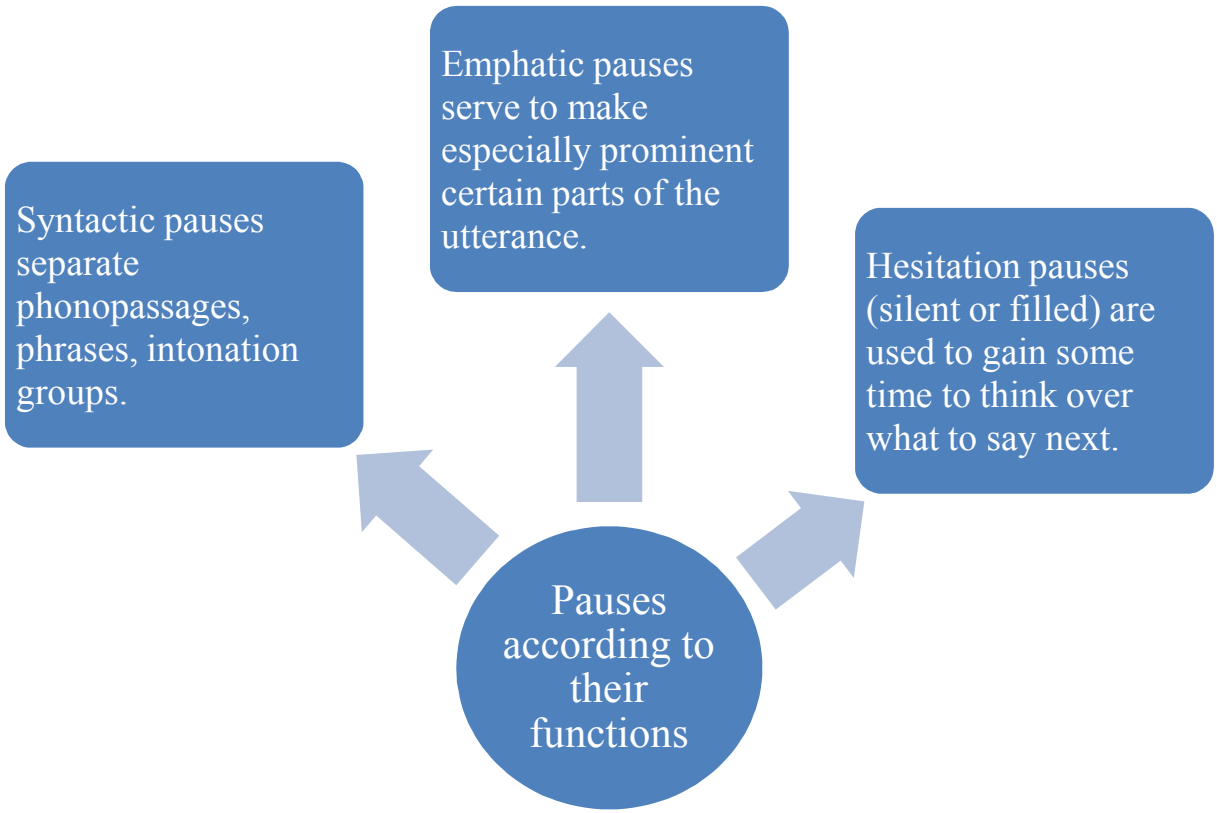


Fig. 25. Functional classification of pauses

Sometimes the stop can be perceived even when there is no stop of phonation. The stop of phonation is not the only factor marking an intonation unit boundary. Other factors are a perceivable pitch change, presence of juncture at the end of each intonation group.

One of the aims of communication is the exchange of information between people. The meaning of an English utterance, the information it conveys to a listener, derives not only from the grammatical structure, the lexical composition and the sound pattern [22; 28]. It also derives from variations of intonation, of its prosodic parameters. There is no general agreement about either the number or the headings of the functions of intonation. The functions of intonation are summarized in Table 36.

Table 36 — Functions of intonation [61; 64]

Function	Its explanation
Emotional	To express a wide range of attitudinal meanings – excitement, boredom, surprise, friendliness, reserve, etc. Here, intonation works along with other prosodic and paralinguistic features to provide the basis of all kinds of vocal emotional expression.
Grammatical	To mark grammatical contrasts. The identification of such major units as clause and sentence often way pitch contours break up an utterance; and several specific contrasts depends on the, such as question and statement, or positive and negative, may rely on intonation. Many languages make the important conversational distinction between 'asking' and 'telling' in this way: She's here, isn't she! (where a rising pitch is the spoken equivalent of the question mark) vs She's here, isn't she! (where a falling pitch expresses the exclamation mark).
Information structure	To convey what is new and what is already known in the meaning of an utterance – what is referred to as the 'information structure' of the utterance. If someone says I saw a BL UE car, with maximum intonational prominence on blue, this presupposes that someone has previously asked about the colour; whereas if the emphasis is on I, it presupposes a previous question about which person is involved. It would be very odd for someone to ask Who saw a blue car!, and for the reply to be: I saw a BLUE car!
Textual	To construct larger than an utterance stretches of discourse. Prosodic coherence is well illustrated in the way paragraphs of information are given a distinctive melodic shape: in radio news-reading. As the news-reader moves from one item of news to the next, the pitch level jumps up, then gradually descends, until by the end of the item the voice reaches a relatively low level.
Psychological	To organize language into units that are more easily perceived and memorized. Learning a long sequence of numbers, for example, proves easier if the sequence is divided into rhythmical 'chunks'.
Indexical	To serve as markers of personal identity – an 'indexical' function. In particular, they help to identify people as belonging to different social groups and occupations (such as preachers, street vendors, army sergeants).

Peter Roach summarizes the following functions of intonation (as presented in Table 37).

Table 37 — Functions of intonation [89; 90]

Function	Its Explanation
Attitudinal	Intonation enables us to express emotions and attitudes as we speak, and this adds a special kind of 'meaning' to spoken language.
Accentual	Intonation helps to produce the effect of prominence on syllables that need to be perceived as stressed, and in particular the placing of tonic stress on a particular syllable marks out the word to which it belongs as the most important in a tone unit.
Grammatical	The listener is better able to recognize the grammar and the synctactic structure of what is being said by using the information contained in the intonation: for example, such things as the placement of boundaries between phrases, clauses and statements and the use of grammatical subordination may be indicated.

Discourse	Intonation can signal to the listener what is to be taken as new information and what is already given, can suggest when the speaker is indicating some sort of contrast or link with material in another tone-unit and, in conversation, can convey to the listener what kind of response is expected.

T.M. Nikolajeva names the three functions of intonation: delimitating, integrating and semantic functions [26]. L.K. Tseplitis suggests the semantic, syntactic and stylistic functions the former being the primary and the two latter being the secondary functions [40].

J.D. O'Connor and G.F. Arnold assert that a major function of intonation is to express the speaker's attitude to the situation he is placed in, and they attach these meanings not to pre-head, head and nucleus separately, but to each of ten 'tone-unit types' as they combine with each of four sentence types, statement, question, command and exclamation [84; 85; 86].

M. Halliday supposes that English intonation contrasts are grammatical. He argues first that there is a neutral or unmarked tone choice and then explains all other choices as meaningful by contrast [69; 70]. M.A. Sokolova, K.P. Gintovt, I.S. Tikhonova and R.M. Tikhonova view intonation as a complex structure of all its prosodic parameters [34; 35]. They argue that intonation choices carry information about the structure of the interaction, the relationship between and the discourse function of individual utterances, the international 'givenness' and 'newness' of information and the state of convergence and divergence of the participants. The functions intonation contours fulfil in utterances define the meanings intonation contours have.

English intonation cannot be fully described without reference to speech rhythm. It should be understood that prosodic components (pitch, loudness, tempo) and speech rhythm work interdependently: prosody supplies means for creating speech rhythm. Rhythm makes up framework of speech organization. Sometimes rhythm is considered one of the components of intonation [61-64]. But it is not singularly prosodic in its nature: sound/word repetition, syntactical parallelism, stylistic intensification can be perceived as rhythmical. A.M.

Antipova defines rhythm as a complex language system which is formed by the interrelation of lexical, syntactic and prosodic means [1-3].

Speech rhythm is traditionally defined as recurrence of stressed syllables at more or less equal intervals of time in a speech continuum. It has long been believed that the basic rhythmic unit is a rhythmic group, a speech segment which contains a stressed syllable with preceding or/and following unstressed syllables attached to it. Another definition treats a rhythmic group as one or more words closely connected by sense and grammar, but containing only strongly stressed syllable and being pronounced in one breath. The stressed syllable is the prosodic nucleus of the rhythmic group. The initial unstressed syllables preceding the nucleus are called proclitics; those following the nucleus are called enclitics.

Speech rhythm is conditioned by the language. Syllable-timed languages allow the speaker to give an approximately equal amount of time to each either stressed or unstressed syllable which produces the effect of even rather staccato rhythm. Stress-timed languages base the rhythm is based on larger than syllables units. Thus total time of uttering each rhythmic unit is practically unchanged unlike the amount of time given on each syllable – syllables can get compressed: speech rhythm has the immediate influence on vowel reduction and elision. At the same time peaks of prominence within the rhythmic unit appear at approximately regular intervals. The most frequent type of a rhythmic group includes 2-4 syllables. According to the aspect of the rhythm-formation the basic rhythmic unit can be defined as 1) an accentual group or a stress group – a speech segment with a stressed syllable with or without attached unstressed syllables; a pause group – a group of words between two pauses; a breath group uttered within a single breath. Most linguists use the term ‘rhythmic group/structure’ [4; 7; 9; 20; 24; 31; 32; 37ж 54; 55; 60; 63; 83].

Rhythmic groups blend together into intonation groups which correspond to the smallest semantic text units – syntagms. The intonation group reveals the similarity of the following features: the tone maximum of the beginning of the

intonation group, loudness maximum, the lengthening of the first rhythmic group in comparison with the following one, the descending character of the melody, often a bow-shaped melody contour. An intonation group includes from 1 to 4 stressed syllables. Most of intonation groups last 1-2 seconds. The end of the intonation group is characterized by the tone and loudness extremum, the lengthening of the last rhythmic group in it, by the terminal tone and a short pause. Syllables or words which are articulated precisely are those high in information content, while those which are weakened, shortened, or dropped are predictable and can be guessed from context. In every language, characteristic intonation contours carry both referential and affective meaning. In their referential function, intonation contours provide an interpretation for a sentence by indicating which part of the information is viewed as new versus known, salient versus less salient, or topic versus comment. Intonation and stress are highly context-dependent, so that the patterns of stress and pitch that characterize isolated words or phrases are typically modified when these words or phrases occur in the context of longer utterances.

2 Notation and meaning of intonation patterns

There are a variety of methods for recording intonation patterns and marking prosodic units. International Phonetic Association presents the chart with markings for suprasegmental units (Fig. 5, Appendix A).

As pitch is the dominant prosodic unit most methods take it into consideration only:

1. The method introduced by Ch. Fries involves drawing a line around the sentence to show relative pitch heights.

2. D. Bolinger favoured the second method when the syllables are written at different heights across the page (Figures 26-27 taken from 54- 56].

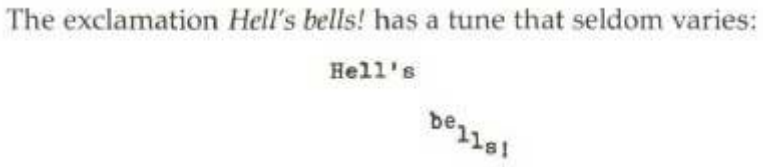


Fig. 26. Tune of the phrase (correct intonation)

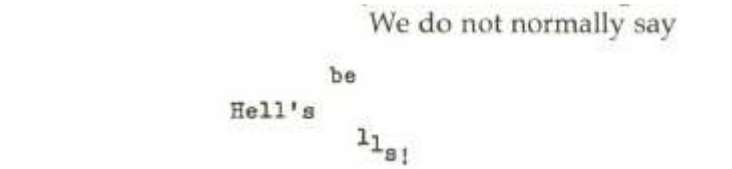


Fig. 27. Tune of the phrase (incorrect intonation)

3. K. Pike and others use the ‘levels’ method – a number of discrete levels of pitch are recognized, and the utterance is marked by numbering them accordingly.

4. D. Jones, J.D. O'Connor and G.F. Arnold, M. Halliday, D. Crystal and others use the traditional method which considers parameters of pitch movement [57; 58; 61-64; 69-71; 77; 84-86; 90; 103]. The method describes the number of terminal tones and prenuclear parts. D. Jones recognizes 2 tones. J.D. O'Connor and G.F. Arnold' system recognizes 10 nuclear tones (Figure 28) [84, p. 290].

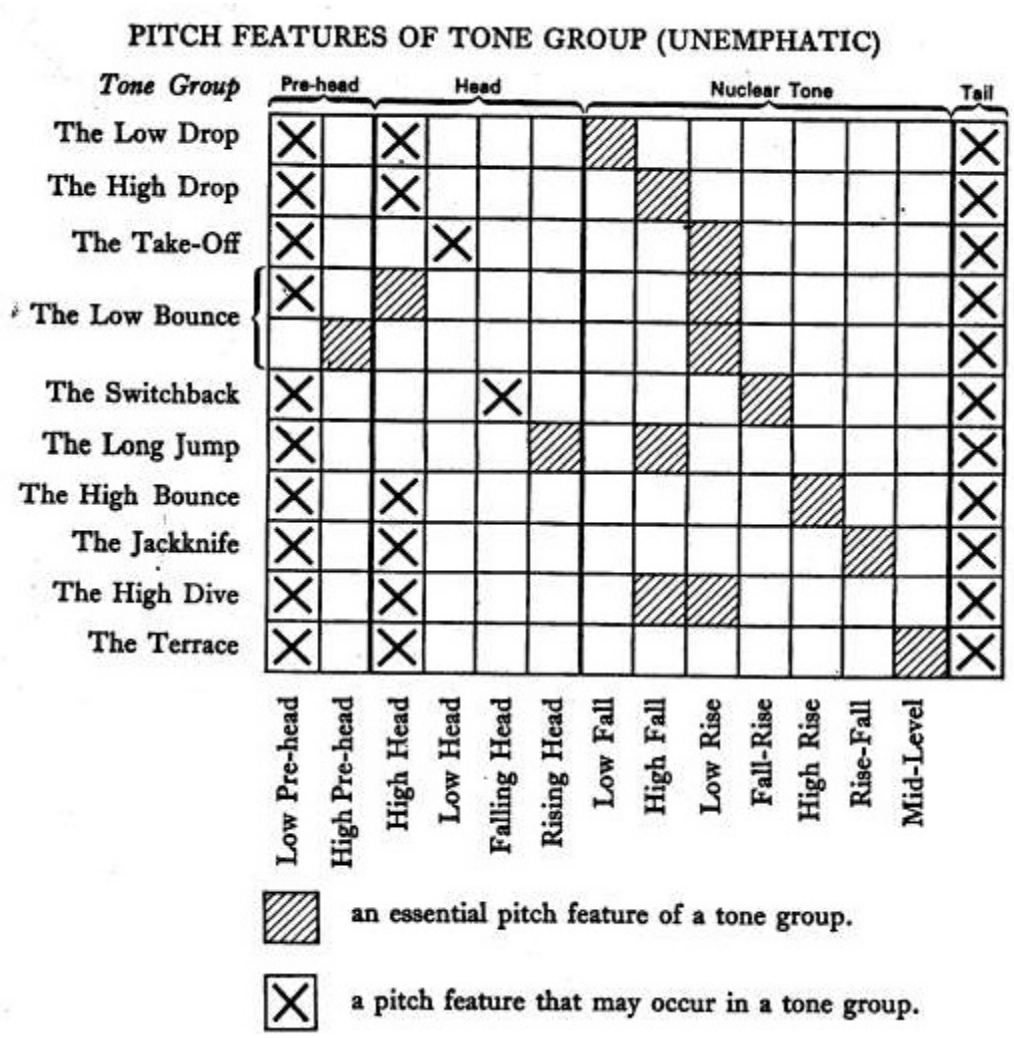


Fig. 28. Enemphatic intonation patterns

All the relevant pitch changes in the pre-nuclear part are indicated by arrows placed before the first stressed syllable instead of an ordinary stress-mark (as shown in Figure 29).

What's ˈwrong, ˌJim? ˇSorry. ‖ He's ˈout.

Fig. 29. Intonation patterns with markings

Traditional representation of intonation contours/patterns takes into account meanings different intonation contours applied to sentences with different syntactical structure may have [91]. The meanings of the nuclear tones are difficult to specify in general terms (as shown in Table 38).

Table 38 — Meanings of nuclear tones in English

Nuclear Tone	General meaning of the tone	Meaning of the nuclear tone	Form of the nuclear tone
The falling tone	The falling tone expresses ‘certainty’, ‘completeness’, ‘independence’. It asserts a fact of which the speaker is certain. It has an air of finality.	The Low Fall enables the speaker to convey an impression of neutral, calm finality, defmiteness, resoluteness. Phrases with the Low Fall sound categoric, calm, neutral, final.	A straight-forward statement normally ends with a falling tone. The Low Fall in the nucleus starts somewhat higher than the mid level and usually reaches the lowest pitch level. It is represented graphically with a downward curve on the tonogram and its tone mark in the text is ↘.
		The High Fall provides a great degree of prominence, depending on the height of the fall. The High Fall adds personal concern, interest and warmth to the features characteristic of the Low Fall. It sounds lively, interested, very emotional, warm and airy.	The High Fall in the nucleus starts very high and reaches the lowest pitch. Its tone mark in the text is ↘.
The rising tone	A rising tone of any level and range expresses ‘uncertainty’, ‘incompleteness’ or ‘dependence’. A general question, for instance, has a rising tone, as the speaker is uncertain of the information they have or want to get.	The Low Rise conveys a feeling of non-finality, incompleteness, hesitation. This tone sounds non categoric, non-final, encouraging further conversation, wondering, mildly puzzled, soothing.	The Low Rise in the nucleus starts from the lowest level and reaches the medium level (the nuclear variant). If the nucleus is followed by a tail, it is pronounced on the lowest level and the syllables of the tail rise gradually (the nuclear-post-nuclear variant). Two variants of the Low Rise (the nuclear and the nuclear-post-nuclear) are pronounced in a different way and consequently they have different graphical representations on the tonogram, but the same tone marks in the text.
		The High Rise expresses the speaker's active request for information. It is often used in echoed utterances, calling for repetition, rechecking or requesting	The High Rise in the nucleus rises from medium to high pitch, if there is no tail. If there are unstressed syllables following the nucleus, the latter is pronounced on a fairly high level pitch and the

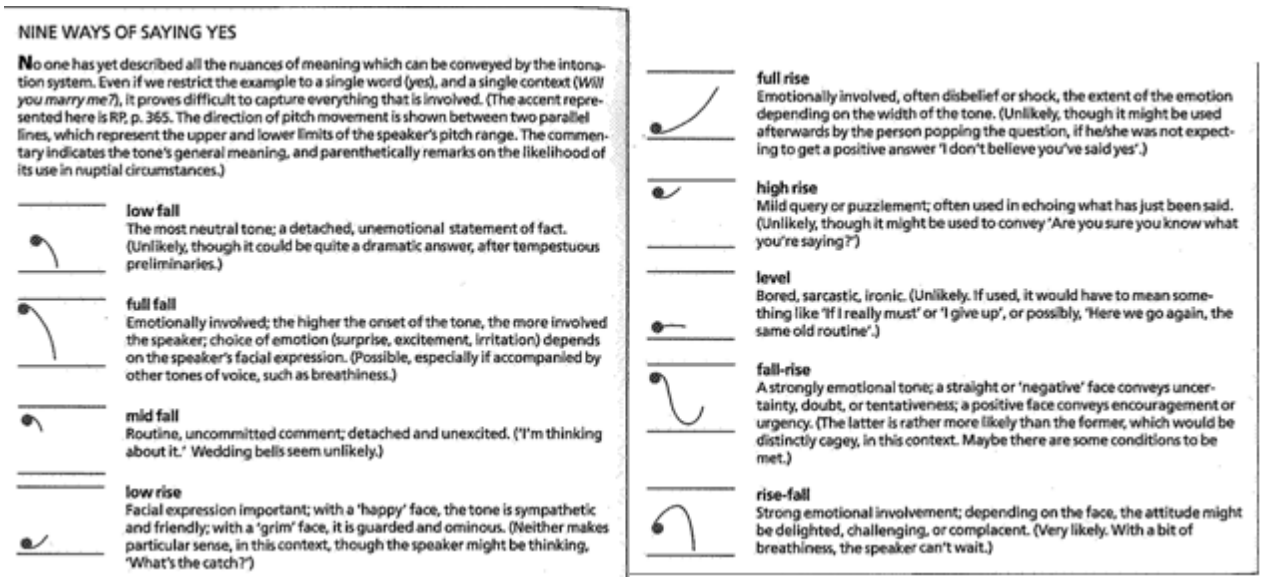
		the additional information. Sometimes this tone is used to keep the conversation going.	syllables of the tail rise gradually.
The falling-rising tone	The falling part marks the idea which the speaker wants to emphasize and the rising part marks the addition to this main idea.	The Fall-Rise is a highly implicatory tone. The speaker leaves something unsaid known to both co-communicators. It is often used in statements (correction of or contradiction to previous phrase, warning) and imperatives (pleading). Greetings sound pleasant and friendly: *He is ↘thirty. – He is ↘thirty-↗five* (a mild correction). *We'II ↘go there.–- You ↘↗shan't.* (a contradiction). *I must be on ↘time. – ↘You'll be ↗late* (a warning). *It's all so ↘awful. – ↘Cheer ↗up.* (pleading). *Goodnight, Betty. – ↘Good ↗night, Mrs. Sandford.* (friendly).	The Fall-Rise is called a compound tone: Low Fall-Low Rise or the High Fall-Low Rise. The Low Fall-Rise may be spread over one, two or a number of syllables; the High Fall-Rise always occur on separate syllables. If the Low Fall-Rise is spread over one syllables, the fall occurs on the first part of the vowel from a medium till a low pitch, the rise occurs on the second part of the vowel very low and does not go up too high: *↘↗No* (the undivided variant). If the fall and rise occur on different syllables, any syllables occurring between them are said on a very low pitch, notional words are stressed: *I ↘think his face is fa↗miliar* (the divided variant).
The rising-falling tone	The Rise-Fall denotes that the speaker is deeply impressed (favorably or unfavorably). The Rise-Fall sometimes expresses the meaning of 'even': *You aren't ↗↘trying.* (You aren't even trying).	The tone is used in statements and questions which sound impressed, challenging, disclaiming responsibility; imperatives sound hostile and disclaiming responsibility: *Don't treat me like a baby. – Be ↗↘sensible then.* *Has he proposed to her? - Why should you ↗↘worry about it?* *Did you like it? – I simply ↗↘hated it.* *I'm awfully sorry. – No ↗↘doubt. (But it's too late for apologies).*	The Rise-Fall is a compound tone. In syllables pronounced with the Rise-Fall the voice first rises from a fairly low to a high pitch, and then quickly falls to a very low pitch: *Are you sure? – ↗↘Yes.*
The level tone	The Mid-Level is used in non-final intonation groups and		The Mid-Level tone in the nucleus is pronounced on the medium level with any following tail syllables on

	expresses non-finality without any expression of expectancy: *Couldn't you help me ? >At present | I'm too busy.* *What did Tom say? >Naturally, | he was delighted.*		the same level. Its tone mark in the text is > and it is marked on the tonogram with a dash: –.

Degrees of information are relevant not only to the position of sentence stress but also to the choice of the nuclear tone. To give subsidiary or less important information, information which is more predictable from the context or situation, the rising or level nuclear tone is used. The falling tones of wide range of pitch combined with a greater degree of loudness can be used to express emphatic stress, to give emphasis to the main information in a phrase. Thus, another use of intonation in English is that of transmitting feelings/emotions and modality. Intonation patterns represent abstract supersegmental units: variations of preheads and Heads, the oppositions of terminal tones distinguish communicative types of sentences. Lack of balance between intonation and word content, or intonation and the grammatical structure of the utterance may serve special speech effects. A highly forceful statement said with a very matter-of-fact intonation may produce irony. It happens when nuances of the communicative meaning fine shade s of meaning in different situations modify the basic meaning they express: the basic meaning of any falling tone in statements is finality. Low Fall and High Fall tones both expressing finality have their own particular semantic shades. Low Fall tone is used in final, categoric detached statements. High Fall tone together with finality may express concern, involvement.

Intonation in everyday speech is usually rather variable with great presence of emphatic tones (the High Fall and the Fall-Rise). The Low Fall takes the fourth place in dialogic speech after the High Fall, the Fall-Rise and the Low Rise. Subsidiary information in a statement is also often spoken with a rising tone, or a mid-level tone, because this information is incomplete and depends on the main assertion for its full understanding: encouraging or polite denials, commands, invitations, greetings, farewells, etc. are generally spoken with a rising tone.

D. Crystal presents an example intonation notation using a single-word utterance ‘Yes’ (Figure 30 is taken from [62, p. 248].



NINE WAYS OF SAYING YES

No one has yet described all the nuances of meaning which can be conveyed by the intonation system. Even if we restrict the example to a single word (yes), and a single context (*Will you marry me?*), it proves difficult to capture everything that is involved. (The accent represented here is RP, p. 365. The direction of pitch movement is shown between two parallel lines, which represent the upper and lower limits of the speaker's pitch range. The commentary indicates the tone's general meaning, and parenthetically remarks on the likelihood of its use in nuptial circumstances.)

low fall
The most neutral tone; a detached, unemotional statement of fact. (Unlikely, though it could be quite a dramatic answer, after tempestuous preliminaries.)

full fall
Emotionally involved; the higher the onset of the tone, the more involved the speaker; choice of emotion (surprise, excitement, irritation) depends on the speaker's facial expression. (Possible, especially if accompanied by other tones of voice, such as breathiness.)

mid fall
Routine, uncommitted comment; detached and unexcited. ('I'm thinking about it.' Wedding bells seem unlikely.)

low rise
Facial expression important; with a 'happy' face, the tone is sympathetic and friendly; with a 'grim' face, it is guarded and ominous. (Neither makes particular sense, in this context, though the speaker might be thinking, 'What's the catch?')

full rise
Emotionally involved, often disbelief or shock, the extent of the emotion depending on the width of the tone. (Unlikely, though it might be used afterwards by the person popping the question, if he/she was not expecting to get a positive answer 'I don't believe you've said yes'.)

high rise
Mild query or puzzlement; often used in echoing what has just been said. (Unlikely, though it might be used to convey 'Are you sure you know what you're saying?')

level
Bored, sarcastic, ironic. (Unlikely. If used, it would have to mean something like 'If I really must' or 'I give up', or possibly, 'Here we go again, the same old routine'.)

fall-rise
A strongly emotional tone; a straight or 'negative' face conveys uncertainty, doubt, or tentativeness; a positive face conveys encouragement or urgency. (The latter is rather more likely than the former, which would be distinctly cagey, in this context. Maybe there are some conditions to be met.)

rise-fall
Strong emotional involvement; depending on the face, the attitude might be delighted, challenging, or complacent. (Very likely. With a bit of breathiness, the speaker can't wait.)

Fig. 30. Different intonation contours of an utterance with their meanings

5. Another way of describing English intonation has been presented by J. Pierrehumbert [87], Pierrehumbert and Hirshberg [88], Ladd [80]. It was stated in auto-segmental theory of intonational phonology (Figure 31 is taken from R. Ladd [80, p. 91]. According to this theory, three basic parameters of the intonation contour are distinguished: pitch accents H* or L*– most prominent syllables, phrase accents H or L– other than pitch accents accented syllables and boundary tones H% or L%– pitch movements after the last pitch accent.

Table 3.1. *Correspondences between Pierrehumbert 1980 and British-style nuclear tones. In the Beckman and Pierrehumbert 1986 version of the analysis, the two contours marked with an asterisk would be variants of the calling contour, because of the modification of the downstep rule (cf. section 3.1.3). For the same reason, the contour marked with a dagger would be a high-range fall–rise in the 1986 version*

Pierrehumbert	British-style
H* L L%	fall
H* L H%	fall–rise
H* H L%	stylised high rise
H* H H%	high rise
L* L L%	low fall
L* L H%	low rise (narrow pitch range)
L* H L%	stylised low rise
L* H H%	low rise
L+H* L L%	rise–fall
L+H* L H%	rise–fall–rise
L+H* H L%	stylised high rise (with low head)*
L+H* H H%	high rise (with low head)
L*+H L L%	rise–fall ('scooped')
L*+H L H%	rise–fall–rise ('scooped')
L*+H H L%	stylised low rise*
L*+H H H%	low rise†
H+L* L L%	low fall (with high head)
H+L* L H%	low rise (with high head)
H+L* H L%	stylised low rise (with high head)
H+L* H H%	low rise (high range)
H*+L H L%	stylised fall ('calling contour')
H*+L H H%	fall–rise (high range)

Fig. 31. Auto-segmental representation of intonation patterns

The intonation patterns are connected with the division of the information conveyed in the utterance. This information can roughly divided into given, or retrievable information (or the theme) and new information (or the rheme) [59; 100; 101]. Given information is something which the speaker assumes the hearer knows about already. New information can be regarded as something which the speaker does not assume the hearer knows about already. New information is obviously what is most important in a message; it receives the information focus, in the nucleus, whereas old information does not. In a sentence/intonation group some words are of greater importance than the others.

Words which provide most of the information are called content/notional words, function/structure/form words do not carry much information. By putting the stress on the particular word/syllable, the speaker treats it as the carrier of new information, and, other accented and non-accented words/syllables in the intonation group carry the information which is not new but can be retrieved from the context. 'Context' taken in a very broad sense may include a lot of

things: from something that has already been said to some aspect of shared knowledge.

Sentence stress is a special prominence given to one or more words according to their relative importance in a sentence/utterance. Stress/prosodic highlighting\prosodic prominence is related to information. The general rule in all languages is that the most important information in a phrase or longer utterance will receive prominence through some kind of accentuation of a particular word or group of words. Prosodic highlighting serves a deictic function to signal important information for the listeners. Under normal conditions, it is the content words (nouns, verbs, adjectives, adverbs) that are accentuated by pitch, length, loudness or a combination of prosodic features. Function words (prepositions, articles, pronouns) and affixes (suffixes and prefixes) are normally unaccented in the utterance There are some specific conditions under which form words appear accented (as presented in Figure 32).

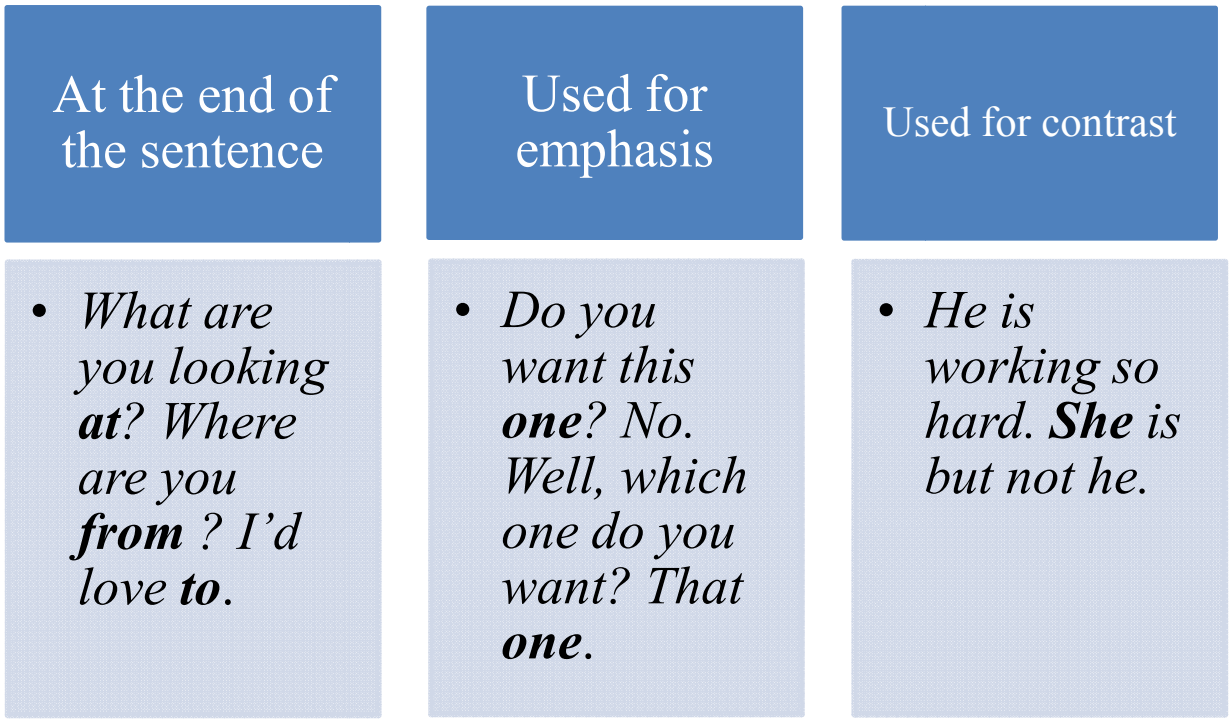


Fig. 32. Conditions for accenting the form words

In rapid speech such words occur more frequently in their weak form. Being unstressed in the stream of speech, function words undergo reduction, including the following:

1) The weakening or centralizing of the internal vowel to [ə], e.g *must* [məst]. In certain phonetic environments: where syllabic consonants are possible, the reduction of a short vowel + consonant sequence to a syllabic consonant [ænd] – [n], as in the example of *bread and butter*, *fish and chips*, etc. Sometimes the unstressed internal vowel can fall out completely: *from* [frəm] – [frm], [fm]

2) Loss of an initial consonant sound: *them* [ðəm] – [əm], *his* [hiz] – [iz];

3) Loss of a final consonant: *and* [ənd] – [ən], *of* [ɔv] – [ə].

This may cause problems in speaking and understanding English speech for nonnative communicants: in the most reduced form, the pronunciation for many common function words is virtually identical: *a, have, of* – [ə].

The main function of sentence stress is to single out the focus (the communicative centre) of the utterance. The stressed word in a given sentence which the speaker wishes to highlight receives prominence and is referred to as the (information) focus (the semantic center). In unmarked utterances, it is the stressed syllable in the last content word that tends to exhibit prominence and is the focus. When a conversation begins, the focus /the semantic center is usually on the last content word: *Give me a HAND. What's the MATTER? What are you DOING?*

Words in a sentence can express new information/rheme/comment (something mentioned for the first time) or old information/theme/topic (something mentioned or referred to before). Within an intonation unit, words expressing the theme/semantically predictable information are either unstressed or stressed and spoken with lower pitch; words expressing the rheme are always accented and spoken with higher pitch. As we have mentined before in Topic 2, loudness is a perceptive correlate of the phonetic prominence and it can be produced by other than dynamic prosodic parameters as well. In the dialogue below words in capital signal new information with more loundness are marked by capitalization (as presented in Figure 33).

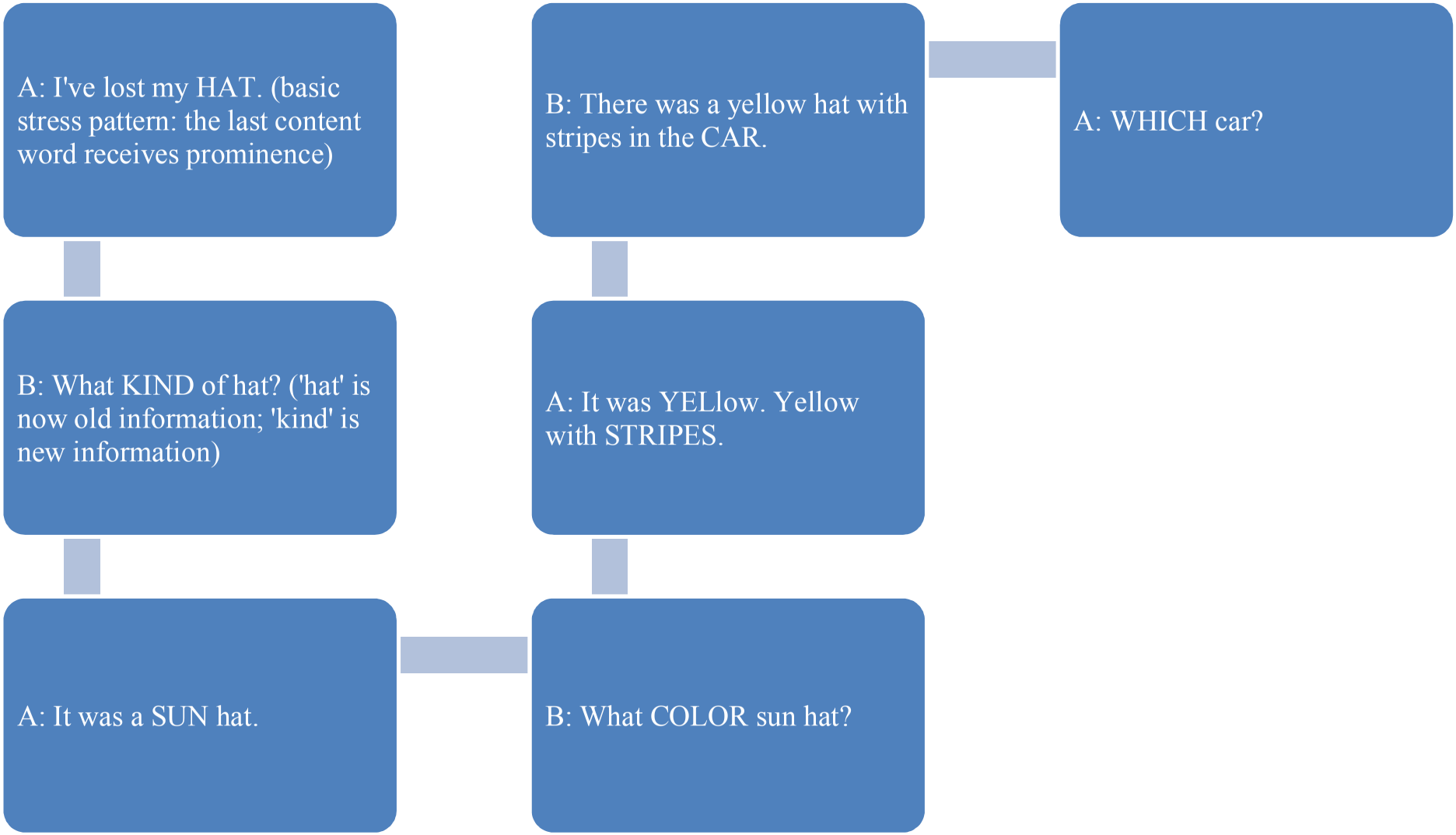


Fig. 33. Dialogue with the themetic and rhematic prominence

Such prominence may be actualized as contrastive stress/accent, or emphatic stress. The speaker can give prominence to words to check or correct the given information (A), or to place emphasis (B). Checking and correcting information is presented in Figures 34-35.

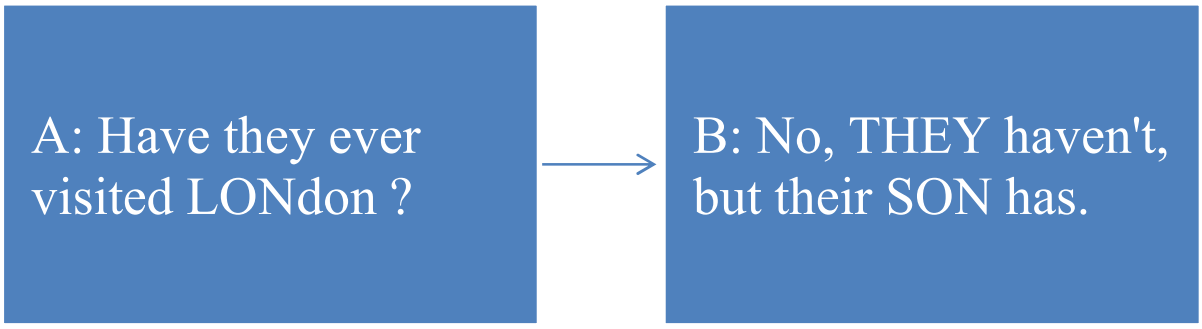


Fig. 34. Correcting information in the dialogue

Or

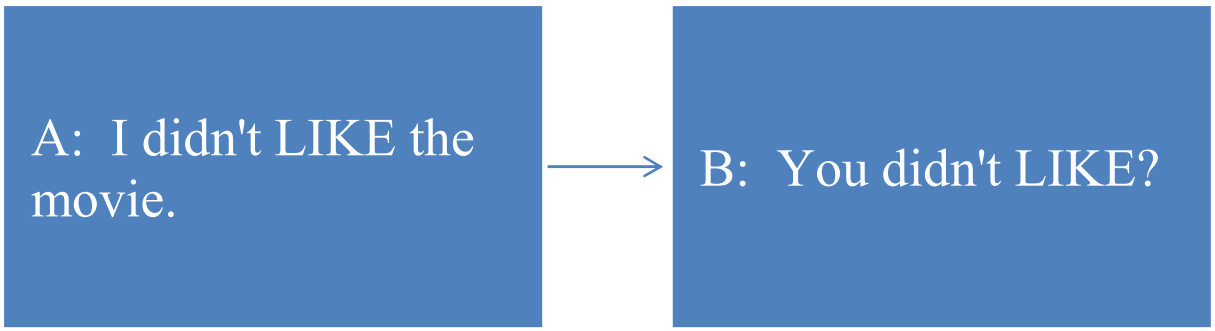


Fig. 35. Checking information in the dialogue

Emphatic stress is presented in Figure 36.

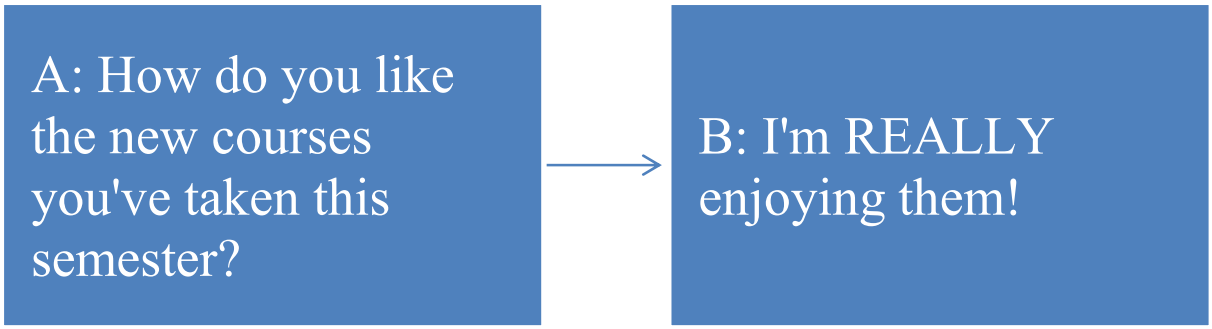


Fig.36. Emphatic stress in the dialogue

Emphatic stress appears in monologues, e.g emphatic stress placed on *NEVER* signals a particularly strong reaction the speaker had had when eating oysters: *I'm NEVER eating oysters again!*

Today's pronunciation curriculum thus seeks to identify the most important aspects of both the segmentals and supra-segmentals, and integrate them appropriately in the teaching process that meets the needs of any given group of learners. The ability to produce English with an English-like pattern of stress and rhythm involves stress-timing (the placement of stress on selected syllables), which in turn requires speakers to take shortcuts in how they pronounce words. Natural-sounding pronunciation in conversational English is achieved through blends and omissions of sounds to accommodate its stress-timed rhythmic pattern.

Topic 6 PHONOSTYLISTICS. STYLE CHARACTERISTICS OF ENGLISH

1. Phonetic peculiarities of style. Style-forming and style-modifying factors. Classifying phonetic styles

2. Informational Style: Press Reporting and Broadcasting

3. Academic Style: Conferences and Symposiums

4. Publicistic Style: Editorials and Public Speeches

5. Declamatory Style: Acting and Declamation

6. Conversational Style: Everyday speech

1 Phonetic peculiarities of style. Style-forming and style-modifying factors. Classifying phonetic styles

Pronunciation is by no means homogeneous. It varies under the influence of numerous extralinguistic factors which are outside any possibility of signalling linguistic meaning. Much of what people say depends directly or indirectly on the situation they are in. Notwithstanding the fact that such variation is vast, it consists of realizations of the same system, so there are regular patterns of variation in language, language means are selected and arranged in the utterance according to some patterns. The rules and principles for such selection and arrangement form the style. Nonlinguistic features are correlated with variations in language use on phonetic, lexical and grammatical levels. The phonetic level represents the area of interest for phonostylistics which studies the way phonetic means are used in the particular situation under the influence of extralinguistic factors [16].

Phonostylistics studies the information conveyed by phonetic means (both segmental and supersegmental) conditioned by those factors. The branch of

linguistics that is primarily concerned with the problems of functional styles is called functional stylistics.

Extralinguistic situation can be defined by three components: purpose, participants, setting. They distinguish situation as the context within which the interaction (communication) occurs. Thus, a speech situation can be defined by the cooccurrence of two or more interlocutors related to each other in a particular way, having a particular aim of communicating about a particular topic in a particular setting. Purpose can be defined as the motivation for the interaction: it directs the activities of the participants throughout a situation to complete a task. There appear to be a considerable number of different types of activities, for example: working, teaching, learning, conducting a meeting, chatting, playing a game, etc, which are socially recognized as units of interaction. They specify the range of purposes to orient toward in the activity, but not the specific purpose.

Another component to consider is the setting/scene. It is defined by several features: 1) spatial orientation of the participantsin relatin to each other and the environment; it is to some extent determined by the activity; 2) dimensions/value scales: public – private, impersonal – personal, polite – casual, high-cultured – low-cultured, and many others.

The last component of situation is participants. Speech is a marker both of various individual characteristics of the speakers and of relationships between participants. Individual characteristics may be divided into properly individual and those which characterize the individual as a member of a significant social grouping. Below, Table 39 represents such characteristics [65; 66]:

Table 39 — Individual characteristics of the speakers

Individual characteristics	Their function	How it works
Age	The role structure in the family and in social groups, with the assignment of authority and status, and with the attribution of different levels of competence.	The speech behaviour of a person not only conveys information about his or her own age but also about the listener or the receiver of the verbal message. Old people speak and are spoken to in a different way from young people. The elderly generally employ a high-pitched voice. People also generally use higher pitch-levels speaking to younger children.
Gender	Gender roles, role structure, assignment of authority and status in social interaction.	Gender differences in pronunciation are much more numerous than differences in grammatical form. For instance, there is a consistent tendency for women to produce more standard or rhetorically correct pronunciation which is generally opposed to the omission of certain speech sounds. Females pronounce the standard realization of the verb ending in -ing (*reading, visiting, interesting*) more frequently than boys and men who realize -in (*readin, visitin, interestin*) more often; female speakers use a more «polite» pattern of assertive intonation (↗*Yes.* ↘↗*Yes, I know.*) while male speakers use a more deliberate pattern (↘*Yes. Yes, I* ↘*know.*); women tend to use certain intonation patterns that men usually do not.
The emotional state	Expression of emotional tate of the speakers, the emotional value of the situation etc.	Less control over speech production which results in faulty pronunciation. Greater prosodic variation.
Formality of the speech situation	Role structure, assignment of authority and status in social interaction.	Formal language is expressed through such features as elaborated syntax and lexicon, phonological precision and rhythmicality; informal, language properties include ellipsis, repetition, speed and slurring.

The features qualities presented in the table above, do not only modify the individual voice. They may very well serve as the speaker-identifying features. They are acquired through the speaker`s lifetime, they are not deliberately chosen and do not usually vary greatly. International Phonetic Association presents the chart for marking such features in transcription (Figure 6, Appendix A) [22; 23; 24; 25; 42; 54].

Thus a number of factors which result in phonostylistic speech varieties can be identified:

1) the purpose, or the aim of the utterance;
2) the speaker's attitude;
3) the form of communication;
4) the degree of formality;
5) the degree of spontaneity (or the degree of preparedness or the reference of the oral text to a written one).

All these factors are interdependent and interconnected. The purpose or the aim of the utterance may be called a phonetic style-forming factor. All other factors cause modifications within this or that style and that is why may be referred to as style-modifying factors.

There are three features that play an important part in style formation and modification:

1. Hesitation. It is characteristic mainly of spoken spontaneous speech, though can be found in other types too. While generating speech, the speaker may not be sure about the verbal expression/form to use. As the wording is taking place simultaneously with pronouncing the speaker needs time to remember some information, to choose a correct word/grammar structure etc. The hesitation phenomenon is expressed through micropauses, pauses of different length and quality (not only pauses at the syntactic juncture), lengthening of sounds within the words and in the word final position. All those phonetic features break the regularity of speech.

2. Delimitation. It is another style-differentiating feature on the perceptive level. Speech message is naturally divided into: phonopassages (in monologues), semantic blocks (in dialogues), phrases, intonation groups, syntagms. Hesitation may cause irregularities in patterns of phonetic delimitation.

3. The accentuation of semantic centres. It is responsible for making parts of the utterance that express the main contents of the utterance contrasted with other parts of the utterance. In spontaneous speech the contrast between accented and non-accented segments of an utterance is greater than in reading.

Style-forming and style-modifying phonetic means in interacting with lexics and grammar optimize the process of realization of ideas by verbal means. While classifying various speech realizations from phonostylistic point of view an analyst should single out criteria that are different from the ones used as a basis for distinguishing functional styles of language. Style-forming and style-modifying factors are presented in Tables 40-41.

Table 40 — The style-forming factors

The factor	The structure of the factor
The purpose of the utterance and the subject matter	The subject matter determines the lexical content of the utterance,so the aim of the utterance affects pronunciation (it could be defined as the communicative strategy). On the phonetic level the speaker selects a number of functional phonetic means to achieve the aim more effectively.

Table 41 — The style-modifying factors

The factor	The structure of the factor	Style-modification in speech
The speaker's attitude to the speech situation/subject	Language users consider the situation from their point of view, revealing personal interests and participation in what is being said, eliciting positive or negative response, emotions.	It is expressed through segmental and supersegmental variation in speech.
The form of communication/types of speech	Monologue is the speaking by one individual to exclude the possibility of interruption by others. Dialogue (conversing) is speaking as to invite the participation of others.	Monologues are usually more extended, characterized by more phonetic, lexical and grammatical cohesion, more apparent continuity and self-containedness than conversation.
	Public and non-public oral texts.	Speech is public when addressed to a group of people. Non-public communication means face-to-face situations.
The formality of situation	Language users recognize, learn and accept social roles and relations: socially realized necessity to follow certain rules while generating an utterance.	It is expressed through variations in rate of articulation. In a formal situation the speech appears more distinct, thorough and precise than in informal situations.
The degree of spontaneity	The degree of spontaneity characterizes different psychic processes. Fully spontaneous speech involves searching/remembering information (intention) and verbal ways of expressing it (adequate linguistic form), and expressing/transmitting information (generation of the utterance). Less spontaneous utterance is generated according to some rules: a) the utterance is too long to be remembered (lectures, reports, etc.); b) the time of the speaker is limited (news on the radio and TV); c) the speaker is realizing somebody else's utterance (reading, quoting, etc.)	A fully spontaneous utterance means that its verbal realization is taking place at the moment of speaking with all accompanying phonetic variation. It is is characterized by relevant segmental and suprasegmental features: assimilation, reduction, elision; uneven rhythm, fragmented melodic contour, pauses, voice loudness and pitch variation, varying tempo. Less spontaneous utterances sound loud and distinct on both segmental and supersegmental levels.

Traditionally the functional styles of the language are differentiated on the basis of spheres of discourse. The linguists take into consideration different factors they assume most relevant. A functional style can be defined as a set of formal patterns into which language means are arranged to transmit information. A considerable number of attempts have been made to work out a classification of functional styles, but there is still no universal classification. V.V. Vinogradov, for example, distinguished styles according to three functions: the function of communication (colloquial style), the function of informing (business, official and scientific styles) and the emotive function (publicistic style and the belles-lettres style). J.A. Dubovsky discriminates the following five styles – informal ordinary, formal neutral, formal official, informal familiar, and declamatory – on the basis of different degrees of formality/familiarity between the speaker and the listener [18]. We would prefer to use the classification presented by M.A. Sokolova who distinguishes between segmental and suprasegmental level of analysis. She states that the aim of the utterance results in determining the trend of variations on both levels of the utterance and identifies five intonational styles according to the purpose of communication. «An intonational style can be defined as a system of interrelated intonational means which is used in a social sphere and serves a definite aim of communication» [34; 35, p. 216]. She refers all main varieties of the texts generated in everyday communication to those types. They are as follows:

1) Informational style.
2) Academic style (Scientific).
3) Publicistic style (Oratorical).
4) Declamatory style (Artistic).
5) Conversational style (Familiar).

The purpose of communication determines the type of information conveyed in oral texts and realised by specific prosodic parameters. These stylistically marked modifications of all the prosodic features represent the invariants of the style-forming intonation patterns common to all the registers of

the particular style. Intonational style markers are restricted to certain situational contexts and to the speakers' aim in communication. The invariant of the intonation patterns may be treated as the norm of speech behavior for these particular spheres of communication. Comparing the register invariant characteristics of the two varieties of the language (written and spoken) by the systematic phonological opposition we can make the following conclusion:

1) Written (read aloud) and spoken texts belonging to the same intonational style have different prosodic realization.

2) In oral speech the means of the prosodic realization are more vivid, expressive and' varied, especially in voice timbre, loudness, tempo, length of pauses and rhythm.

3) The speaker often uses some hesitation phenomena (hesitation pauses and temporizers) intentionally, which enables him to obtain the balance between formality and informality and establish contacts with the public.

4) The speaker uses various hesitation phenomena unintentionally which enables him to gain the time in search for suitable expression or idea and thus not interrupt the flow of speech.

5) The speech is characterized by a greater number of intonation groups, supraphrasal units and phonopassages. In spontaneous speech an intonation group doesn't always coincide with a syntagm. Pauses at the end of the phrase are optional.

6) The reading is characterized by a decentralized stress distribution whereas speaking – by a centralized one.

7) Spontaneous speech is more contrastive, communicative centers are more vividly underlined; the emphasis is achieved by a wider range of terminal tones, greater degree of loudness and prominence of accented segments.

8) The reading is rhythmical, oral speech rhythm is non-systematic, unpredictable, variable.

2 Informational Style: Press Reporting and Broadcasting

Informational style is sometimes qualified as «formal», «neutral», since in an ideal setting, in its pure manifestation it is least of all influenced or correlated by extralinguistic factors. It is manifested in the written variety of an

informational narrative read aloud. The majority of these texts is of a purely descriptive character and is simply called descriptive narrative.

Press Reporting and Broadcasting. Press reporting and broadcasting, especially the news coverage, is very close to this style: the reader tends to sound impartial when reporting routine news or weather forecast. The central function of a newspaper and news bulletin is to inform, to present a certain number of facts to give the impression of neutral, objective reporting. The phonological opposition of phonostylistic features of an informational descriptive/informational narrative allows to draw the following conclusions:

1) Reading aloud informational descriptive/informational narrativesis done to convey the intellectual information; thus attitudinal and emphatic functions are of secondary importance.

2) Basic variation of prosodic parameters is aimed at breaking the monotony of speech, drawing the attention to something in a message, marking the beginning and the end of each new paragraph or topic.

3) The voice timbre makes up a very important marker of the specific news coverage as compensating means. When tragic or formal news is broadcast, the timber is used to convey the meaning.

Segmental characteristics include pronunciation: its peculiarities conditioned by purpose of communication, style-forming and style-modifying factors. Supersegmental characteristics are represented by features of temporal, dynamic, tonal and timber components of intonational contours. Segmental and supersegmental characteristics of the informational style are presented in Table 42.

Table 42 — Informational style. Segmental and supersegmental features

I.Segmental features	Pronunciation	Pronunciation is clear, standard, easy to understand
II.Supersegmental features	1.Temporal component	The length of intonation groups is adjusted so that the groups are not too long for the speaker to pronounce and for the listeners to comprehend. The boundaries between syntagms are marked by the pauses which appear in more or less the same spaces in speech continuum, rather preiodically. This creates rhythmic, isochronous character.

		As the purpose of speech is is solely conveying information so the speakers try to avoid making hesitation or dramatic pauses. The tempo of speech is relatively slow and its variation is not great.
	2.Dynamic component	Loudness is relatively stable. It is varied within the limits of normal range. Within the syntagm the loudness slightly decreases towards the end (declination).
	3.Tonal component	Basic prosodic features concern the cemantic focus of the syntagm and the way it is made prominent by terminal tone, tone level and range, location of the nucleus of the intonation group. Pitch varies slightly within the normal range and middle to low levels. Within the syntagm the pitch decreases towards the nucleus (declination). Terminal tones are represented by llow falling/rising tones.
	4.Tamber	The speaker basically uses impartial, dispassionate and reserved voice.

3 Academic Style: Conferences and Symposiums

Academic style is often described by phonostylists as both intellectual and volitional. It is determined by the purpose of the communication as the speaker's aim is to attract the listener's attention, to establish close contacts with the audience and to direct the public attention to the message carried in the text. It is frequently manifested in academic and educational lectures, scientific discussions, at the conferences, seminars and in classes. As the users of the style are interested in the involvement of the audience into the talk, this intonational style tends to be concerned and rather emotional. A good example of this style would be an academic informational lecture read aloud. Specific characteristics of the academic style which display features not shared by others include:

1) An academic text read aloud for an audience conveys both intellectual and volitional information, so the attitudinal and emphatic functions of intonation cease to be of little importance.

2) Any speech in academic style should be well prepared and is often even rehearsed by a trained lecturer.

Basic segmental and supersegmental features of the academic style are presented in Table 43.

Table 43 — Academic style. Segmental and supersegmental features

I.Segmental features	1.Pronunciation	Pronunciation is clear, standard. The speaker may employ some regional/social variation in pronunciation, but it must be within the limits of regional standard, easy to understand to the listeners.
II.Supersegmental features	1.Temporal component	Speech is clearly segmented into intonation groups, they are roughly equal in length. Rate normal, slow on the most important parts of the lecture (rules, conclusions, examples), its variation is flexible within limits of normal, slightly slow/quick level, though it is not great. u. Pauses between utterances are rather long, the speaker may use them to bring out most relevant messages. There are not many, though some, pauses of hesitation. There is occasional use of breath-taking pauses. Rhythm is properly organized by periodically occurring pauses, approximately equal syntagms and intonation groups.
	2.Dynamic component	Loudness is varied, usually the variation is not very great. But sometimes it may increase to forte.
	3.Tonal component	Basic prosodic features concern the cemantic focus of the syntagm and the way it is made prominent by terminal tone, tone level and range, location of the nucleus of the intonation group. Pitch level and range can vary within the the passage, gradually decreasing towards the end of the supraphrasal unity. The speaker employs frequent use of stepping and falling heads, alternating between descending and ascending heads, especially in enumerations. The speaker uses high proportion of compound terminal tones (High Fall + Low Rise; Fall- Rise, Rise-Fall-Rise); a great number of high categoric falls. The contrast between the accented and unaccented segments is not great.
	4. Tamber	The speaker sounds authoritative, imposing. The voice is edifying, instructive, self-assured.

4 Publicistic Style: Editorials and Public Speeches

The term «publicistic» serves for many kinds of oratorial activities. The aim of the speaker is to extend persuasive and emotional influence on the listeners which makes volitional and desiderative information predominant in

the texts. In publicistic speech this effect is achieved not only through argumentation, but also through all sorts of direct oratorial performances which are designed to influence the listeners. The style should be characterized as oratorial, volitional and desiderative. Its manifestation can be heard in political, judicial, oratorial speeches, in sermons, parliamentary debates, at congresses, meetings, press conferences.

Two main characteristics of the style are:

1) It is always public. Whenever the style is employed, it is done for the sake of the audience, either real or imagined.

2) Such speech is never spontaneous. Even when the speaker sounds impromptu, the speech in reality is well rehearsed cultivating the effect of apparent spontaneity.

Basic segmental and supersegmental features of the publicistic style are presented in Table 49.

Table 49 — Publicistic style. Segmental and supersegmental features

I.Segmental features	1.Pronunciation	Pronunciation is clear and easy to understand. The speaker involves careful articulation, but for the sake of effect the speaker may use regional and social variation.
II.Supersegmental features	1.Temporal component	The speaker uses moderately slow rate of speech. But the public speaker slows down and speeds up to make prominent and mark as unimportant those parts of the message that the speaker seeks to show or hide. The speaker makes dramatic pauses, not only between the semantic and syntactic units but also within those units, «rhetorical silence» is often used to exert influence on the listeners Breath-taking pauses are made, another characteristic feature of this style is a rather frequent stop of phonation before the emphatic semantic centre; it serves as a means of bringing out words and phrases. Voiceless hesitation pauses occur to produce the effect of apparent spontaneity. Rhythm is properly organized; within the speech segments rhythmic groups have recurrent alternation, which produces the acoustic effect of strict rhythmicality.
	2.Dynamic component	Loudness varies, ranging from forte to fortissimo. Sometimes the speaker uses instances of diminished loudness to bring out words and phrases and produce certain psychological effects. Speakers may go to extremes by enormously increasing the loudness and alternate it with whisper.

	3.Tonal component	Basic prosodic features concern the cemantic focus of the syntagm and the way it is made prominent by terminal tone, tone level and range, location of the nucleus of the intonation group. Tone range and level is greatly varied: there is predominant use of wide ranges within the phonopassage, a very high level of the start of the initial intonation groups. In non-final intonational groups falling-rising tones are frequent; in pre-nuclear patterns descending sequence of stressed syllables is commonly used. There is a large proportion of falling and stepping heads, the tonal movement in the head is frequently broken by accidental rises to increase the emphasis. Terminal tones used by the speakers are mostly emphatic, especially on emotionally underlined semantic centres. They are contrasted to distinguish between the formal segments of speech and less formal ones. The contrast between stressed and unstressed segments can be great. The speakers may make use of a common «rhetorical trick» – the tonal subordination. In this trick relevant intonation groups contrast with their neighbours by all prosodic features (so the high level head may be alternated with the low level head), especially in enumerations.
	4.Tamber	The speakers sound dignified, self-assured, concerned and personally involved. Their voice characteristics possess a variety of attitudinal and modal expressions.

The style usually involves a great number of paralinguistic effects, kinesic components – facial expressions, body movements, gestures – subjected to the main purpose of the publicistic discourse: to influence the audience, involve it into the talk and to exhort the expected response from it.

5 Declamatory Style: Acting and Declamation

This intonational style is also called by some as «artistic, acquired or stage». Attitudinal, volitional and intellectual functions of intonation are of primary importance here and serve to appeal to the mind, will and feelings of the listener. The aim of the speaker is to attract the attention of the audience through the imagery, through all sorts of image-bearing devices which require rehearsing and professional skills. This intonational style can be heard on the stage, on the

screen, in a TV studio or in a classroom during verse speaking and prose readings and recitations. It is always a written form of the language read aloud or recited. Acting is a two-way conversation, players respond very directly and promptly to the «feedback» they get from the audience; the «feedback» in their case being almost certainly communal, collective, non-verbal language. Distancing, posture, gesture, facial expression and timing – the actor uses all accessible means.

1) The prosodic organization of the declamatory reading depends on the type of the literary text – descriptive, narrative, dialogue; on the character of the described events, schemes and objects and on the skills of the reader/presenter.

2) Declamatory speech is always clearly marked and distinguished by its expressiveness, personal involvement on the part of the author, by the emphasis, by the entire range of prosodic and paralinguistic effects.

Basic segmental and supersegmental features of the declamatory style are presented in Table 50.

Table 50 — Declamatory style. Segmental and supersegmental features

I.Segmental features	1.Pronunciation	Pronunciation varies greatly according to the purpose of the speaker: it depends on the type of image the actor is trying to produce.
II.Supersegmental features	1.Temporal component	The length of the intonation groups and syntagms is greatly varied, according to the purpose of the speaker which depends on the type of image the actor is trying to produce. There may be deliberate, slow tempo, caused by the lento rate of utterances and prolonged pauses, especially at the passage boundaries, or quick tempo almost unintelligible. Disjunctive pauses tend to be longer than connecting ones. Internal boundary placement is always syntactically or semantically predictable. There is a great number of prolonged emphatic pauses – the device used by the reader to underline the emphasis. The rhythm is properly organized, the isochronic recurrence of stressed and unstressed syllables, even when apparently there is no rhythm at all.
	2.Dynamic component	Loudness is greatly varied according to the size of the audience and to the emotional setting. The speakers use loudness according to the purpose of the speaker which depends on the type of image the actor is trying to produce.
	3.Tonal	Basic prosodic features concern the cemantic focus of

	component	the syntagm and the way it is made prominent by terminal tone, tone level and range, location of the nucleus of the intonation group. Tonal levels and ranges within the intonation groups are variable. The use of the falling terminal tones in initial intonation groups, the increase of their range with the emphasis. Pre-nuclear patterns contain patterns which have both common emphatic and nonemphatic usage; for the emphasis the following patterns are most frequently used: Low Head + High Fall; High Head + Low Fall High Head + High Fall; Stepping Head + High Fall. There is common use of categoric low and high falls in final and even initial intonation groups and on semantic centres; occasional use of rising and level tones is aimed to break the monotony and in initial groups to connect segments of the phrase, to lead the listener on the later developments in the message. The contrast between accented and unaccented segments can be great according to the purpose of the speaker which depends on the type of image the actor is trying to produce.
	4.Tamber	The emotional colouring of the speaker`s voice is very rich, varied, according to the degree of emphasis. The speakers appear concerned, personally involved, their voices – emotionally rich, according to the purpose of the speaker which depends on the type of image the actor is trying to produce.

6 Conversational Style: Everyday speech

Conversational style is also called familiar. This kind of English speech is also the means for everyday communication, heard in natural conversational interaction between speakers. It is also called informal, because this style occurs mainly in situations characterized by informal external and internal relations. In informal situations the speakers are more relaxed, exercising less control over their speech.

Variations of the conversational style depend on the social background. It is the most situationally influenced kind of English. In a conversation speakers rely on what they derive consciously or unconsciously from a number of other communicative systems: both linguistic and paralinguistic. In conversational style the emotional reaction to the stimulating speech signals is very important,

so the attitudinal function of intonation is extremely important. Thus there are a great number of contrasts realized by all kinds of prosodic means. Spontaneous, colloquial, informal conversations display certain common linguistic characteristics.

1) This speech is characterized by the linguistic implicity as the speakers rely upon the extralinguistic context in identifying and interpreting factors. It manifests itself in «incompleteness» of most utterances. Occasionally, the repetition is requested by repeated and echoing questions.

2) Conversations are unpredictable, characterized by the lack of planning and the randomness of subject matter. It is, however, true that in many everyday communications semantic blocks are commonly repeated: stereotyped phatic exchanges (greetings, partings, pleasantries, making acquaintance, starting the conversation, arresting attention, making contacts). These devices are used by native speakers mechanically to build up a conversational unity.

3) Conversational style is characterized by «non-fluency». Informal spontaneous conversation is characterized by a high proportion of «errors»: hesitation phenomena, slips of the tongue, overlapping and simultaneous speech. Vocalic clusters, sounds (whistles, laughs, giggles, clearings of the throat, snorts and sniffs) and non-verbal signals are common in conversations.

The grammatical structure of the informal conversation determines the delimitation of utterances and, consequently, their prosodic and intonational structure. It is done through:

1) High proportion of parenthetic compound types of sentence introduced by *you see, you know, I mean, I say*. Common use of vocatives, especially in initial position.

2) Frequent use of interrogative sentences and imperatives. A great number of question tags.

3) Rare use of nominal groups as subjects; the personal pronouns are more in evidence, the informal you is quite common in its impersonal function.

4) The use of all sorts of repetitions and repetition structures.

5) The occurrence of contracted verbal forms (*he's, I'll, I've*) and ellipses.

All intonation choices depend ultimately on the extralinguistic situation, on the speaker's assessment of the state and the common ground between the participants of the communication. To convey the idea adequately the speakers

must be always aware of the relative information load carried by particular elements in the discourse. The distribution of prominence in each phrase depends upon the speakers' understanding of how much common knowledge the co-communicants have. On the prosodic level the research shows that there are some generalizations concerning conversational speech (as shown in Table 51).

Table 51 — Conversational style. Segmental and supersegmental features

I.Segmental features	1.Pronunciation	Pronunciation varies greatly. The speakers can lose control over their speech behavior due to emotional stress or lack of time, shortage of physical resources etc. Variation can be of regional/ social nature.
II.Supersegmental features	1.Temporal component	Just as conversational syntactic structures intonation groups are also rather short. The tempo may be greatly varied, but all variations are conditioned by the extralinguistic factors. There usually are a great number of hesitation pauses both filled and empty within the conversational blocks. Sometimes the speakers speak simultaneously, interrupting each other. Another important feature of the informal conversation is the frequency of contrastive pauses which can occur randomly. It makes the tempo uneven with and between utterances.
	2.Dynamic component	Loudness is greatly varied according to the emotions the speakers experience, the size of the audience and the location. All variations are conditioned by the extralinguistic factors
	3.Tonal component	All variations are conditioned by the extralinguistic factors. Interpausal stretches have a marked tendency towards subjective rhythmic isochrony. Short interpausal units are characterized by decentralized stress and sudden jumps down on communicative centres. The heads are usually level, or rarely, falling. Falling heads occur only in groups consisting of several stressed syllables. As for the nuclei, simple falling and rising tones are common. Emphatic tones occur in highly emotional contexts. High pre-nuclear syllables are very frequent.
	4.Tamber	The emotional colouring of the speaker`s voice is seldom rich as most speakers do not have any training in voice acting.

Topic 7. STANDARDS OF PRONUNCIATION IN ENGLISH. TERRITORIAL VARIETIES OF ENGLISH PRONUNCIATION

1. Functional stylistics and dialectology. World Englishes. English-based pronunciation standards of English. American-based pronunciation standards of English

2. Accents of English outside UK and USA

1 Functional stylistics and dialectology. World Englishes. English-based pronunciation standards of English. American-based pronunciation standards of English

Language variation caused by social and regional difference is studied by dialectology and sociolinguistics. A dialect is a variant of the language; it is distinguished from other such varieties in grammar, vocabulary, and pronunciation. Thus, a dialect includes an accent. An accent is a set of pronunciation patterns used by the members of the same speech community for communicative interaction. Speakers usually share relevant social or geographical attributes and maintain a uniform set of phonological characteristics pertaining to the same manner of pronucniation. Some scholars consider functional stylistics to be a branch of sociolinguistics since it studies the distinctive linguistic characteristics of smaller social groupings.

So, pronunciation varieties can be of the following types:

– Territorial/regional/geographical. A rather large language community lives in a certain area.

– Social. Speakers of the said variety of the language belong to the same demographic in regard to their status, age, gender, ethnicity.

– Situational (diglossia). Speakers use the said variety of the language in specific discourse environment.

Social variation of pronunciation shows that every national language community employs a uniform phonological system within which different social and regional groups of people vary certain phonetic and phonologic features of language units to different degrees. Those features are called sociolinguistic variables. These variables can be rather stable in their usage, they characterize speech peculiarities of a demographic. If they are not stable, they characterize discourse environments and social roles in communication [47, p. 185-186].

Territorial/regional/geographical varieties are represented by:

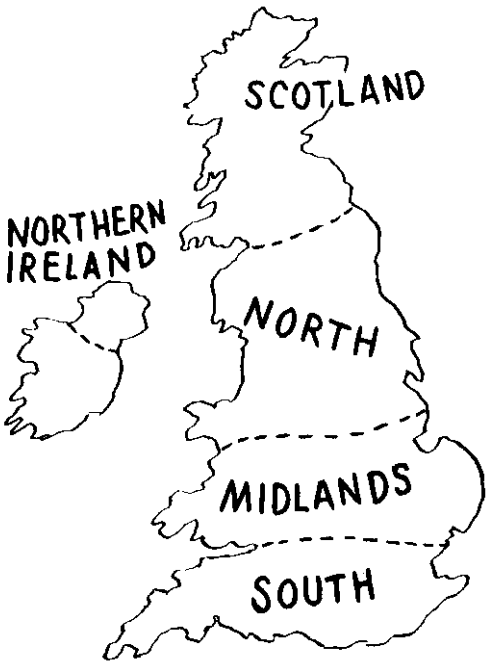
– National standards referred to as the pronunciation norm of the country. This norm is taught in schools and in L2 teaching. National standard in UK is RP (Received Pronunciation/BBC English), in USA it is GA (General American/American Network English), in Canada it is GenCan (General Canadian), in Australia it is GenAus (General Australian).

– Regional standards used by the educated people living in a certain area. They may modify the national standard to a certain degree.

– Rural dialects and accents spoken by general population of smaller towns and villages in everyday situations. Those dialects and accents are closer to what foreigners perceive as ‘unintelligible local speech’ [47, p. 189].

Varieties of English spoken in ‘inner circle’ – UK, USA and countries to which people from UK or USA migrated frequently and vastly, and English is the mother tongue for the majority of the population (Canada, Australia, New Zealand), - are called national standards. Varieties of English spoken in ‘outer circle’ – former British colonies, where English is one of the official languages, are defined by the name of the country: Hindi English, Singapore English. Varieties of English spoken in ‘expanding circle’, where English is the most popular foreign language taught in schools and colleges, are not given a specific name [47, p. 187-188].

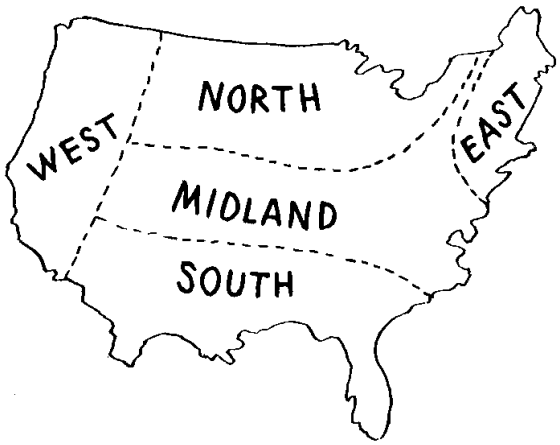
Regional standards of UK are shown in Figure 37 (taken from [47, p. 190]).



Great Britain

Fig. 37. Regional standards in UK

Regional standards of USA are shown in Figure 38 (taken from [47, p. 190])



USA

Fig. 38. Regional standards in UK

A language like English is called a polyethnic language or a nationally heterogeneous language. English has the following national variants of

pronunciation: British English, American English, Australian English, New Zealand English. A.D. Shweitzer defined the national variants of the language as «a historical category evolving from conditions of economic and political concentration which characterizes the formation of a nation» [43]. The problem of national language stratification is closely connected with the problem of the language standard. All English-speaking nations have national variants of pronunciation with their own distinctive features. The term «standard» is interpreted in several ways. Standard is generally associated with the «neutral» style which exludes the stylistically marked parameters. Y. Screbnev looks upon the norm as a complex of all functional styles [33]. It is a more objective view of the standard as the language standard should reflect what exists in objective speech. So, the standard will be defined as a complex unity of phonetic styles realized in the process of communication in accordance with varying extralinguistic and social factors [12-14; 45]. A standard variety of the language may be defined as socially accepted, established by a codified norm [10; 11; 23].

National variants of English have much in common, they differ primarily in sound, stress, and intonation. National standards undergo constant changes due to various internal and external factors. Every national variety of the language falls into territorial/regional dialects – differences in pronunciation which are referred to as accent. Actually there is certain confusion in terminology, as dialects are supposed to have specific lexical, grammatical and phonetic/phonologic features. Accents are associated primarily with phonetic/phonologic variations, they are sometimes also referred to as idiolects [47, p. 187].

The standard of the British English. The generally accepted standard for the English language is «Received Pronunciation» or RP [95-97; 102]. Usually one of the accents in the country iacquires social prestige and gets accepted by the educated speakers throughout the national community. It gets the name of «literary pronunciation», or «a (national) standard of pronunciation». The standard of pronunciation can be defined as pattern of pronunciation, including

articulation, representing the spoken form of a national language variant received by the educated users of that language. This variant at a given time is considered correct, statistically relevant and/or enjoys (open or covert) social prestige.

But RP has unique history. Its origins RP go back to the XVI-XVII century to the pronunciation of the London region. By the XVIII century standard of the language started acquiring a social character: a prestigious pronunciation model was characterized as the speech «received by the polite circles of society». By the XIX century it was finally fixed as the pronunciation of the ruling class losing all local pronunciation features. In the mid XIX century since 1864 Public School Act there was an increase in public schools. School system introduced RP as the teaching standard in boarding schools. Since that time London English or Southern English was termed as Classroom English, Public School English or Educated English. At the beginning of the XX century Southern Educated English became a variety of the language of more or less clearly definable social basis belonging to a rather small group of people with public school education (Oxford, Cambridge).

Educated Southern English underwent the normalization movement towards its establishment as the standard accent. It was conditioned by the need for a clearly defined and recognized norm for public and other purposes. In 1930th the term «Standard Pronunciation» was replaced by «Received Pronunciation», introduced by I. Ward, who pointed as its most important characteristic the loss of all noticeable local differences [101].

In Britain «RP» became the standard pronunciation of the country with the unique feature – the affiliation with the certain demographic. In the 90s the pressure of Standard English was so strong that many people became diglossal: they used a variation of RP in the formal communication and their native local accent when speaking among themselves.

The British Broadcasting Corporation (the BBC) adopted RP since 1920s. Until the early 1970s it was the only accent demanded in the BBC's announcers.

Since post-war years the pronunciation norm has not been exclusively correlated with one section of society, because the use of RP in the media led to the spread of the standard in all social circles. RP is sometimes called BBC English because of the role the broadcasting company played in propagation of the language variant. Access to education has led to less strict views on prestige in pronunciation.

British phoneticians estimate that nowadays RP is not homogeneous [60; 72]. Only 3-5% of the population of England can be said to speak RP. A.C. Gimson distinguishes three main types of RP: «the conservative RP forms, used by the older generation, and traditionally, by certain profession or social groups; the general RP forms, most commonly in use and typified by the pronunciation adopted by the BBC, and the advanced RP forms, mainly used by young people of exclusive social groups – mostly of the upper classes, but also for prestige value, in certain professional circles» [72, p. 88]. The tendencies of change in pronunciation reflect the changes in the social structure of the society. Many native speakers, especially teachers of English and professors of colleges and universities (particularly from the South and South-East of England) have accents closely resembling RP but not identical to it. P. Trudgill and J. Hannah call it Near-RP [98]. So various types of present-day Standard English pronunciation may be summarized as Conservative RP (Adoptive RP); General RP (Mainstream RP); Advanced RP (U-RP); Near-RP.

J.C. Wells refers to an educated accent in London and the southeast which is termed Estuary English (EE) as the probable substitute for the RP [103-104]. In fact, the term RP has become imprecise, but it still has wide currency in books on contemporary English pronunciation. There are changes in present-day English Standard Pronunciation that reflect the linguistic change as presented in Tables 52-53.

Table 52 — Changes of vowel quality

Articulatory feature	Pronunciation feature	Specific cases	Examples
The stability of articulation	Diphthongization	Two historically long vowels [iː], [uː] become diphthongized (diphthongoids).	In words like *see, two*.
	Shortening and monophthongization	This is very often the case with [ei], particularly in the word-final position, where the glide is very slight.	*Today* [tə'dei], say [sei], may [mei].
		Also diphthongs [oə], [ʊə] tend to be levelled to [ɔː].	In words like *pore, poor* vowel opposition is neutralized.
		Diphthongs [ai], [aʊ] are subject to de-diphthonization when followed by the neutral sound [ə].	
		The diphthong [Iə] in its final positiondoes not shorten or level. It undergoes the prominence and length shift to the glide, this final quality often being near to [ʌ].	In words like *dear* [diə] – [diʌ].
The horizontal and vertical movements of the tongue	The centering of both front and back vowels	The nuclei of [ai], [aʊ] tend to be more back, especially in the male variant of the pronunciation.	
		The vowel phoneme [æ] is often replaced by [a] by younger speakers.	In words like [hæv] – [hav], [ænd] – [and].
		The nucleus of the diphthong [ɜʊ] varies ranging from [oʊ] among conservative speakers to [ɜʊ] among advanced ones.	Conservative RP: [sou], [foun], [nout] changes in Advanced RP to [sɜʊ], [fɜʊn], [nɜʊt].
		There is a tendency for all short vowels to become more central, to move towards [ə], especially in unstressed position.	In words like *honest* ['ɒnɪst] – ['ɔnəst].
		[ɪ] is replaced by [ə] in weak syllables of a number of assorted words as: *cinema, majesty, relevance, satirical, secrecy, system, temperature, family*, etc., in which [ə] has become the dominant variant.	-ity: [ətɪ] is generally more common than [ɪtɪ]: *quality, capacity.* -ate (in nouns and adjectives): [ət] is more common than [It]: *deliberate, delicate, chocolate, fortunate*. -ess: [əs] becomes more frequent as the main variant: *hopeless, goodness*. -et: [ət] becomes more frequent as the main variant: *sonnet, carpet, bonnet*; [it] is generally used after [k],

			[g], [ʧ], [ʤ]: *pocket, target, hatchet, budget*. However, in the endings -let, -ret: bracelet, *scarlet, toilet, claret, garret* [ət] is either a dominant or a common variant. -ily: *easily, happily, worthily*: [ə] becomes more frequent especially after [r]: *angrily, primarily extraordinarily*, when it is a dominant form and in foreign words. -ace; *palace, necklace, populace*: [I] and [ə] are alternatives with the increasing tendency to [ə]. In the terminations -es, -ed: *horses, waited*, [iz], [id] forms remain dominant in RP, despite the influence of the alternatives [əz], [əd] characteristic of American and Australian English.
	The fronting and retracting of vowels	Back-advanced vowels [ʌ], [ʊ] are considerably fronted in the advanced RP.	In words like *but* [bʌt] – [bət], *good* [gʊd] – [gəd].
		More back pronunciation of the nuclei of diphthongs: [ai] – [ɑi], [au] – [ɑu].	
		More advanced pronunciation of the diphthong: [ou] – [ɜʊ].	
	The closing and opening of vowels	[e] and [ɔ:] which tend to be closer in advanced RP.	
		The nuclei of diphthongs [ei], [ɛə], [ɔə], [ʊə] become more open when these phonemes are being levelled, particularly the diphthong [ɛə]. The first element of the diphthong [ʊə] can be lowered considerably. Thus several words with [ʊə] are given a shade [ɔə] pronunciation by some advanced RP speakers:	In words like *careful* ['kɛəful] – ['kɛ:ful]. In words like *poor, sure* [pʊə, ʃʊə] – [pɔə, ʃɔə].
Combinative changes	Changes in [j + u:], [l + u:] (Yod Dropping)	The tendency is for middle-aged and younger speakers to omit the [j] after [s] before [u:]. Word-internal [j] tends to be retained There is also fluctuation after [l].	In words like *suit, student, super* pronounced as [sju:t] or [su:t], ['stju:dənt] or ['stu:dnt], ['sju:pə] or ['su:pə]. *Assume* [as'ju:m]. Word-initially *lute* [lu:t] is normal, but it is possible to pronounce [i'lju:zn] in *illusion*.
	Change of [ɔ:] to [ɒ]	Where orthographic «o» occurs before the voiceless	In words like *loss* [lɔ:s]. This pronunciation is

	before [f, s, θ]	fricatives [f, s, θ] older speakers pronounce the vowel [ɔ:].	currently dying out in RP and being replaced by [ɒ]: [lɒs]. Words like *salt* and *fault* still may be pronounced with [ɔ:].
	Changes in length. In present-day English changes in vowel lengthcan be influenced by other factors than the following consonant, syllabic border, the degree of stress, and the types of nuclear tone	There is a strong tendency for the short vowels to be lengthened to be heard sporadically in many words in any position. It should also be mentioned that [ɪ] is often lengthened in the final syllable.	The lengthening of [ɪ] is often heard in *big, his, is*; of [ʊ] in *good*; [ʌ] in *come*. In words like *very, many*: ['veriː], ['meniː].
		Short vowels [e, æ] are also very frequently lengthened. This tendency has considerably increased in the past few years.	In words like *yes, bed, men, said*, *sad, bad, bag*.

Table 53 — Changes in consonant quality

Articulatory feature	Pronunciation feature	Specific cases	Examples
Voicing and Devoicing	Final RP consonants are all partially devoiced.	Final stop consonants are all partially devoiced, particularly after long vowels and diphthongs. However, the partly devoiced consonants are never identical with their voiceless counterparts, though devoiced, weak consonants never acquire aspiration.	In words like *deed*: [di:d].
Loss of a sound	Loss of [h]	In rapid speech initial [h] is lost in form word, it is dropped completely. The loss of [h] in stressed syllables does not happen.	So instead of *He wants her to come* [hiˑ – wɒnts hɜˑ tə ḳʌm] one hears: [i: – wɒnts ɜˑ tə ḳʌm].
	Loss of final [ŋ]	Loss of final [ŋ] happens occasionally, does not seem to become general usage.	In words like *looking, working*.
	Vocalization of [l], spread of «dark» [ɬ]	The 'dark' allophone of [l] loses its alveolar lateral nature and becomes a vowel of the [o] or [ʊ] type. It is restricted to the preconsonantal and word-final environment.	In words like ['mio/ʊk] *milk*, ['mido/ʊ] *middle.*
	Glottal stop	In RP the glottal stop [ʔ] can appear only in the following two environments: a) as a realization of syllable-final [t] before a following consonant as in; b) in certain consonant clusters as in where it is known as «glottal reinforcement». Among younger RP speakers glottaling can even be heard finally before vowels or in absolute final position. Intervocalically within a word, it remains firmly excluded from RP	In words like *batman* ['bætmən] – ['bæʔmn] or *not quite* ['nɔt 'kwait] – ['nɔʔ 'kwaiʔ]. In words like *box, simply* [bɔʔks], ['sIʔmplI], (*pick it up* [pɪʁ ɪʔ ʌp]) (*Let's start*! [leʔs sta: ʔ]). (cf. Cockney city ['sɪʔɪ]).
Palatalization	Palatalization	Palatalized final [k'] is often heard.	In words like *week, quick*, etc.: [wi:k'], [kwIk'].
Epenthetic sound	Initial «hw»	Initial «hw».	Some conservative RP speakers pronounce words like *why, when, which* with an initial weak aspiration-like sound [h] – [ʍ].

	Linking and intrusive [r]. All English accents are divided into «rhotic» or «non-rhotic». Rhotic accents are those which actually pronounce [R].	RP is a non-rhotic accent but most speakers do pronounce [R] word-finally before a vowel. By analogy with linking «r», «r» is inserted before a following vowel even though there is no «r» in spelling.	*It is a far◡away country,* as linking «r». In words like *idea of*, *China and*.
Combinative changes	Sound combinations	Sound combinations [tj, dj, sj] are pronounced as [ʧ, ʤ, ʃ]. Yod coalescence (coalescent assimilation) is established in casual RP, It is avoided in careful style. Where [t] is involved, it faces a rival in glottalling.	In words like *actual* ['æktjʊəl] – ['aekʧʊəl], *graduate* ['grædjuəit] – ['grædʒʊeit], *issue* ['isju:] – ['iʃʊ], involving the clitic *you* or *your*, as ['wɔʧu 'wɔnt] *what you want*, [puʧɔ:] *put your (things down)*, ['wudʒu 'maind] *would you mind*, or glottalling ['wɔʔju] *what you*.
		Within a word with a following unstressed vowel, RP shows categorical coalescence.	In some words it has long been the norm (*Figure, soldier*), while in others its use in RP is more recent and subject to stylistic variation.
		Within a stressed syllable, traditional RP [tju:n, dju:k] face strong popular competition in [ʧu:n, ʤu:k].	In words like *tune, duke*. In near-RP, the first syllable of *Tuesday* may well be like that in *choose* and the last syllable of *reduce* just like the one in *juice*.

Free variation is presented in Figure 39.

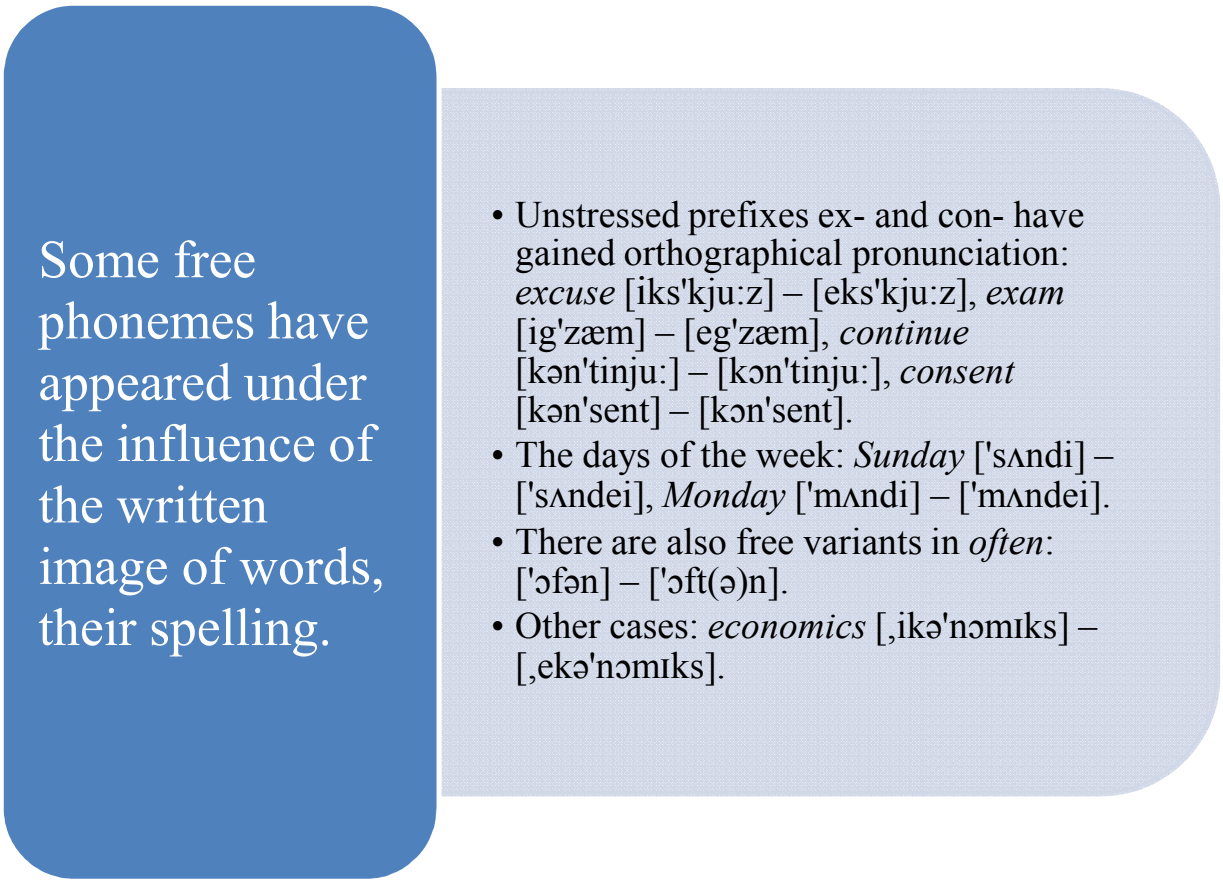


Fig. 39. Non-systematic variations in RP phonemes

Not all the changes are recognized as a normby the language community. Some changes are quite stable, others tend to disappear. It is important to realize the importance of recent developments, which may lead to radical changes in the whole phonemic inventory.

British English is represented by regional non-RP accents. Territorially there are more than ten varieties. The non-RP accents of England may be grouped like this:

1) Southern accents.
   a) Southern accents (Greater London, Cockney, Surrey, Kent, Essex, Hertfordshire, Buckinghamshire);
   b) East Anglia accents (Lincolnshire, Norfolk, Suffolk, Cambridgeshire, Bedfordshire, Northamptonshire, Leicestershire;
   c) South-West accents (Gloucestershire, Avon, Somerset, Wiltshire).
2) Northern and Midland accents.
   a) Northern accents (Northumberland, Durham, Cleveland);

b) Yorkshire accents;

c) North-West accents (Lancashire, Cheshire);

d) West Midland (Birmingham, Wolverhampton).

But generally they all can be grouped into southern and northern regional varieties. The main differences between southern and northern accents are as presented in Table 54.

Table 54 — Distinctive pronunciation features of Northern and Southern English dialects

Southern accents	Northern accents
Consonants	
Before the voiceless fricatives [f], [θ], [s] and certain consonant clusters containing initial [n] or [m], [a:] is pronounced in the the South.	Before the voiceless fricatives [f], [θ], [s] and certain consonant clusters containing initial [n] or [m], [æ] is pronounced in the North.
Non-rhotism, absence of post-vocalic [r], is typical of RP and Welsh English.	Rhoticism, retaining post-vocalic [r], is spread in Scotland, Ireland, and Southwest in words like *bar, farm*, etc. which have the [R].
In the south of Britain the glottal stop is used more frequently than in RP.	In the north-east of England, East Anglia and Northern Ireland, the glottal stop may also be pronounced simultaneously with the voiceless [p, t, k], most strikingly between vowels: *pity* [‘pitʔi:].
Many southern non-RP speakers use [n] in the suffix «-ing» instead of [ŋ]; *sitting* ['sitin].	In an area of western central England which includes Birmingham, Manchester and Liverpool they pronounce [ŋg]: *singer* ['siŋgə], *wing* [wiŋg].
In most southern accents [j] is dropped after [t, s]: *student* ['stu:dənt], *suit* [su:t]. In London [j] is lost after [n, t, d]: *news* [nu:z], *tune* [tu:n].	In parts of the north the j-dropping has progressed a good deal further, it has been lost after [θ]: *enthusiasm* [ən'θuziəzm]. In large areas of eastern England [j] is lost after every consonant.
Vowels	
The vowel [ʌ] occurs regularly in the accents of the south.	The vowel [ʌ] does not occur in the accents of the north.
Southern speakers distinguish pairs like *book* and *buck*, as [buk] and [bʌk], in the north as [bu:k] and [bʊk].	Many northern speakers, while they do not have [ʌ] have [u:] rather than [ʊ] in words such as *hook, book, look*. They therefore distinguish pairs like *book* and *buck*, which in the south sound [buk] and [bək], in the north as [bu:k] and [bʊk].
Before the voiceless fricatives [f, θ, s] and certain consonant clusters containing initial [n] or [m], [a:] is pronounced in the south.	Before the voiceless fricatives [f, θ, s] and certain consonant clusters containing initial [n] or [m], [æ] is pronounced in the north instead of [a:]
The final [i:] like in words *city, money*, etc. in the south of England is	The final [i:] like in words *city, money*, etc. in the north of England is pronounced as [ɪ].

pronounced as [i:].	

Southern English Accents. Educated Southern speech is very much near-RP accent. Pronunciation features of the Southern English accents are presented in the Table 55.

Table 55 — Pronunciation features of Southern English accents

Vowels	Pronunciation features	Examples
	The short front vowels [e], [æ] tend to be closer than in RP.	
	Among the long vowels, most noticeable is the diphthongization of [i:] – [əi], [u:] – [əʊ].	In words like *bead* = [bəid], *boot* = [bəʊt].
	When [ɔ:] is final, it is pronounced as [ɔwə].	In words like *sore, saw* = [sɔwə]; when it is not final, its realization is closer [ɔʊ].
	[ʌ] is realized as [æi].	In words like *blood* [blʌd] – [blæid].
	[æ] is realized as [ɛ] or [ɛi].	In words like *bag* [bæg] – [bɛg], [bɛig].
	[ɪ] in word-final position sounds as [i:].	In words like *city* ['sitɪ] – ['siti:].
	[ɜʊ] sounds as [æu].	In words like *soaked* [sɜʊkt] – [sæʊkt].
	[au] may be [æə].	In words like *now* [nau] – [næə].
	The diphthong [ei] is realized as [æi] or [ai].	In words like *lady* ['leidi] – [læidi:], [laidi:].
	[ai] sounds as [ɔi]~[ai].	In words like *price*= [prɔis].
	[əu] sounds as [æu].	In words like *load* [læʊd].
	[au] sounds as [a:].	In words like *loud* [la:d].
	RP diphthong [əʊ] in is weakened to schwa [ə].	In words like *window, pillow.*
	You, to are pronounced as [jə], [tə].	Especially finally in , *see you, try to*.
Consonants	H-dropping. [h] is not pronounced in initial positions in words which have this phoneme in RP. [h] is used, however , in initial positions in words which in RP begin with a vowel.	*have, hat, horse* = [əv], [æt], [hɔ:s]. Thus the words *air, atmosphere, honesty* are pronounced in Cockney as [heə], [hætməsfiə], ['hɔnəstɪ].
	[ʔ] is widely spread in Cockney speech.	In words like *paper* ['pæiʔpə], *butterfly* ['bʌtəflai].
	The contrast between [θ] and [f] is completely lost.	In words like *thin* [fin], *booth* [bu:f].
	The contrast between [ð] and [v] is occasionally lost.	In words like *weather* ['wevə].
	When [ð] occurs initially it is either dropped or replaced by [d].	In words like *this* [ðIs], *them* [(d)əm].
	[l] is realized as a vowel when it precedes a consonant and follows a vowel, or when it is syllabic when the preceding vowel is [ɔ:], [l] may	In words like *milk* [mɪʊk], table [teibʊ].

	disappear completely.	
	[ŋ] is replaced by [n] in word-final position: or it may be pronounced as [Iŋk].	In words like dancing ['dansɪn]. In words like something, anything, nothing: [nʌfiŋk].
	[p, t, k] are heavily aspirated, more so than in RP.	
	[t] is affricated, [s] is heard before the vowel:	In words like *top* [tsɒp].
	Yod coalescence of [t], [d] before [j] into [ʧ], and [ʤ]. But elision of [j] followed by [n].	In words like *tube* [ʧu:b], *during* [‘ʤuərin]. In words like *news* [nu:z].

Northern and Midland Accents. Northern and Midland accents have very much in common. There is noticeable influence of Scotch accent. The most typical representative of the speech of this area is Newcastle accent. Pronunciation features of the Northern accents are presented in Table 56.

Table 56 — Pronunciation features of Northern accents

	Pronunciation features	Examples
Vowels	RP [ʌ] is realized as [ʊ].	In words like *love* [lʌv] – [lʊv].
	RP final [ɪ] sounds like [i:].	In words like *city* ['sitɪ] – ['siti:].
	Words like *dance, chance* which in RP have [a] are pronounced with [æ].	In words like [dæns], [ʧæns].
	[ei], [ɜu] are either monophthongs, or narrow diphthongs than those in RP, or they may even sound as opening diphthongs [ie], [uo].	In words like *bay* [be:], [bie], *plate* [ple:t], [pliet], *boat* [bo:t], [buot].
	Words that have «al» in spelling – *talk, call, all*, are pronounced with [a:]:	In words like [ta:k], [ka:l], [a:l].
	RP words with [ɜ:] are pronounced with [ɔ:] in a broad Tyneside accent.	In words like *first* [fɔ:st], *shirt* [sɔ:t]; *so first, forced; shirt, short* are homonyms.
	Diphthong [ai] is pronounced as [ɛi].	In words like *right* [rɛit].
	Words which in RP have [au] may have [u:].	In words like *about* ['əbu:t].
Consonants	[1] is clear in all environments.	
	[h] is usually present in all positions.	
	-ing is [ɪn].	In words like *shilling* ['ʃilin].
	[p, t, k] between vowels are accompanied by glottal stop [ʔ].	In words like *pity* ['pitʔi:].
	In parts of Northumberland and Durham [r] may be uvular (the tongue and the uvular take part in its production).	

There are also regional-national varieties of English: Welsh English, Scottish English, Irish English. These accents function in bilingual areas. This speech situation in linguistics is known as exoglossic. In Wales, Scotland and Northern Ireland English usually dominates over national languages in urban areas, whereas in rural areas people use both English and the national language. Welsh, Scottish and Irish Englishes represent regional standards. Principal

phonological differences between regional standards and RP are represented in Tables 57-59.

Table 57 — Pronunciation features of Welsh English

	Pronunciation features	Examples
Vowels	The distribution of [æ] and [a:] is as in the north of England.	*Last, dance, chance* tend to have [æ] rather than [a:].
	Unstressed orthographic «a» tends to be [æ] rather than [ə].	In words like *sofa* ['sɔ:fæ].
	There is no contrast between [ʌ] and [ə].	In words like *rubber* ['rəbə].
	[ɪ] at the end is a long vowel.	In words like city ['siti:].
	In words like *tune, few, used* we find [iu] rather than [ju:].	In words like *tune* [tiun].
	[ei], [ɜu] may become monophthongs.	In words like *bake* [bɛ:k], *boat* [bɔ:t].
	The vowel [ɜ:] is produced with rounded lips approaching [ɔ:].	As in *girl.*
	The vowels [iə], [uə] do not occur in many variants of Welsh English.	In words like *fear* is ['fi:jə], *poor* is ['pu:wə].
Consonants	W.E. is non-rhotic, [r] is a tap, or it is also called a flapped [r]. Intrusive and linking [r) do occur.	
	Consonants in intervocalic position, particularly when the preceding vowel is short are doubled.	In words like *city* ['sitti:].
	Voiceless plosives tend to be strongly aspirated: in word final position they are generally released and without glottalization.	In words like *pit* [phith].
	[l] is clear in all positions.	

In the Highlands and Islands of northern and western Scotland Gaelic is still the native language of thousands of speakers. Educated Scottish people speak a form of Scottish Standard English which grammatically and lexically is not different from English, although with an obvious Scottish accent as presented in Table 58.

Table 58 — Pronunciation features of Scottish English

	Pronunciation features	Examples
Vowels	Sc. Eng. is rhotic, it preserves post-vocalic [r], vowels such as RP [iə], [ɜ:], [ɛə], [ʊə] do not occur.	
	Length is not a distinctive feature of Scottish vowels. It should be noted, however, that vowels are longer in final stressed open syllables than elsewhere.	Pairs like *pool – pull*, *cot – caught* are not distinguished.

	Monophthongs are pure, there is no trace of diphthongization with the exceptions of [ai - ɛi], [au - ɛu] and [ɔi].	
	The RP [æ - a: (a)] distinction doesn't exist.	In words like *hat* [hat], *dance* [da:ns].
	[i]- [u]. [a], [ə] may be central.	
	In non-standard Sc. Eng. accent [u:] often occurs when RP has [au].	In words like *house* [haus – hu:s].
	It is interesting to mention that [ɒ] and [ɜu] may be not contrasted.	
	In very many regional accents *do, to* are pronounced as [də], [tə].	
	Words such as *arm, after, grass* may have [ɛ] rather than [a:].	In words like *after* ['ɛftə].
Consonants	Sc. Eng. consistently preserves a distinction between [ʍ] and [w].	In words like *which* [ʍits] – *witch* [wiʧ].
	Initial [p, t, k] are usually non-aspirated.	
	[r] is most usually a flap.	
	Non-initial [t] is often realized as glottal stop [ʔ].	
	[ɬ] is dark in all positions.	
	The velar fricative [x] occurs in a number of words.	In words like *loch* [lɒx].
	-ing is [in].	
	[h] is present.	
	A specific Scottish feature is the pronunciation of [θr] as [ʃ r].	In words like *through* [ʃru:].

Of all regional standards Irish English in Northern Ireland and in the Republic of Eire are different. The English language in Southern Ireland was originally introduced from the West and West Midlands of England and still shows signs of this today. This kind of English has spread over most of the Irish Republic. In the northern parts with the centre in Belfast, English has its roots in Scotland. Some areas of the Republic speak Northern Ireland English while others speak Southern Ireland English. Pronunciation features of Irish English are presented in the Table 59.

Table 59 — Pronunciation features of Irish English

	Pronunciation features	Examples
Vowels. The vowel system is similar to that of Scottish accents, post-vocalic retroflex frictionless	In words like *bay, say* the vowel is a monophthong [ɛ], preconsonantally it may be a diphthong of the type [ɛə - iəj].	In words like *gate* [giət].
	[i], [ʊ] are fairly central.	

sonorant [r] being used as in Scotland	[ɔ:] and [ɔ] contrast only before [p, t, k].	
	[ai], [au] are very variable.	
	Realization of [a:] may vary considerably.	
Consonants	[l] is mainly clear.	
	Intervocalic [t] is often a voiced flap [d].	In words like *city* ['sidi:].
	Between vowels [ð] may be lost.	In words like *mother* ['mɔ:ər].
	[h] is present.	

Between 375 million people now speak English as their first language. It is the national language of Great Britain, the USA, Australia, New Zealand and Canada (part of it). In the XVII and XVIII centuries English was brought to North America (mainly from the West of England). In the XX century American English began to spread in Canada, Latin America, on the Bermudas and in other parts of the world. According to British dialectologists the American-based group includes United States English, Canadian English [72; 98].

In American English, three main types of literary/cultivated pronunciation are distinguished (as displayed in Figure 40).

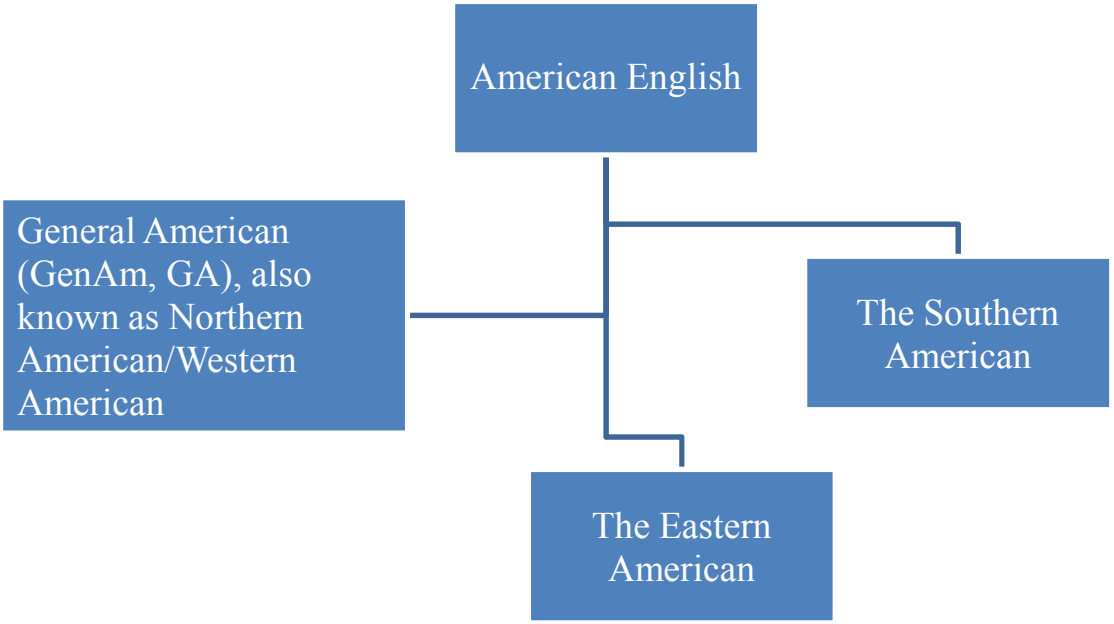


Fig. 40. Types of literary/cultivated pronunciation in American English

Stratification of American English is presented in Table 60.

Table 60 — Regional varieties of American English

Regional variety	Relation to the norm	Where spoken	Typical situation
General American/Northern American/Western American	The type of educated American speech known to be the pronunciation standard of the USA.	Spoken in the central Atlantic States: New York, New Jersey, Wisconsin and others. GA is spoken in two important business centres – New York and St. Louis, though New York is situated within the territory of Eastern American and St. Louis – that of Southern American.	GA is the form of speech used by the radio and television, mostly used in scientific, cultural and business intercourse.
The Eastern American	It bears a remarkable resemblance to Southern English.	Spoken in New England, and in New York City.	No particular situations.
The Southern American	Vowel drawl is a specific way of pronouncing vowels: diphthongization and even triphthongization of some pure vowels and monophthongization of some diphthongs at the expense of prolonging («drawling») their nuclei and dropping the glides.	Spoken in the South and South-East of the USA: Virginia, North Carolina, South Carolina, Tennessee, Florida, Alabama, Georgia, Mississippi, Arkansas, Lousiana, Texas ans parts of Maryland, West Virginia ans Oklahoma.	No particular situations.

The situation in the USA may be characterized as exoglossic: several languages function in the same territory. American English shows less dialectal differentiation than British English due to thecomplex of historical factors: Standard English as the starting point, high mobility of the population. Pronunciation features of American English are presented in Table 61.

Table 61 — Pronunciation features of American English

	Pronunciation features	Examples
Vowels	There is no strict division of vowels into long and short in GA, though certain GA vowels are tense and likely to be accompanied by relative length.	In words like [i:] in *seat*, [uː] in *pool*.
	A slight rise in tongue position during the pronunciation of tense vowels leads to a diphthongal quality of tense vowels which contrasts to a monophthongal quality of lax vowels.	
	In GA some diphthongs are treated as biphonemic combinations. The inventory of GA diphthongs varies from three to twelve phonemes: [ei], [ai], [ɔi], [au], [ɔu] (Shakhbagova 1982).	
	The pronunciation of [r] sound between a vowel and a consonant or between a vowel and a silence causes different interpretations of diphthongs and vowel length in GA.	In words like *turn* [tɜ:rn], *bird* [bɜ:rd], *star* [sta:r].
	GA is rhotic when [r] follows the vowels and ends the word. The sound [r] in *far* closes the syllable more definitely than in British Received Pronunciation. There occurs a vocalic, or vowel-like and syllabic [r] after a vowel and before a consonant.	In words like *far, core*. In words like *bird, murmur.*
	Nasalization of vowels preceded or followed by a nasal consonant is often called «American twang». It is incidental, unmarked in phonemic transcription.	In words like *take, small, name.*
	GA front vowels [i:], [ɪ] are distributed differently in GA. In word final position it is often even diphthongized.	In words like *very, pity* GA has [i:] rather than [ɪ].
	Vowel [e] is more open in GA. It also may be diphthongized before [p], [t], [k].	In words like *let* [lɛət].
	[ɜ], [ə], [ʌ], [a] are central vowels in GA that differ markedly from RP vowels in articulation and distribution.	
	Distribution of [ɔ:], [ɔ] in RP and GA is different. GA [ɔ] is intermediate in quality between the RP [ɔ:] and [ɔ]with considerably less rounded lips.	
	The diphthong [ei] is closer in GA.	
	Very front RP realization of [ɜu] is not found in GA: its nucleus is a more back vowel, such as [o], thus it is transcribed as [ou]. In unstressed syllables and before	In words like *radio*, *boat, coat.*

	voiceless consonants the glide of the dipthong is weakened and sometimes reduced to a monophthongal [o].	
	The nucleus of [aʊ] tends to be more advanced in GA.	
	RP vowels (derived historically from vowel + [r]) do not occur in GA, since GA is a rhotic accent.	[iə] in *dear* – GA [dir], [ɛə] in *dare* – GA [deir], [uə] in *tour* – GA [tur].
	Some words and names spelled er are pronounced [a:] in RP, but /ɜr/ in GA.	In words like *clerk, derby, Kerr*.
	Words ending in *-ille* tend to be pronounced [ail] in RP but [ɜl] or [l] in GA.	In words like *hostile, missile, tactile, fertile, docile, sterile, agile, fragile, futile*.
	[h] phoneme has differing lexical distribution of consonants in RP and GA.	GA has preserved the older (seventeenth-century) pronunciation [ɜb] or [hɜb] of the word *herb* without an [h], whereas RP invariably uses the newer form [hɜ:b].
	The vowels [ʌ] and [ə] can be generally regarded as allophones of the same phoneme in GA.	In words like *cup* [kəp], *above* [ə'bəv].
	When RP has [ʌr] + a vowel most Americans use r-colored, mid-central [ɜr].	In words like *courage* ['kɜ:riʤ], *hurry* ['hɜ:ri].
	The GA [æ] is somewhat closer than in RP: before [r] plus a vowel [ɛ] is used instead of [æ]. The GA [æ] is tense, long and nasalized before [d], [m], [n], as in [bɜr:d], [mɜr:n], [lɜr:nd].	In words like *carry, marry, parrot.* Thus the words *marry* and *merry* are homophones in GA.
	[ɜ] and [ɪ] are not distinct as weak vowels. The actual quality used by Americans for ɜ varies considerably, being typically more [i]-like when followed by a consonant, but more [ʌ]-like when at the end of the word.	*Rabbit* rhymes with *abbot*.
Consonants	The retroflex pronunciation of [r] is typical GA pronunciation feature. RP [r] is produced farther forward in the mouth than GA [r]. In words containing a vowel or a digraph followed by «r», [r] is either pronounced distinctly or the vowel sound has a retroflex coloring.	In words like *bird* [bərd], *further* ['fərðər], *fear* [fir].
	GA speakers tend to pronounce intervocalically before a weakly stressed vowel or after a vowel+/r/ and before a weakly stressed vowel a voiced alveolar tap/flap, in the dictionaries it is shown by the symbol [t]. It sounds like a quick English [d], and also like the [r] of some languages. After [n] [t̲] in GA can optionally be elided/omitted.	In words like *city, better, latest, forty, party.* GA *shutter* ['ʃʌt̲əɔr] may sound identical with *shudder* ['ʃʌdəɔr]: distinct pairs in RP, have the same pronunciation in GA: *latter/ladder, writer/rider*. Accordingly, GA *winter* ['wint̲əɔr] can sound

		identical to *winner*.
	Yod dropping: [j] is not pronounced in the combination of [j] + [U:] after t, s, d.	In words like *tube, suit, student, news.*
	Yod coalescence (coalescent assimilation): [t] + [j], [d] + [j] before a weak vowel, as [u] or [ə] are assimilated into [ʧ], [ʤ].	In words like *educate* ['eʤukeit], *factual* ['fæktʃuəl].
	In GA [ʃ] is vocalized in final weak syllables ending with *-ion, -ia*.	In words like *Asia* ['eiʒə], *version* ['vɜʒn].
	Nasality (nasal twang) is limited to vowels adjacent to [m, n, ŋ] where the velum lowers too soon and makes the preceding vowel nasal.	In words like *manner, candy*.

There are a number of individual words in common use in both accents which have the same spelling but different phoneme distribution (as shown in Table 62).

Table 62. Different phoneme distribution in individual words

Words	GA	RP
ate	[eit]	[et]
either, neither	['i: ðər], ['ni:ðər]	['aiðə], ['naiðə]
figure	['figər]	['figə]
leisure	['li:ʒər]	['leʒə]
lever	['levər]	['li:və]
process	['pra:ses]	['prəuses]
schedule	['skedʒu:l]	['sedju:l]
shone	[ʃoun]	[ʃɔn]
tomato	[tə'meitou]	[tə'ma:təu]
vase	[veis]	[va:z]

Non-systematic Differences between General American and Received Pronunciation (as presented in Table 63).

Table 63 — Non-systematic differences between GA and RP

Features	Pronunciation features	Examples
A.Pronunciation differences	Words *apparatus, data, status* can be pronounced with either [æ] or [eɪ] in GA, but only with [ei] in RP.	
	Words like *hostile, missile, reptile* have final [ail] in RP. In GA they may have [əɪ].	
B.Stress Differences	In words of French origin GA tends to have stress on the final syllable, while RP has it on the initial one.	*frontier* ['frʌntiə] [frʌn'tiɔr], *composite* ['kɔmpəzit] [kəm'pa:zət], *primarily* ['praimərɪli] [prai'merɪli].
	Some compound words have stress on the first element in GA and in RP they retain it on the second element.	In words like *weekend, ice-cream, hotdog, New Year*.
	Polysyllabic words ending in *-ory, -ary, -ery, -mony* have secondary stress on the vowel in the penultimate syllable in GA, and RP has no stress in the same position. In some cases, words in GA and RP have the same number of syllables but simply take different stress patterns, with concomitant differences in pronunciation	In words like *laboratory* ['læbrə,tɔri], *dictionary* ['diksə,neri], *secretary* ['sekrə,teri], *testimony* ['testi,mouni]. In words like *advertisement*: GA [,ædvər'taizmənt], RP [əd'vɜ:tismənt]; *adult*: GA [ə'dʌlt], RP ['ædʌlt], *laboratory, address*, etc.
C. Intonation	GA intonation on the whole is similar	BE has a greater pitch range

Differences	to that of RP. In GA the voice doesn't fall to the bottom mostly, Thus BE speakers tend to perceive the Americans as monotonous and negative, GA speakers tend to perceive the British as pretentious and tnannered. Other differences concern mainly the use of similar tones. This explains the fact that the English speech for Americans sounds «affected» and «pretentious» or «sophisticated». And for the English, Americans sound «dull», «monotonous», «indifferent».	with a marked rise, then a gradual fall with a final glide down on the last syllable.o low. GA intonation begins with a much smaller rise-fall, maintaining a mid-level pitch with a marked rise-and-fall glide on the final syllable. GA clearly makes more use of high rise rather than of low rise in yes-or-no questions, and the use of high rise seems to be increasing, on declaratives, as a marker of casualness, particularly in narrative monologues.

2 Accents of English outside UK and USA

Canadian English Pronunciation. Canadian English is used by about 14 million Canadians. Typical Canadian accent is similar to GA. There are still some differences in pronunciation as displayed in Table 64.

Table 64 — Pronunciation features of Canadian English

	Pronunciation features	Examples
Vowels	The «Canadian raising»: diphthongs [ai] and [aʊ] in CnE have a mid-central nucleus, but not the low one as in RP, before the following voiceless consonant, so [ai] = [əi] and [au] = [ʌu].	In words like *price, mouth*, and *pipe, while, like, life, nice*, *out, south, couch*.
	The pronunciation of the sentence *I saw the White House* may be regarded as typically Canadian, but un-American.	*I saw the White House* as [ai'sa ðə ↘hweit ˌhʌus]
	There is no opposition [e]-[æ]-[ɛə], in all these cases [ɛ] is used.	In words like *merry – marry – Mary*/
	In CnE, just as well as in GA, [ɜr] is used as distinct from RP [ʌ].	In words like *hurry, courage, current, worry.*
	Like GA speakers, most Canadians use the retroflex [r] and dark [ä] in all positions.	
	Yod dropping is widespread, although the pronunciation with [j] enjoys higher prestige.	In words like *tune, duke, new.*
	Lever with [ɛ], *either, neither* with [i:], *missile* with [əl] are reported more frequently by the younger age group (students) than by the older one (parents).	In words like l*ever* with [ɛ], *either, neither* with [i:], *missile* with [əl].
Consonants	CaE is rhotic, with [æ] in *bath*, etc., and [t] voicing, that is why the British usually take English-	

	speaking Canadians for Americans.	
	CaE is rhotic, with [æ] in *bath*, etc., and [t] voicing, that is why the British usually take English-speaking Canadians for Americans.	
	Like GA speakers, most Canadians use the retroflex [r] and dark [ä] in all positions.	
	Flapping of the alveolar sounds [t], [d] can occur between the two vowels, if the second is not stressed. It is a process of replacing an intervocalic [t] or [d] with a quick voiced tap of the tongue against the alveolar ridge, as in the words	In words like *waiting/wading, seated/seeded, writer/rider*.
	Older Canadians are less likely than younger ones to replace alveolar stops with flaps.	

Australian and New Zealand Englishes. During the colonial expansion English was exported to Australia, New Zealand and South Africa (XVIII-XIX century). Unlike people who emigrated to North America, the emigrants who went to those lands were mostly from the south-eastern parts of England. It conditioned specific phonetic features of Australian English, New Zealand English and South African English.

Until recently Australians with British ancestors were the predominant part of the emigrants: Australia and New Zealand have a relatively recent history of settlement – since the end of the 18th century. Being the penal colony, Australia took most newcomers from the region in and around London. The second important group of immigrants was Irish which is mainly responsible for the huge number of Catholics in Australia. They were eventually followed by voluntary immigrants.

Today, Australia is the sixth largest country in the world by area. It is estimated that around 70% of its population is of European ancestry and descent. Australian population is mostly urban: nearly half of the population lives in its four major cities: Sydney, Melbourne, Brisbane and Perth. There is little geographic variation in Australia, but Australian English (AuE) displays social variationwith the most distinctive feature – its accent.

Australian pronunciation has three major varieties: Cultivated (or Educated) Australian (CAuE), General Australian (GAuE) and Broad Australian (BAuE). Cultivated Australian is used by about 10% of the population. General

Australian is the most characteristic type of AuE pronunciation, used by «people of good education and high standing in the community». It is the type of accent used in broadcasting industry.

A substandard accent is represented by Broad Australian (Uneducated, Popular Australian) which is distinguished by nasality («Australian twang») and by its vowels. The vowel system of Broad Australian is very similar to Cockney which is the result of the historical development. The phonetic differences between RP and General Australian are represented in Table 65.

Table 65 — Phonetic features of Australian English

	Pronunciation features	Examples
Vowels	RP [i:] and [u:] are heard as diphthongs: [i] = [əi], [u:] = [əu]. The effect on [i:] is particularly striking as a marker of Australian accent.	In words like *see, do tea* = [təi], *too* = [təu].
	Centring diphthongs are pronounced in GAuE with the final element hardly heard. The effect is almost a pure vowel.	In words like *here* = [hi:], *fair* = [fɛ:], *poor* = [pu:].
	Closing diphthongs change in GAuE: [eɪ] = [aɪ]. It is widely heard in the name Australia and in the greeting *g'day* [gədai].	In words like *same* = [saɪm].
	Closing diphthongs have the following counterparts in GAuE: [aɪ], especially in the word final position = [oɪ].	In words like *time* = [toɪm], *high* = [hoɪ].
	Closing diphthongs have the following counterparts in GAuE: [au] = [æʊ].	In words like *now* = [næʊ], *cow* = [kæʊ].
	GAuE speakers show a general tendency to avoid the pure [a:]: there is a preference for the short [æ] before two consonants (especially nasal sonants); [a:] also tends to change in certain positions to [ʌ] or [ʌə].	In words like *plant* = [plænt], *dance* = [dæns]. In words like *cart* = [kʌət], *darling* = ['dʌlin].
	GAuE vowels [i], [e], [æ] are noticeably closer than their counterparts in RP.	
	The distribution of shwa (the neutral vowel [ə]) in GAuE is greater than in RP. It is used even in the endings *-es*, *-est* and in *-ess, -less, -let, -ness*, in various positions where the spelling is «i».	In words like *boxes* = ['bɔksəz], *he crosses* = ['krɔsəz], *rabbit* = ['ræbət], *terrify* = ['terəf aɪ].
	The sound [ʊ] is more advanced in GAuE and has lip rounding.	
Consonants	The omission of some consonants, especially [k], [t], [g], [h].	In words like *facts* = [fæks], *half past two* = ['a:pa:stu:], *recognize* =['rekənaiz].
	The substitution and insertion of consonants	In words like *morning* =

	in certain words.	['mɔ:nən], *suggest* = [səg'ʤəst].
	There are no glottal stops.	
	Some Australians produce rhotic words.	

There are also supersegmental differences as presented in Table 66.

Table 66 — Supersegmental features of Australian English

	Pronunciation features	Examples
A.Word Stress	Full value is allowed to unstressed vowels.	In words like *subject* = ['sʌbʤekt], *bankrupt* = ['bænkrʌpt], *-day* = [dei] in the names of the days of the week.
	In a similar way the endings *-ial, -ius, -ium* which in RP are often reduced to monosyllables, are usually disyllabic in GAuS.	In words like *genial* = ['ʤiniəl], *genius* ['ʤiniəs], *helium* ['hi:liəm].
	The stress is usually kept in the first syllable.	In words like *incline* = ['inklain], *defect* =['difekt], *relay*= ['rilei].
B. Intonation	There is a general opinion that GAuE and RP intonational patterns are practically the same, but RP intonation is «more lively and vigorous» than GAuE. There is a common tendency in GAuE to «use longer word-groups». It is characterized by a slower rhythm which has a quality of monotony. There is a strong tendency to stress words like *by, and, to, in* etc. in the sentence.	

New Zealand English. NZE is used by nearly 90% of the country's population. Maori is the second official language of NZ. The settlement of the country started about 1840. The first settlers came from Australia. NZE shares almost the same phonetic features with AE as presented in Table 67.

Table 67 — Phonetic features of NZE

	Pronunciation features	Examples
Vowels Phonologically accent has a lot of similarities. The differences between NZE with AuE reside primarily in the	In NZE the vowel [æ] as in had is quite close to the AusE [e] as in *head.*	The well known phrase «The cat sat on a mat» would sound somewhat like «The cet set on a met» in a NZer's pronunciation.
	But NZE [i] is more central and similar to the schwa.	It is the speech sound most parodied by Australians imitating New Zealanders in

short front vowels and in the centring diphthongs.		phrases like *'fush 'n' chups*.
	In NZE the centring diphthongs as in *ear* and *air* have merged for most young speakers whereas in AusE these two vowels remain very distinct.	

In New Zealand, RP is used as pronunciation model for educated speakers.

PART II. Workshops, Practical Tasks, Mid- and End-of-term Tests

Workshop 1. Topics 1,2

Topics to discuss

– Phonetics as one of the branches of linguistics.
– Methods of investigation in phonetics.
– Aspects of speech sounds.
– Articulatory aspect of speech sounds.
– Acoustic and auditory aspects of speech sounds.
– Phonological aspect of speech sounds
– Basic concepts of the theory of phonemes.
– Theoretical approaches to the theory of phoneme.

Tasks to Topic 1

Answer the following questions

1. What is phonetics?
2. What branches of phonetics can you name?
3. What aspects are studied by different branches of Phonetics?
4. What is pronunciation?
5. What problems can we focus on when discussing the English pronunciation?
6. How is language shaped into a spoken message?
7. How can the sound be defined articulatorily and auditorily?

Practical tasks (You can use the glossary)

Make a dictionary of the main notions and give their definitions

1. People engaged in the study of phonetics are called …
2. People engaged in the study of phonology are called …
3. The basic component of the phonic substance of language is called …
4. How many components does the phonic substance of language consist of?
5. A sequence of words spoken in a single breath, a stretch of speech which has describable melody is called …

6. Knowledge, a code which is known and shared by speakers who use their knowledge for transmitting and interpreting verbal messages in these events is called …

7. Phonetics whose domain is the larger units of connected speech: syllables, words, phrases and texts is called …

8. The part of phonetics which is concerned with individual sounds is called …

9. The part of phonetics which is mainly concerned with the functioning of phonetic units in the language is called …

10. The science that studies the ways in which pronunciation interacts with society is called …

11. The science that investigates a wide range of phenomena from acoustic phonetics to language pathology is called …

Make a table and put words in italics from the poem «The Chaos» into the table according to the similarity of their pronunciation. Check their meaning in the dictionary [27; 28; 47; 53]

Tasks to Topic 2

Answer the following questions

1. What is an allophone?
2. What are the three aspects of a phoneme?
3. What allophones are called principal/subsidiary?
4. What is the difference between distinctive and non-distinctive articulatory features?
5. What types of transcription do you know?
6. What are the main trends in phoneme theory?
7. How is a speech sound iproduced?
8. What does the articulation of a sound consist of?
9. What is an articulatory classification of speech sounds? Speak on the following.

1. How many aspects of speech sounds can be differentiated? Explain each aspect.
2. What are coarticulatory / adjustment phenomena? Give examples.
3. Enumerate the methods of phonological analysis.
4. Define the invariant of the phoneme.
5. Define the phoneme.

Practical tasks (You can use the glossary)

Make a dictionary of the main notions and give their definitions

1. The basic component of the phonic substance of language is called …
2. A unit of spoken message larger than a single sound and smaller than a word is called …
3. Give the name of the founder of phonology.

Fill in the table by finding information on the following

1. Give all names of speech mechanisms.
2. Describe the power mechanism and the way it works.
3. Describe the vibrator mechanism and the way it works.
4. Describe the resonator mechanism and the way it works.
5. Describe the obstructor mechanism and the way it works.

Mechanism	What it consists of	How it works	Its function

Analyze the following minimal pairs and identify phonemes that possess the distinctive functions. Do not hesitate to use the dictionary if the word is unfamiliar or you are not sure about its pronunciation [78; 79; 98; 104]

a) bent – scent
coarse – source
dear – dare
die – dice
eye – isle
fair – bare
floor – flower
for – fort
hair – fare
heat– heel
hear – here
him – hymn
make – maid
mail – mane
meat – meet
oar – orb
one – son
peer – pear
peace – peek
plain – plate
poor – pour
real – reel
right – bright
root – route
sail – sole
sew – so
shore – sure
sop – soup
some – seem
steal – stole
tail – tall
their – there
waist – wait
wait – wake
way – whale
wear – where

b) complement – compliment
principal – principle

Workshop 2. Topic 3

Topics to discuss

– Modification of sounds in speech.

– Phonotactics and distribution of Cs in English speech.

– Assimilation and other phonetic processes in the English speech.

– Tendencies in the articulation of English vowels.

– Tendencies in the articulation of English consonants.

Tasks to Topic 3

Answer the following questions

1. According to what are speech sounds divided into vowels and consonants?
2. What differences are there between V and C?
3. Under what conditions are English consonants modified?
4. What is connected speech and what is its significance?
5. What does the ability to produce English with an English-like pattern of stress and rhythm involve?
6. What syllables are typically articulated precisely and what are weakened, shortened, or dropped in connected speech?
7. What is the quality of a vowel determined by?
8. What criteria are used for the classification of vowels?
9. What are English vowels subdivided into?
10. From what aspects is the position of the tongue in the mouth cavity characterized?
11. What groups of vowels are distinguished in English?
12. What are the traditional lip positions in English pronunciation?
13. What does the checkness of English vowel sounds depend on?
14. What is duration of a vowel modified by and what does it depend on?
15. What is the phonemic status of the neutral sound [q]?
16. What are the directions of modifications of vowels?
17. What are historical alternations?
18. What is phonemic neutralization?
19. What do the terms «formal speech» and «informal speech» suggest?
20. Where is vowel elision very frequent?

Speak on the following

1. Explain articulatory differences between V and C
2. Explain acoustic differences between V and C
3. Explain functional differences between V and C.
4. Classify English consonants. What principles of classification do you use?
5. Speak on the typology of sound adjustments in connected speech.
6. Define diphthongs.
7. Define tenseness.
8. Define sound alternations.

Practical task (You can use the glossary)

Find which distinctive feature is absent in the following consonants

[p] – a occlusive, plosive, voiceless, fortis consonant phoneme

[b] – a bilabial, plosive, voiced, lenis

[t] – a forelingual, occlusive, plosive, voiceless, fortis

[d] – a forelingual, alveolar, plosive, voiced, lenis

[k] – a backlingual, occlusive, plosive, voiceless

[g] – a occlusive, plosive, voiced, lenis

[f] – a constrictive, fricative, voiceless, fortis

[v] – a labio-dental, fricative, voiced, lenis

[θ] – a foreligual, constrictive, fricative , voiceless, fortis

[ð] – a foreligual, interdental, constrictive, , voiced, lenis

[s] – a forelingual, alveolar, constrictive, fricative, voiceless

[z] – a forelingual, alveolar, constrictive, fricative, voiced

[ʃ] – a foreligual, constrictive, fricative, voiceless, fortis

[ʒ] – a palato-alveolar, constrictive, fricative, voiced, lenis

[h] – a glottal, fricative, voiceless, fortis

[ʧ] – a voiceless

[dʒ] –a affricate

[m] – a occlusive, plosive nasal sonant

[n] – an alveolar-apical, plosive nasal

[ŋ] – a backlingual, velar, occlusive, plosive

[1] – an alveolar-apical, constrictive, fricative

[w] – a constrictive, fricative, medial

[r] – a post-alveolar, fricative, medial

[j] – a medio-lingual, constrictive, fricative

Identify which distinctive features are absent in the following vowels

[i:] – a monophthong, tense, unrounded, front, high/close, narrow

[i] – a monophthong, short, lax, unrounded, front retracted, high/close, wide

[e] – a monophthong, short, lax, front, mid/half-open, narrow.

[æ] – a monophthong, unrounded, front, low / open, wide

[ʌ] – a short, lax, unrounded, central / mixed, mid, wide

[a:] – a monophthong, long, tense, , back, low / open, wide

[ɒ] – a monophthong, short, lax, rounded, back, low / open

[ɔ:] – a long, tense, back, low / open, narrow.

[u] – a monophthong, lax, rounded, , low / open, wide.

[u:] – a monophthong, long, tense, rounded, back, narrow

[ɜ:] – a monophthong, long, tense, unrounded, central / mixed.

[ɜ] – a monophthong, short, lax, central / mixed, mid V ph of the wide.

Diphthongs

[ei] – a closing diphthong with the i-glide

[ai] – a closing diphthong with the i-glide

[ɔi] – a closing with the i-glide

[əu/ɜu] – a closing diphthong

[au] – diphthong with the u-glide

[iə] – a diphthong with the ɜ -glide

[eə] – a centering diphthong

[uə] – a centering with the a-glide

Fill in the following table with examples from English (you can use texts from Appendix B)

Types of adjustments	Kinds of adjustments	Examples from the text
Adjustments related to C-C linking	Assimilations	
Adjustments related to V-V, C-V, V-C linking	Liaison	
	Accommodation (adaptation)	
	Glottal stop/hard attack	

Adjustments related to sound deletion/ insertion	Elisions (ellipsis or omission)	
	Epenthesis	
	Smoothing	
Adjustments on the syllable level	Compression	
Weakening	Weak forms	

Identify the phonetic process in each word or word combination and fill them in into the appropriate section of the table

Types of adjustments	Kinds of adjustments	Examples from the text
Adjustments related to C-C linking	Assimilations	
Adjustments related to V-V, C-V, V-C linking	Liaison	
	Accommodation (adaptation)	
	Glottal stop/hard attack	
Adjustments related to sound deletion/ insertion	Elisions (ellipsis or omission)	
	Epenthesis	
	Smoothing	
Adjustments on the syllable level	Compression	
Weakening	Weak forms	

Spar owners, a pair of shoes, left arm, stop pushing, it's, his shirt, It rains in May, He's coming this year, exactly, history, correct, 'cause, lots of money, reference, are, kindness, Is that your dog?, miserable, favourite, Let me do that for you, Does your mother know?, far away, police, 'bout, tell them, ask her, quick cure, vanilla ice-cream, find out, suppose, Would you mind moving?, waste of time, we, 'round, Be on guard, must.

Information and Tasks

To learn how to differentiate words the author of the book found it extremely helpful to work with what in English is known as «confusing» words. They are also termed as *paronyms.* You could see some examples of such words in the poem in the beginning of the course.

Here we give a list of such words. Analyze these words and identify minimal pairs [78-79; 98; 104]

a/uh
a la/Allah
accept/except
acclamation/acclimation
ad/add
adds/ads
aerial/areal
aerie/airy/eerie
afterward/afterword
ail/ale
air/aire/ere/err/eyre/heir
aisle/I'll/isle
allowed/aloud
all together/altogether
altar/alter
ante/anti/auntie
ascent/assent
ate/eight
aural/oral
aye/eye/I
bad/bade
bail/bale
bait/bate
baize/bays/beys
balm/bomb
band/banned
bard/barred
bare/bear
bark/barque
baron/barren
baroque/broke
basal/basil
based/baste
bass/base
be/bee
beach/beech
beat/beet
beau/bow
been/bin
beer/bier
berry/bury
bight/bite/byte
billed/build
blew/blue
boar/bore
board/bored
bolder/boulder
bough/bow
bouillon/bullion
brake/break
breath/breadth
brews/bruise
bridal/bridle
broach/brooch
bury/burry
but/butt
by/buy/bye
cannon/canon
canvas/canvass
carat/caret/carrot
cay/key/quay
ceiling/sealing/seeling
cell/sell
cent/scent/sent
cereal/serial
chews/choose
chili/chilly
choral/coral
chronical/chronicle
cite/sight/site
clause/claws
close/clothes
coarse/corse/course
coat/cote
colonel/kernel
commence/comments
concord/conquered
consonance/consonants
cord/cored/chord
core/corps
council/counsel
coward/cowered
creak/creek
crewel/cruel
crews/cruise/cruse
cue/queue
currant/current
curser/cursor
cymbal/symbol
days/daze/deys
decade/decayed
dense/dents
descent/dissent
desert/dessert
dew/do/due
diarrhetic/dieretic/diuretic
die/dye
dinar/dinner
discreet/discrete
disease/dizzies
divers/diverse
doe/dough
doubt/dought
draft/draught
dual/duel
earing/earring
elicit/illicit
elusion/illusion
epic/epoch
euthanasia/youth in Asia
ewe/yew/you
eye/aye/I
eyelet/islet
faint/feint

fairy/ferry
faro/farrow/Pharoah
faun/fawn
feted/fetid
figurate/figure eight
find/fined
fisher/fissure
flair/flare
flea/flee
flew/flu/flue
flier/flyer
flour/flower
for/fore/four
foreword/forward
fort/forte
forth/fourth
foul/fowl
fraise/frays/phrase
frees/freeze/frieze
friar/fryer
froes/froze
fungous/fungus
gaol/jail
gait/gate
gest/jest
ghoulish/goulash
gild/gilled/guild
gilt/guilt
gnu/knew/new/nu
gored/gourd
gorilla/guerilla
grate/great
grease/Greece
grill/grille
grisly/grizzly
groan/grown
guessed/guest
guise/guys
hair/hare
hairier/harrier
hairy/harry
hall/haul
hangar/hanger
hart/heart
heal/heel/he'll
heard/herd
here/hear
hew/hue
higher/hire
hissed/hist
hoard/horde/whored
hoarse/horse
hoes/hose
hold/holed
hole/whole
hoop/whoop
hostel/hostile
hour/our
hungry/Hungary
idle/idol/idyl/idyll
immanent/imminent
impassable/impassible
in/inn
incidence/incidents
incite/insight
intense/intents
it's/its
jam/jamb
knead/kneed/need
knot/not
knows/noes/nose
lam/lamb
laps/lapse
lead/led
leak/leek
leased/least
lends/lens
lessen/lesson
lightning/lightening
links/lynx
lionize/lyin' eyes
lite/light
lumbar/lumber
made/maid
mail/male
main/mane
manner/manor
mare/mayor
marshal/martial
meat/meet/mete
medal/meddle
metal/mettle
might/mite
mince/mints
miner/minor
minks/minx
missed/mist
moan/mown
mode/mowed
moose/mousse
morn/mourn
mustard/mustered
naval/navel
necklace/neckless
none/nun
oar/or/ore/o'er
one/won
overdo/overdue
overseas/oversees
paced/paste
pail/pale
pain/pane
pair/pare/pear
passed/past
patience/patients
pause/paws
peace/piece
peak/peek/pique
peal/peel
pearl/purl
pedal/peddle
peer/pier
per/purr

personal/personnel
pi/pie/pye
pidgin/pigeon
plain/plane
plate/plait
pleas/please
plum/plumb
poll/pole
pore/pour
prays/praise/preys
presence/presents
prier/prior
prise/prize
profit/prophet
pros/prose
purest/purist
putty/putti/puttee
quarts/quartz
quiet/quite
raid/rayed
rain/reign/rein
raise/rays/raze
rap/wrap
read/rede/reed
real/reel
recede/reseed
receipt/reseat
reck/wreck
refind/refined
resister/resistor
rest/wrest
retch/wretch
review/revue
rhos/roes/rose/rows
rhyme/rime
right/rite/wright/write
road/rode/rowed
role/roll
rood/rude/rued
rues/ruse
rushin'/Russian
sail/sale
sari/sorry
scene/seen
seas/sees/seize
serge/surge
sew/so/sow
shear/sheer
shone/shown
side/sighed
sighs/size
sleight/slight
soar/sore
soled/sold
some/sum
son/sun
spatial/special
stair/stare
stake/steak
stoop/stoup/stupe
straight/strait
suede/swayed
tacked/tact
tacks/tax
tail/taille/tale
tarrier/terrier
taught/taut
tea/tee
tear/tier
teas/tease/tees
tense/tents
tern/turn
their/there/they're
throe/throw
throne/thrown
thyme/time
tide/tied
tighter/titer
toad/toed/towed
toe/tow
ton/tun
tongue/tung
tracked/tract
troop/troupe
trussed/trust
trustee/trusty
uncal/uncle
undo/undue
urine/yearn/yourn
vail/vale/veil
vain/vane/vein
vary/very
wail/wale/whale
wain/wane
waist/waste
wait/weight
waive/wave
walk/wok
want/wont
war/wore
ware/wear
warn/worn
wax/whacks
way/weigh
weakened/weekend
weal/we'll/wheel
weave/we've
we'd/weed
weld/welled
were/whir
wet/whet
which/witch
whiled/wild/wiled
while/vile
whined/wind/wined
whirled/whorled/world
whirred/word
white/wight/wite
whose/who's
width/with
wood/would
worst/wurst
yoke/yolk

yore/your/you're you'll/Yule

Below there is a list of book titles. Analyze them and identify phonetic means that provide for the word play

Knot what It Seams
Stay At Home Dead
No Nest for the Wicket
Owls Well that Ends Well
Sew Deadly
Manor of Death
Dressed to Keel
Grime and Punishment
War and Peas
Witch way to Murder
Styx and Stones
I Scream, You Scream
Paws for Murder
Crewel Intentions
Shore to Die
A Corpse for Yew
Dyer Consequences
Silver and Guilt
Hit and Nun
Some Like It Haute
As Gouda as Dead
Fry Another Day
License to Dill
Assault and Pepper
Buy a Whisker
Hiss and Tell
Here Comes the Bribe
Purl Up and Die
Lord of the Wings
Caught Read-Handed
Berried Secrets
Paw and Order

Additional texts for the analysis (minimal pairs, paronyms, modifications of consonants and vowels in connected speech)

1) “Far out in the uncharted backwaters of the unfashionable end of the western spiral arm of the Galaxy lies a small unregarded yellow sun. Orbiting this at a distance of roughly ninety-two million miles is an utterly insignificant little blue green planet whose ape-descended life forms are so amazingly primitive that they still think digital watches are a pretty neat idea.

This planet has – or rather had – a problem, which was this: most of the people on it were unhappy for pretty much of the time. Many solutions were suggested for this problem, but most of these were largely concerned with the movements of small green pieces of paper, which is odd because on the whole it wasn't the small green pieces of paper that were unhappy.

And so the problem remained; lots of the people were mean, and most of them were miserable, even the ones with digital watches. Many were increasingly of the opinion that they'd all made a big mistake in coming down from the trees in the first place. And some said that even the trees had been a bad move, and that no one should ever have left the oceans” [106, p. 3].

2) “The train from 'Frisco was very late. It should have arrived at Hugson's Siding at midnight, but it was already five o'clock and the gray dawn was breaking in the east when the little train slowly rumbled up to the open shed that served for the station-house. As it came to a stop the conductor called out in a loud voice: "Hugson's Siding!".

At once a little girl rose from her seat and walked to the door of the car, carrying a wicker suit-case in one hand and a round bird-cage covered up with newspapers in the other, while a parasol was tucked under her arm. The conductor helped her off the car and then the engineer started his train again, so that it puffed and groaned and moved slowly away up the track. The reason he was so late was because all through the night there were times when the solid earth shook and trembled under him, and the engineer was afraid that at any moment the rails might spread apart and an accident happen to his passengers. So he moved the cars slowly and with caution” [107, p. 3].

3) “Ender nodded. It was a lie, of course, that it wouldn't hurt a bit. But since adults always said it when it was going to hurt, he could count on that statement as an accurate prediction of the future. Sometimes lies were more dependable than the truth.

"So if you'll just come over here, Andrew, just sit right up here on the examining table. The doctor will be in to see you in a moment».

The monitor gone. Ender tried to imagine the little device missing from the back of his neck. I'll roll over on my back in bed and it won't be pressing there. I won't feel it tingling and taking up the heat when I shower.

And Peter won't hate me anymore. I'll come home and show him that the monitor's gone, and he'll see that I didn't make it, either. That I'll just be a normal kid now, like him. That won't be so bad then. He'll forgive me that I had my monitor a whole year longer than he had his. We'll be – not friends, probably. No, Peter was too dangerous. Peter got so angry. Brothers, though. Not enemies, not friends, but brothers – able to live in the same house. He won't hate me, he'll just leave me alone. And when he wants to play buggers and astronauts, maybe I won't have to play, maybe I can just go read a book” [113, p. 10].

4) “Here Comes Charlie.

These two very old people are the father and mother of Mr Bucket. Their names are Grandpa Joe and Grandma Josephine. And these two very old people are the father and mother of Mrs Bucket. Their names are Grandpa George and Grandma Georgina.

This is Mr Bucket. This is Mrs Bucket. Mr and Mrs Bucket have a small boy whose name is Charlie. This is Charlie. How d'you do? And how d'you do? And how d'you do again? He is pleased to meet you.

The whole of this family – the six grown-ups (count them) and little Charlie Bucket – live together in a small wooden house on the edge of a great town. The house wasn't nearly large enough for so many people, and life was extremely uncomfortable for them all. There were only two rooms in the place altogether and there was only one bed. The bed was given to the four old grandparents because they were so old and tired. They were so tired; they never got out of it. Grandpa Joe and Grandma Josephine on this side, Grandpa George and Grandma Georgina on this side. Mr and Mrs Bucket and little Charlie Bucket slept in the other room, upon mattresses on the floor" [114, p. 3].

5) "Last month, much to Langdon's embarrassment, Boston Magazine had listed him as one of that city's top ten most intriguing people—a dubious honor that made him the brunt of endless ribbing by his Harvard colleagues. Tonight, three thousand miles from home, the accolade had resurfaced to haunt him at the lecture he had given.

"Ladies and gentlemen..." the hostess had announced to a full house at the American University of Paris's Pavilion Dauphine, "Our guest tonight needs no introduction. He is the author of numerous books: The Symbology of Secret Sects, The An of the Illuminati, The Lost Language of Ideograms, and when I say he wrote the book on Religious Iconology, I mean that quite literally. Many of you use his textbooks in class."

The students in the crowd nodded enthusiastically.

"I had planned to introduce him tonight by sharing his impressive curriculum vitae. However..." She glanced playfully at Langdon, who was seated onstage. "An audience member has just handed me a far more, shall we say... intriguing introduction." She held up a copy of Boston Magazine.

Langdon cringed. Where the hell did she get that?

The hostess began reading choice excerpts from the inane article, and Langdon felt himself sinking lower and lower in his chair. Thirty seconds later, the crowd was grinning, and the woman showed no signs of letting up. "And Mr. Langdon's refusal to speak publicly about his unusual role in last year's Vatican conclave certainly wins him points on our intrigue-o-meter." The hostess goaded the crowd. "Would you like to hear more?"

The crowd applauded" [108, p. 8].

You can also do exercises in:

Переверзенцева О.А., Фрейдина Е.Л., Ковпак Н.А., Козачук О.Г., Нестерова Т.Д., Сейранян М.Ю. Теоретическая фонетика английского языка. Практикум. Дубна: Феникс+, 2011. С. 34 – 43.

Евстифеева М.В. Теоретическая фонетика английского языка. М.: Флинта, 2022. С. 133 – 136.

Test 1

Answer the following questions using one-word/phrase answers

1. How many aspects of speech sounds are distinguished?
2. How many major types can speech sounds be subdivided into according to the specific character of the work of the speech organs?
3. [r], [w], [j] are termed …
4. Sounds in the production of which the soft palate is lowered, and the air escapes through the nose are called …
5. A labial, labio-dental, constrictive, fricative, voiceless, fortis consonant phoneme is…
6. An alveolar-apical, constrictive, fricative, lateral sonant is…
7. A glottal, constrictive, fricative, fortis consonant phoneme is…
8. A post-alveolar, constrictive, fricative, medial sonant is…
9. A forelingual, palato-alveolar, constrictive, fricative, voiced, lenis consonant phoneme is…
10. A lingual, backlingual, velar, occlusive, plosive nasal sonant is…
11. A labial, bilabial, constrictive, fricative, medial sonant is…
12. A lingual, backlingual, occlusive, plosive, voiceless, fortis consonant phoneme is…
13. A lingual, forelingual, post-alveolar, constrictive, fricative, medial sonant is…
14. A forelingual, interdental, constrictive, fricative, voiceless, fortis consonant phoneme is…
15. A voiceless affricate is…
16. How many consonant phonemes re there in RP?
17. The founder of the phoneme theory is …
18. Features of phonemes involved in the differentiation of the words are called …
19. Allophones free from the influence of the neighbouring sounds and most representative of the phoneme are called …
20. Allophones appearing as a result of the influence of the neighbouring speech sounds (assimilation, adaptation, accommodation) are called …
21. What is the principal function of the phoneme?

22. The articulatory features which do not serve to distinguish meaning are called …

23. The phonemes of a language form a system of …

24. The ability to produce English with an English-like pattern of stress and rhythm involves …

25. Modifications of a consonant under the influence of a neighbouring consonant are termed …

26. A deletion of a sound in rapid or careless speech is termed …

27. Connecting the final sound of one word/syllable to the initial sound of the next one is called …

28. Modifications of a consonant under the influence of the adjacent vowel or vice versa are called …

29. Inserting of a vowel or consonant segment within an existing string of segments is called …

30. The process when two syllables, usually both weak, become one is called …

31. According to the degree, assimilation may be …

32. What are the most common types of assimilation in English?

33. What type of assimilation occurs in the contractions *it's*, *that's*?

34. What is the name of assimilation in which the first and the second consonants in a cluster fuse and create a third consonant with features from both original consonants?

35. Linking and intrusive r are special cases of …

36. «Glottalizing» may be used as an allophone of the phoneme …

37. Define the type of assimilation in *ten mice* [tem mais]

38. Name the phenomenon occurring in the pronunciation of *button* ['bAtən] – ['bAʔn]

39. Name the phenomenon occurring in the pronunciation of *camera* ['kæmərə] – ['kæmrə]

Test 2

Answer the following questions using one-word/phrase answers

1. From the acoustic point of view vowels are called the sounds of …

2. Vowels have no …

3. Sounds whose phonetic content is predominantly made up by the sound waves produced by their voicing are called …

4. A monophthong, half-long, lax, unrounded, front, low / open vowel phoneme of the wide variety

5. A monophthong, long, tense, unrounded, central / mixed, mid vowel phoneme of the narrow variety

6. A monophthong, long, tense, unrounded, back, low / open vowel phoneme of the wide variety

7. A monophthong, short, lax, rounded, back advanced, low / open vowel phoneme of the wide variety

8. A monophthong, long, tense, unrounded, front, high / close vowel phoneme of the narrow variety

9. A monophthong, short, lax, unrounded, central / mixed, mid vowel phoneme of the wide variety

10. A monophthong, short, lax, rounded, back, low / open vowel phoneme of the wide variety

11. A monophthong, short, lax, unrounded, central / mixed, mid vowel phoneme of the wide variety

12. A monophthong, short, lax, unrounded, front, mid / half-open vowel phoneme of the narrow variety

13. Change of consonant or vowel quality, loss of consonants or vowels, and even loss of entire syllables in connected speech are called …

14. The process under which a diphthong optionally loses its second element before another vowel, or it is monophthongized, is called …

15. Vowels are subdivided into …

16. The position of the tongue in the mouth cavity is characterized from two aspects:…

17. Traditionally three lip positions are distinguished: …

18. What articulatory feature characterizes the state of the organs of speech at the moment of producing a vowel?

19. In what positions does the shortening of a vowel length occur?

20. What changes are vowels of full value subjected to in unstressed syllables?

Workshop 3. Topic 4

Topics to discuss

– The syllabic structure of English words.

– Syllable formation in English.

– Syllable division in English.

– Word stress in English.

– Tendencies of word stress distribution in English.

– Accentual structure of English words.

Tasks to Topic 4

Answer the following questions

1. What is a syllable?

2. How many aspects does the problem of the syllable have?

3. How many functions does the syllable perform?

a. What does the constitutive function mean?

b. What does the distinctive function mean?

c. What does the identificatory function mean?

4. What are the structural components of a syllable called: *cat, tree, ice*?

5. What is the presentation of a syllable structure in terms of C and V called?

6. What are the commonest types of the syllable in English structurally?

7. What is the limit for the number of syllables in a word in English?

8. How can syllables be designated: a) by the position in a word? b) by the position in relation to stress?

9. What is the prominence theory based upon?

10. What can be said about the question of syllabification in English?

11. What is the phonotactic constraint on syllabification?

12. What are basic rules of phonetic (spoken) syllable division?

13. Is there any coincidence between a syllabic and a morphological boundary?

14. Where is the syllabic boundary in writing if there are two or three consonants before –ING: *grasping, puzzling*?

15. How can compound words be divided: *hotdog; spotlight*?

16. Is it possible to divide a word within a phonetic syllable?/Is it possible to divide a word of ONE phonetic syllable?/Is it possible to divide a word of less than FIVE letters?

17. How can word stress (WS) be defined?

18. What types of WS are distinguished in different languages according to its nature?

19. How many types of WS are there in English?

20. What information should be taken into account in order to decide on stress placement?

21. What status do accentual variants of such words have?

22. What is 'stress-shift'?

Speak on the following

1. Comment on the location of WS which can differentiates parts of speech. Give examples.

2. Comment on English stress placement as a general problem.

3. What function does WS perform? Explain each function.

4. Explain the recessive tendency; the rhythmic tendency; the retentive tendency.

5. Speak on the teories of syllable formation.

6. Speak on the guidelines to WS placement in English: monosyllabic words; two-syllable simple words; three-syllable simple words; four or more syllables; words with prefixes; words with suffixes; compounds and phrases.

7. Name structural types of syllables in terms of C and V.

Practical tasks (You can use the glossary)

Divide these words into phonetic syllables. Give their syllabic structural patterns

0 bridle ['braid .ə1]	CVC	6 scatter	
1 people		7 scissors	
2 copious		8 tired	
3 luggage		9 disorientation	
4 militant		10 incomprehensible	
5 participant			

Mark the stress in the following words [78-79; 98; 104]

Profile, capitalize, unintelligibility, temperamental, qualify, situate, dictate, desert (verb), desert (noun), bare-headed.

Mark which words contain: a stress-neutral suffix – SN; a stress-imposing suffix – SI; a stressed suffix – S

Base word	Derivative word and its lexical stress	Type of suffix
climate	climatic	SI
Portugal	Portuguese	
poison	poisonous	
launder	launderette	
infirm	infirmary	
period	periodical	
punctual	punctuality	
separate	separatist	
punish	punishment	
picture	picturesque	
proverb	proverbial	

Write each compound in the correct group

apple blossom		cheese sauce	
apple pie		jam jar	
cheese grater		jam sandwich	
peach brandy		peach stone	
mineral water		orange juice	

Analyze these words and identify stress placement. Explain the rules applied [78-79; 98; 104]

acclamation/acclimation
all together/altogether
all ways/always
also/all so
carrion/carryon
complacence/complaisance
complacent/complaisant
complement/compliment
confluence/confluents
correspondence/correspondents
elusion/illusion
eyelet/islet
figurate/figure eight
forbear/forebear
foreword/forward
homonymous/homonomous
impassable/impassible
innocence/innocents
intercession/intersession
intern/inturn
invade/inveighed
lionize/lyin' eyes
literal/littoral
meddler/medlar
mignonette/minionette
millenary/millinery
miscible/missable
muscleman/Mussulman
necklace/neckless
outcast/outcaste
overdo/overdue
overseas/oversees
readout/redoubt
stichtite/sticktight
trichinosis/tricky gnosis
weakened/weekend
wolfish/wolffish

Analyze these phrases and explain how the difference in meaning is realized through juncture

my turn – might earn

all that I'm after today – all the time after today

kid's skin – kids kin

he lies – heal eyes

keep sticking – keeps ticking

Test

1. The limit for the number of syllables in English is …
2. The universal syllabic structure in the canonical form is …
3. The division of words into syllables is called …
4. Divide into phonetic syllables the word bottle.
5. What symbol is used to designate a syllabic consonant?
6. What two types of sounds cannot be split during syllabification?
7. Divide in writing the word speaking.
8. Divide in writing the word teacher.
9. How is the third syllable from end designated?
10. How is the syllable preceding the stressed syllable designated?
11. What sounds are at the peak of the syllable according to the prominence theory?
12. How many degrees of word stress are singled out in English?
13. What degree of word stress do American phoneticians add to the traditionally recognized degrees in English?
14. Indicate word stress placement in the word increase as a) a verb and b) a noun.
15. What syllable of four- or more-syllable words is stressed in English?
16. How many types of suffixes are identified from the point of view of their influence on word stress placement?
17. What kind of suffixes are –ic, -ity, -ian from the point of view of their influence on word stress placement?
18. Give two examples of stress-fixing suffixes.
19. Which kind of word stress do typically compounds have?
20. Give correct lexical stress in an English teacher for

a) a teacher who is English

b) a teacher of English

Workshop 4. Topic 5

Topics to discuss

– Suprasegmental units.

– Structure of intonation in English.

– Function of intonation in English.

– Sentence stress in English.

– Rhythm in English.

– Meanings of intoination patterns in English.

Tasks to Topic 5

Answer the following questions

1. What are the components of the intonation pattern in English?
2. What tones are called kinetic or moving? How do they differ from static tones?
3. What is nucleus? Characterize each of the nuclear tones in English. What are their meanings? What do they express?
4. What pitch ranges are distinguished? What pitch levels are there in English?
5. What kind of pauses are there in English?
6. What functions of intonation are distinguished by D. Crystal, P. Roach?
7. How is the communicative function of intonation realized?
8. What are the terms for the given and the new information?
9. How can you prove that intonation transmits feelings and / or emotions?
10. What is the grammatical function of intonation?
11. How is the distinctive function of intonation realized?
12. What is the semantic centre of an utterance?
13. What are words highlighted in an utterance with?
14. What is its main function ? What does deictic mean?
15. What do function words exhibit in their weak forms?
16. What is the sentence focus and where is it located in unmarked utterances?
17. How can a speaker place special emphasis on a particular element in an utterance?
18. What is de-accenting? What are its means and function?
19. How would you define the role of sentence stress?
20. What are proclitics and enclitics?

21. What signals do listeners attend to trying to identify the end of one intonation unit and the beginning of another?

Speak on the following

1. Define rhythm.
2. Define sentence stress/utterance-level stress?
3. Define prosody.
4. Define intonation pattern.
5. Define logical sentence stress.
6. Discuss cases when function words are used in their strong and weak forms.
7. Define rhythmic group.

Practical tasks (You can use the glossary)

Fill in the following tables with definitions for functions of intonation

a) by D.Crystal

Function	Explanation
Emotional	
Grammatical	
Information structure	
Textual	
Psychological	
Indexical	

b) by Peter Roach

Function	Explanation
Attitudinal	
Accentual	
Grammatical function	
Discourse function	

Fill in the following table to match the given utterances with the adequate nuclear tone and attitude

Utterance	Tone	Attitude

Utterances:

– *It's possible.*

– *It won't hurt.*

– *I phoned them right away (and they agreed to come).*

– *Red, brown, yellow or....*

– *She was first!*

– *I'm absolutely certain.*

– *This is the end of the news.*

– *You must write it again (and this time get it right).*

– *Will you lend it to me?*

– *It's disgusting!*

Tones: a. FALL; b. RISE; c. FALL-RISE; d. RISE-FALL.

Attitudes: finality, general questions, uncertainty, doubt/surprise, being definite, listing, requesting, encouraging

Mark the nuclear tone you think appropriate in the following responses

Verbal context	Response-utterance	Nuclear tone
It looks nice for a swim.	It's rather cold (doubtful)	
I've lost my ticket.	You're silly then (stating the obvious)	
You can't have an ice-cream.	Oh, please (pleading)	
What times are the buses?	Seven o'clock, seven thirty, ...(listing)	
She won the competition.	She did ! (impressed)	
How much work have you got to do?	I've got to do the shopping (and more things after that)	
Will you go?	I might. (uncertain)	

Define the sentence focus in every case

Mary told John all the secrets. (Not just a few secrets)

Mary told John all the secrets. (She didn't tell Richard, or Harold or...)

Mary told John all the secrets.(She didn't hint, imply them...)

Mary told John all the secrets. (It wasn't Angela, or Beatrice or...)

Mary told John all the secrets. (She told him not the news, or the story...).

Read the following dialogue and mark the accents

A *Have you taken your family to the zoo, yet, John?*

B *No, but my kids have been asking me to. I've heard this city has a pretty big one.*

A *Yes, it doesn't have a lot of animals, but it has quite a variety of animals. I think your kids would enjoy seeing the pandas.*

B *I'm sure they would. I'd like to see them, too.*

A *Also, the tigers are worth looking at.*

B *Is it okay to feed them?*

A *No, they're not used to being fed.*

B *What bus do you take to get there?*

A *Number 28. But don't you have a car?*

B *We used to have one, but we had to sell it.*

Divide the sentences into rhythmic groups attaching the unstressed syllable to the preceding stressed syllable rather than the following one.

Thank you for the present.

Somebody called you when you were out.

I would have tried to see his point of view.

Perhaps we might go to the movie together for once.

I should think it would be better to wait till tomorrow.

Test

1. Which tone can encourage further conversation, be wondering, mildly puzzled, soothing?
2. What meaning does the Fall-Rise express in the response? We'll ↘go there. – You ↘↗shan't.
3. What are the adjoining unstressed syllables called when they precede the stressed syllable?
4. What is the core component of intonation?
5. Mark the syllables which make the head of the tone unit: «I'll ask what to do» as stressed and unstressed.
6. How many rhythmic groups are there in «Thank you for the present»?
7. How many components does intonation contour consist of?
8. What tone expresses the speaker's active searching for information?
9. Intonation is …
10. Pitch movements, loudness and tempo form …
11. Explain the term «semantic centre».
12. The pre-nuclear part of the intonation pattern is called …
13. What are the types of the pre-nucleus?
14. Pitch ranges can be …
15. Pitch levels may be …
16. The rate of the utterance and pausation are called …
17. Pauses may be …

18. D. Crystal distinguishes … functions of intonation, while P. Roach summarizes them into … types.

19. The given information is called …, while the new information is termed …

20. Larger units of connected speech are the domain of …

Workshop 5. Topis 6

Topics to be discussed

– Stylistic variation in the English speech.
– Phonostylistics.
– Style-forming and style-modifying features.
– Individual vocal features. Voice quality. Tamber, tempo, tones.
– Informational Style.
– Academic Style.
– Publicistic Style.
– Declamatory Style.
– Conversational Style.

Tasks to Topic 6

Practical tasks (You can use the glossary)

Answer the following questions

1. What is a phonetic style-forming factor?
2. What is a phonetic style-modifying factor?
3. What are the invariants of the style forming intonational patterns?
4. What is the communicative purpose of academic style?
5. When and where do we use publicistic style?
6. What phonetic style is close to the publicistic one?
7. What is characteristic for declamatory style?
8. Where does conversational style occur?
9. What are the common linguistic characteristics of spontaneous, colloquial, informal conversation?
10. What is functional stylistics?
11. What is the subject matter and aim of phonostylistics?
12. What is a speech situation?
13. Are there any differences in pronunciation depending on the age and gender of the person?
14. How does the speaker's attitude affect communication?
15. What is the difference between public and non-public communication.

16. How does spontaneous speech differ from non-spontaneous?

Speak on the following

1. Define phonostylistics.
2. Define intonational style.
3. Classify intonational styles.
4. Characterize hesitation, delimitation, and accentuation.
5. Characterize press-reporting and broadcasting.
6. Enumerate the components of a situation.
7. Enumerate the forms of communication.
8. Classify phonetic styles.

Use texts in Appendix B. Identify the style of the texts. Fill the table with examples from the one of the texts

Example from the text	Pronunciation features of the style	Syllabic and accentuasl features of the style	Suprasegmental features of the style

Information and Tasks

You can also do exercises in:

Переверзенцева О.А., Фрейдина Е.Л., Ковпак Н.А., Козачук О.Г., Нестерова Т.Д., Сейранян М.Ю. Теоретическая фонетика английского языка. Практикум. Дубна: Феникс+, 2011. С. 34 – 122.

Евстифеева М.В. Теоретическая фонетика английского языка. М.: Флинта, 2022. С. 136 – 146.

Test

1. A system of interrelated intonational means which is used in a social sphere and serves a definite aim of communication is called …
2. The choice of an intonational style is determined primarily by …
3. Informational style includes …
4. Types of style – certain spheres of discourse are called …
5. A coordinated simultaneous speech act of two participants is called …
6. Besides verbal communication any kind of dialogue involves …

7. Do errors in speech bother communicants in dialogues?

8. What is the average length of units in the majority of dialogues?

9. Is it true that a reporter or a journlist can be completely independent in his political views of his class, party, country and so on?

10. What is the central function of a newspaper?

11. Is the speech of radio and television announcers similar?

12. Highly skilled newsreaders are capable of making the sense clear by the careful control of …

13. Academic style is described as …

14. Where do we use academic style?

15. How should a lecturer sound?

16. Who sounds louder a scientific talk presenter or an informational style reader?

17. What tones are used in academic style?

18. What is the other term for oratorial style?

19. Artistic, acquired, stage style is …

20. Familiar style is also termed as …

21. Factors lying outside any possibility of signalling linguistic meaning are called …

22. Information about stylistic variations in learning, understanding and producing language is studied by …

23. The branch of linguistics that is primarily concerned with the problem of functional styles is called …

24. A functional set of formal patterns into which language means are arranged in order to transmit information is defined as …

25. The science that studies the way phonetic means are used in this or that particular situation, which exercises the conditioning influence of a set of extralinguistic factors, is called …

26. Extralinguistic situation can be defined by three components: …

27. The cooccurrence of two or more interlocutors related to each other in a particular way, having a particular aim of communicating about a particular topic in a particular setting is defined as …

28. What directs the activities of the participants throughout a situation to complete a task?

29. Individuals taking part in a communicative event are called …

30. The component of something associated with the role structure in the family and in social groups, with the assignment of authority and status, and with the attribution of different levels of competence is called …

31. Is the following statement true or false: «Gender differences in pronunciation are less numerous than differences in grammatical form».

32. The component of situation defined among other features by the physical orientation of participants is called …

33. What phonetic factor is the purpose or the aim of the utterance?

34. The language user's strategy can be called the speaker's …

35. If the language user considers the situation from his point of view, reveals his personal interest and participation in what he is saying, we speak about …

36. The two forms of communication are called …

37. Considering a communicative situation from the point of view of sociolinguistics we can speak of the dichotomy …

38. When a speaker is listened to by a group of people, speech is qualified as … and is opposed to …

39. The actor's and the lecturer's speech as opposed to classroom teaching, television and radio interviews can be characterized as …

40. Parts of the utterance that express its main contents are called …

Workshop 6. Topic 7

Topics to be discussed

– Standards of pronunciation in English.
– RP and its modifications
– National varieties of present-day English
– British accents and dialects
– American English

Tasks to Topic 7

Practical tasks (You can use the glossary)

Answer the following questions

1. What does dialectology deal with?
2. What does sociolinguistics deal with?
3. What is monolingualism and bilingualism?
4. How do dialects differ from accents?
5. Is diglossia the same as bilingualism? Do they have common or differentiating features?
6. How many people speak English as their mother tongue?
7. What are the main varieties of English? Where are they spoken?
8. What is the national standard of pronunciation in the UK, the USA, Canada, New Zealand, Australia?
9. What are the types of RP?
10. What are the regional non-RP accents of England?
11. What are the types of educated American speech?
12. What is characteristic for Australian speakers of English?
13. What is characteristic for Canadian speakers of English?
14. What is characteristic for New Zealand speakers of English?
15. What is Estuary English?

Speak on the following

1. Define dialect.
2. Define standard pronunciation.
3. Define RP.

4. Define lingua franca.

5. Dwell on the peculiarities of Welsh English.

6. Dwell on the peculiarities of Scottish English.

7. Dwell on the peculiarities of English in Northern Ireland.

Define the following phonetic objects

1. a language which is a mother tongue of several nations

2. a variant of the language that includes differences in grammar, vocabulary, and pronunciation

3. a unified entity of pronunciation patterns used for communicative interaction by the members of the same speech community

4. a set of parameters describing that phonetic shaping of spoken form of a national language which at a given time is 1) generally considered correct, 2) statistically relevant and/or 3) enjoys social prestige

5. reflection/fixing of actual pronunciation forms in pronunciation dictionaries and other sources of reference

Give the pronunciation forms for RP and Gen Am [78-79; 98; 104]

address, n
advertisement
adult, adj, n
ate (past form of eat)
attitude
borough
cigaret, cigarette
complex, adj
costume
courage
depot
direct
docile
encourage
erase
education
figure
hero
herb
inquiry
laboratory
leisure
lieutenant
luxury
massage
neither /either
resource
schedule
vase
tomatoes
forehead
year
with
fragile
zebra
vehicle
vacation
rune
syrup

Read this Australian dialogue and give the British English equivalents to Australian words and word combinations

A – *G'day, mate. Are you playing footy today?*

B – *No. I'm going to a barbie at a bush station. There'll be plenty of the amber fluid, and the tucker's bonzer. Why don't you come too?*

A – *Ta, I'm busy in the arvo. Г going to see my sheila. She's crook.*

B – *Well, good on yer, mate.*

A – *G'bye.*

Information and Tasks

You can also do exercises in:

Переверзенцева О.А., Фрейдина Е.Л., Ковпак Н.А., Козачук О.Г., Нестерова Т.Д., Сейранян М.Ю. Теоретическая фонетика английского языка (практикум), Дубна: 2011. С. 122 – 137.

Test.

1. What is the standard of pronunciation for educated speakers in Australia?
2. How many literary pronunciation accents are there in the USA?
3. What are regional varieties of English in the UK?
4. What are the prominent features of RP/BBC English and GA? How are they different?
5. What accent is RP, according to the phonotactic specification of [r] occurrence?
6. What sound combinations undergo assimilation?
7. Which is the first vowel in GA *either*?
8. What is the most prominent pronunciation feature of Southern American?
9. What is the root vowel in *leisure*?
10. Which regional varieties does does GA have?
11. Is glottaling found in Australian English?
12. What vowel is pronounced in *merry – marry – Mary* in Canadian English?
13. What do New Zealanders call themselves?
14. What allophones of [r] and [l] do Canadians use in all positions?
15. What is a popular term for Australian English?

16. What is the root vowel in Canadian English *hurry*?

17. Give the transcription symbol for a glottalized [t].

18. Give an example of intrusive [r].

19. Give Australian English pronunciation for *day*.

20. Name the process that results in RP variant pronunciations of the words *suit*, *super* etc.

21. Give GA for *herb*.

22. Give the name of the accent the mainstream of Australian educated speakers use?

23. A unified set of pronunciation patterns used by members of a speech community for communicative interaction, sharing relevant social or geographical attributes and maintaining a set of phonological characteristics, despite limited phonetic and lexical-incidental variation between the speakers is called ...

24. The situation when speakers can use both literary pronunciation and their native local accent in different situations is called ...

25. A language used as a means of communication by speakers who do not have a native language in common is called ...

26. A set of pronunciation forms and rules of their usage is called...

27. The body of national variants, related to them dialects and their associated accents is called ...

28. Reflection/fixing of actual pronunciation forms and patterns in pronunciation dictionaries and other references is called ...

29. Individual speech of members of the same language community is called...

30. A stress on the vowel in the penultimate syllable which is not typically stressed in RP is called ...

End-of-term Tests

Test on English Phonetics (the basics)

1) What is the definition of the phoneme?
   a) A phoneme is a sound.
   b) A phoneme is an abstract notion of a sound.
   c) A phoneme is a group of sounds with similar articulatory features.
2) What is a typical allophone?
   a) A sound which is found in a certain position in the word.
   b) A sound which does not undergo any specific changes in production.
   c) A sound which falls under the influence of other sounds.
3) What is a distinctive feature of a phoneme?
   a) Ability to change pronunciation.
   b) Ability to distinguish meanings.
   c) Ability to produce a sound.
4) What is the most frequent vowel in English?
   a) A front labialized long vowel.
   b) A short central vowel.
   c) Schwa.
5) What is the most frequent phonetic process involving English consonants?
   a) Accommodation
   b) Reduction.
   c) Assimilation.

Practical assignment.

Find in the text examples of the following types of allophones (choose two words with every type of these allophones from the text and underline the position of the allophone): principal; positional; combinatory. There should be not less than six examples.

Find in the text examples of the following phonetic processes (choose two words with every type of the processes from the text and underline the position of the process): regressive partial functional established assimilation; progressive partial functional established assimilation; historical assimilation/elision; functional reduction; voicing; accidental elision. There should be not less than twelve examples.

"Far out in the uncharted backwaters of the unfashionable end of the western spiral arm of the Galaxy lies a small unregarded yellow sun. Orbiting this at a distance of roughly ninety-two million miles is an utterly insignificant little blue green planet whose ape-descended life forms are so amazingly primitive that they still think digital watches are a pretty neat idea.

This planet has - or rather had - a problem, which was this: most of the people on it were unhappy for pretty much of the time. Many solutions were suggested for this problem, but most of these were largely concerned with the movements of small green pieces of paper, which is odd because on the whole it wasn't the small green pieces of paper that were unhappy.

And so the problem remained; lots of the people were mean, and most of them were miserable, even the ones with digital watches. Many were increasingly of the opinion that they'd all made a big mistake in coming down from the trees in the first place. And some said that even the trees had been a bad move, and that no one should ever have left the oceans." [106, p. 3].

6) What is the full definition of a syllable?
   a) A syllable is a combination of vowels and consonants.
   b) A syllable is a minimal combination of consonantal phoneme/s (optional) and an obligatory vowel phoneme, which form a distinctive unit.
   c) A syllable is a meaningful (root) part of the word.
7) What element/sound must be present in a syllable?
   a) A consonant.
   b) A vowel.
   c) A sonorant.
8) What is the correct sequence of syllables in the word «cappuccino»?
   a) CV-CV-CV-CV
   b) CVC-CV-CV-CV-V
   c) CVC-V-CV-CV-V
9) Which is the description of a stress system in the English language?
   a) Tonal stress system with four degrees and tone variations.
   b) Dynamic stress system with fixed one degree stress.
   c) Dynamic stress system with free stress varying in three degrees.
10) What tendency of stress distribution is used in the word «assault»?
   a) Rhythmic tendency.
   b) Retentive tendency.
   c) Recessive tendency.

Practical assignment.

Find in the text examples of the following stress position tendencies (choose at least two words with every type of the processes from the text and underline the position of the process): recessive; rhythmical; retentive.

Find in the text examples of the following syllable groups: CVC; CV; VC; V; CCVC; CVCC.

"Criminals, terrorists, and spies had grown tired of having their phones tapped and immediately embraced this new means of global communication. E-mail had the security of conventional mail and the speed of the telephone. Since the transfers traveled through underground fiber-optic lines and were never transmitted into the airwaves, they were entirely intercept-proof – at least that was the perception. In reality, intercepting E-mail as it zipped across the Internet was child's play for the NSA's techno-gurus. The Internet was not the new home computer revelation that most believed. It had been created by the Department of Defense three decades earlier – an enormous network of computers designed to provide secure government communication in the event of nuclear war. The eyes and ears of the NSA were old Internet pros. People conducting illegal business via E-mail quickly learned their secrets were not as private as they'd thought. The FBI, DEA, IRS, and other U.S. law enforcement agencies – aided by the NSA's staff of wily hackers – enjoyed a tidal wave of arrests and convictions." [109, p. 33-34]

11) What terminal tone expresses «incompleteness»?
   a) Falling tone.
   b) Level tone.
   c) Rising tone.
12) What terminal tone is used in a general question?

a) Falling tone.
b) Rising tone.
c) Level tone.

Practical assignment.

Locate the terminal tone in the following utterances:

I `ve got a small bottle, but I want a large bottle.
The jury found Smith not guilty this time.
He can come tomorrow but not today.
I know what you like but what do they like?
We are going to the cinema. Where are they going?

Suggest questions to which these utterances might be a response:

I have *eaten* your apple.
He did *not* see the pedestrian.
We are flying to Toronto *tomorrow*.
What is the *latest* news?
June is *planning* to go to South America.

13) To which styles do these texts belong?

a) "Only once a year, on his birthday, did Charlie Bucket ever get to taste a bit of chocolate. The whole family saved up their money for that special occasion, and when the great day arrived, Charlie was always presented with one small chocolate bar to eat all by himself. And each time he received it, on those marvellous birthday mornings, he would place it carefully in a small wooden box that he owned, and treasure it as though it were a bar of solid gold; and for the next few days, he would allow himself only to look at it, but never to touch it." [114, p. 6].

b) "English is the official language of nearly 50 different countries and is currently spoken as a first language by over 300 million people (Crystal 1988). Among the numerous dialects of English spoken throughout the world, two, usually referred to as (Standard) American English and (Standard) British English, have a rather special status in that they are considered distinct standards for the teaching of English as a foreign language. Both dialects of English are spoken with a number of different accents." [116, p. 56].

c) "Cambridge University Press has no responsibility for the persistence or accuracy of urls for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate." [123, p. 5].

d) "And so, my fellow Americans, ask not what your country can do for you; ask what you can do for your country. My fellow citizens of the world, ask not what America will do for you, but what together we can do for the freedom of man. Finally, whether you are citizens of America or citizens of the world, ask of us here the same high standards of strength

and sacrifice which we ask of you. With a good conscience our only sure reward, with history the final judge of our deeds, let us go forth to lead the land we love, asking His blessing and His help, but knowing that here on earth God's work must truly be our own." [118].

14) What do we call Standard English Pronunciation?
    a) General English
    b) Received Pronunciation
    c) Southern English

Test on English Phonetics (advanced)

1) Which science is connected with phonetics?
   a) Physics
   b) Geometry
   c) Chemistry
2) The phonemes in the opposition [h - f] differ by
   a) One feature
   b) Two features
   c) More than two features
3) Phonemes [w], [l], [r] possess one common property. They all are
   a) Back consonants
   b) Lingual consonants
   c) Sonorants
4) What phonetic process never happens in consonants?
   a) Assimilation
   b) Reduction
   c) Elision
5) Which is a minimal pair among the following?
   a) kit – patter
   b) Laugh – large
   c) Pot – potter

Practical assignment.

Find in the text examples of the following types of allophones (choose two words with every type of these allophones from the text and underline the position of the allophone): principal; positional; combinatory. There should be not less than six examples.

"Nancy thoroughly enjoyed herself and was sorry when the affair ended. With the promise of another date as soon as she returned from Twin Elms, Nancy said good night and waved from her doorway to the departing boy. As she prepared for bed, she thought of the play, the excellent orchestra, how lucky she was to have Dirk for a date, and what fun it had all been. But then her thoughts turned to Helen Corning and her relatives in the haunted house, Twin Elms." [117, p. 16].

Find in the text examples of the following phonetic processes (choose two words with every type of the processes from the text and underline the position of the process): regressive partial functional established assimilation; progressive partial functional established assimilation; reciprocal partial functional established assimilation; historical assimilation; historical elision; functional reduction; voicing; accidental elision. There should be not less than twelve examples.

"I heard the mailman approach my office door, half an hour earlier than usual. He didn't sound right. His footsteps fell more heavily, jauntily, and he whistled. A new guy. He whistled his way to my office door, then fell silent for a moment. Then he laughed.

Then he knocked.

I winced. My mail comes through the mail slot unless it's registered. I get a really limited selection of registered mail, and it's never good news. I got up out of my office chair and opened the door.

The new mailman, who looked like a basketball with arms and legs and a sunburned, balding head, was chuckling at the sign on the door glass. He glanced at me and hooked a thumb toward the sign. "You're kidding, right?"

I read the sign (people change it occasionally), and shook my head. "No, I'm serious. Can I have my mail, please." [112, p. 5].

6) English language stress system is a
   a) Free stress system with dynamic stress of four degrees
   b) Fixed stress system with the dynamic stress of three degrees
   c) Tone stress system with four degrees of stress
7) How many syllables are there in the word «transcendental»
   a) 3
   b) 4
   c) 5
8) According to which tendency doe the stress distribute in words like «apply, appreciate, adversary».
   a) Recessive
   b) Retentive
   c) Rhythmical
9) What is the syllable pattern of the word «equilateral»?
   a) V-CCV-CV-CV-CVC
   b) V-CVV-CV-CV-CVC
   c) VC-CV-CV-CV-CVC
10) What modifications can be found in the word «cupboard»?
   a) Historical elision, reduction, stress shift
   b) Assimilation, elision
   c) No modifications

Practical assignment.

Find in the text examples of the following stress position tendencies (choose at least two words with every type of the processes from the text and underline the position of the process): recessive; rhythmical; retentive. There should be not less than six examples.

Find in the text examples of the following syllable groups: CVC; CV; VC; V; CCVC; CVCC. There should be not less than twelve examples.

”Don Vito Corleone was a man to whom everybody came for help, and never were they disappointed. He made no empty promises, nor the craven excuse that his hands were tied by more powerful forces in the world than himself. It was not necessary that he be your friend, it was not even important that you had no means with which to repay him. Only one thing was required. That you, you yourself, proclaim your friendship. And then, no matter how poor or powerless the supplicant, Don Corleone would take that man’s troubles to his heart. And he would let nothing stand in the way to a solution of that man’s woe. His reward? Friendship, the respectful title of «Don,» and sometimes the more affectionate salutation of «Godfather.» And perhaps, to show respect only, never for profit, some humble gift--a gallon of homemade wine or a basket of peppered taralles specially baked to grace his Christmas table. It was

understood, it was mere good manners, to proclaim that you were in his debt and that he had the right to call upon you at any time to redeem your debt by some small service.

Now on this great day, his daughter's wedding day, Don Vito Corleone stood in the doorway of his Long Beach home to greet his guests, all of them known, all of them trusted.

Many of them owed their good fortune in life to the Don and on this intimate occasion felt free to call him «Godfather» to his face. Even the people performing festal services were his friends. The bartender was an old comrade whose gift was all the wedding liquors and his own expert skills. The waiters were the friends of Don Corleone's sons. The food on the garden picnic tables had been cooked by the Don's wife and her friends and the gaily festooned one-acre garden itself had been decorated by the young girl-chums of the bride.

Don Corleone received everyone--rich and poor, powerful and humble--with an equal show of love. He slighted no one. That was his character. And the guests so exclaimed at how well he looked in his tux that an inexperienced observer might easily have thought the Don himself was the lucky groom." [122, p. 5].

11) What are acoustic correlates of tempo, loudness, tone?
12) Without which part an intonation group cannot exist?

Practical assignment.
Locate the terminal tone in the following utterances:

We were walking down the Abbey Road.
Mary and Ann would start with the Caesar salad.
They have not taken their vows.
Are you ready to order?
Try to keep your voice down a bit.

Suggest questions to which these utterances might be a response:

The *boys* have finished all the yoghurt.
What is the *latest* news?
She was *very* surprised by the news.
So, he did not *see* the driver.
Are *you* going to answer those e-mails?

13) Which style does the text belong to?

"We present a method for investigating the temporal alignment of intonation events by parametrizing F0 contours. Results for three German single-speaker corpora and one American English multi-speaker corpus show that the speakers generally avoid to place peaks in syllable onsets. We suggest

that this is a quantal effect [9] which results from the fact that syllable onsets are boundaries in tonal production." [119, p. 1112].

14) What style are hesitation pauses most characteristic of?

List of questions for the mid-term/final exam

1. Phonetics as one of the branches of linguistics. Methods of investigation in phonetics.
2. Aspects of speech sounds. Articulatory aspect of speech sounds. Acoustic and auditory aspects of speech sounds. Phonological aspect of speech sounds.
3. Basic concepts of the theory of phonemes. Theoretical approaches to the theory of phoneme.
4. Distinctive and non-distinctive features of English consonants.
5. Distinctive and non-distinctive features of English vowels.
6. Modification of sounds in speech. Juncture, assimilation and other phonetic processes in the English speech.
7. Segmental and suprasegmental levels in phonetics. Suprasegmental phonemes.
8. Syllabic structure of the English language. Accentual structure of English. Word stress.
9. Sentence stress. Rhythm. Pausation.
10. Tones. Recent theoretical approaches to intonation in Europe and America.
11. Stylistic variation in the English speech. Phonostylistics.
12. Individual vocal features. Voice quality. Tamber, tempo, tones.
13. Standards of pronunciation in English. RP and its modifications.
14. National varieties of modern English.
15. British accents and dialects. American English.

GLOSSARY

(Glossary was composed with the help of [21; 3562; 63; 73; 74; 82; 86; 90; 91; 93; 95]).

Accent

This word is used (rather confusingly) in two different senses: (1) accent may refer to prominence given to a syllable, usually by the use of pitch. For example, in the word 'potato' the middle syllable is the most prominent; if you say the word on its own you will probably produce a fall in pitch on the middle syllable, making that syllable accented. In this sense, accent is distinguished from the more general term stress, which is more often used to refer to all sorts of prominence (including prominence resulting from increased loudness, length or sound quality), or to refer to the effort made by the speaker in producing a stressed syllable. (2) accent also refers to a particular way of pronouncing: for example, you might find a number of English speakers who all share the same grammar and vocabulary, but pronounce what they say with different accents such as Scots or Cockney, or BBC pronunciation. The word accent in this sense is distinguished from dialect, which usually refers to a variety of a language that differs from other varieties in grammar and/or vocabulary.

Acoustic phonetics

An important part of phonetics is the study of the physics of the speech signal: when sound travels through the air from the speaker's mouth to the hearer's ear it does so in the form of vibrations in the air. It is possible to measure and analyse these vibrations by mathematical techniques, usually by using specially-developed computer software to produce spectrograms. Acoustic phonetics also studies the relationship between activity in the speaker's vocal tract and the resulting sounds. Analysis of speech by acoustic phonetics is claimed to be more objective and scientific than the traditional auditory method which depends on the reliability of the trained human ear.

Affricate

An affricate is a type of consonant consisting of a plosive followed by a fricative with the same place of articulation: examples are the tʃ and d sounds at the beginning and end of the English words 'church', 'judge' (the first of these is voiceless, the second voiced). It is often difficult to decide whether any particular combination of a plosive plus a fricative should be classed as a single affricate sound or as two separate sounds, and the question depends on whether these are to be regarded as separate phonemes or not. It is usual to regard tʃ, d as affricate phonemes in English (usually symbolised č, ǰ by American writers); ts, dz, tr, dr also occur in English but are not usually regarded as affricates. The two phrases 'why choose' wai tʃuz and 'white shoes' wait ʃuz are said to show the difference between the tʃ affricate (in the first example) and separate t and ʃ (in the second).

Airstream

All speech sounds are made by making air move. Usually the air is moved outwards from the body, creating an egressive airstream; more rarely, speech sounds are made by

drawing air into the body – an ingressive airstream. 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 a pulmonic airstream (usually an egressive pulmonic one, but occasionally speech is produced while breathing in). Others are the glottalic (produced by the larynx with closed vocal folds; it is moved up and down like the plunger of a bicycle pump) and the velaric (where 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). Ingressive glottalic consonants (often called implosives) and egressive ones (ejectives) are found in many non-European languages; click sounds (ingressive velaric) are much rarer, but occur in a number of southern African languages such as Nàmá, Xhosa and Zulu. Speakers of other languages, including English, use click sounds for non-linguistic communication, as in the case of the «tut-tut» (American «tsk-tsk») sound of disapproval.

Allophone

Central to the concept of the phoneme is the idea that it may be pronounced in many different ways. In English (BBC pronunciation) we take it for granted that the r sounds in 'ray' and 'tray' are «the same sound» (the same phoneme), but in reality the two sounds are very different – the r in 'ray' is voiced and non-fricative, while the r sound in 'tray' is voiceless and fricative. In phonemic transcription we use the same symbol r for both, but we know that the allophones of r include the voiced non-fricative sound ɹ and the voiceless fricative one.

In theory a phoneme can have an infinite number of allophones, but in practice for descriptive purposes we tend to concentrate on a small number that occur most regularly.

Alveolar

Behind the upper front teeth there is a hard, bony ridge called the alveolar ridge; the skin covering it is corrugated with transverse wrinkles. The tongue comes into contact with this in some of the consonants of English and many other languages; sounds such as t, d, s, z, n, l are consonants with alveolar place of articulation.

Alveolo-palatal

When we look at the places of articulation used by different languages, we find many differences in the region between the upper teeth and the front part of the palate. It has been proposed that there is difference between alveolo-palatal and palato-alveolar that can be reliably distinguished, though others argue that factors other than place of articulation are usually involved, and there is no longer an alveolo-palatal column on the IPA chart. The former place is further forward in the mouth than the latter.

Apical

Consonantal articulations made with the tip of the tongue are called apical; this term is usually contrasted with laminal, the adjective used to refer to tongue-blade articulations. It is said that English s is usually articulated with the tongue blade, but Spanish s (when it occurs before a vowel) and Greek s are said to be apical, giving a different sound quality.

Articulation

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). The branch of phonetics that studies articulators and their actions is called articulatory phonetics.

Aspiration

This is noise made when a consonantal constriction is released and air is allowed to escape relatively freely. English p t k at the beginning of a syllable are aspirated in most accents so that in words like ‘pea’, ‘tea’, ‘key’ the silent period while the compressed air is prevented from escaping by the articulatory closure is followed by a sound similar to h before the voicing of the vowel begins. This is the result of the vocal folds being widely parted at the time of the articulatory release. It is noticeable that when p t k are preceded by s at the beginning of a syllable they are not aspirated. Pronunciation teachers used to make learners of English practise aspirated plosives by seeing if they could blow out a candle flame with the rush of air after p t k – this can, of course, lead to a rather exaggerated pronunciation (and superficial burns).

Assimilation

If speech is thought of as a string of sounds linked together, assimilation is what happens to a sound when it is influenced by one of its neighbours. For example, the word ‘this’ has the sound s at the end if it is pronounced on its own, but when followed by ʃ in a word such as ‘shop’ it often changes in rapid speech (through assimilation) to ʃ, giving the pronunciation ðiʃʃɒp. Assimilation is said to be progressive when a sound influences a following sound, or regressive when a sound influences one which precedes it; the most familiar case of regressive assimilation in English is that of alveolar consonants, such as t, d, s, z, n, which are followed by non-alveolar consonants: assimilation results in a change of place of articulation from alveolar to a different place. The example of ‘this shop’ is of this type; others are ‘football’ (where ‘foot’ fʊt and ‘ball’ bɔl combine to produce fʊpbɔl) and ‘fruit-cake’(frut + keik → frʊkkeik). Progressive assimilation is exemplified by the behaviour of the ‘s’ plural ending in English, which is pronounced with a voiced z after a voiced consonant (‘dogs’ dɒz) but with a voiceless s after a voiceless consonant (‘cats’ kts).

Attitude

Intonation is often said to have an attitudinal function. What this means is that intonation is used to indicate to the hearer a particular attitude on the part of the speaker (friendly, doubtful, enthusiastic). Considerable importance has been given by some language

teaching experts to learning to express the right attitudes through intonation, but it has proved extremely difficult to state usable rules for foreigners to learn and results have often been disappointing. It has also proved very difficult to design and carry out scientific studies of the way intonation conveys attitudes and emotions in normal speech.

Auditory

When the analysis of speech is carried out by the listener's ear, the analysis is said to be an auditory one, and when the listener's brain receives information from the ears it is said to be receiving auditory information. In practical phonetics, great importance has been given to auditory training: this is sometimes known as ear-training, but in fact it is the brain and not the ear that is trained. With expert teaching and regular practice, it is possible to learn to make much more precise and reliable discriminations among speech sounds than untrained people are capable of. Although the analysis of speech sounds by the trained expert can be carried out entirely auditorily, in most cases the analyst also tries to make the sound (particularly when working face to face with a native speaker of the language or dialect), and the proper name for this analysis is then auditory – kinaesthetic.

BBC pronunciation

The British Broadcasting Corporation is looked up to by many people in Britain and abroad as a custodian of good English; this attitude is normally only in respect of certain broadcasters who represent the formal style of the Corporation, such as newsreaders and announcers, and does not apply to the more informal voices of people such as disc-jockeys and chat-show presenters (who may speak as they please). The high status given to the BBC's voices relates both to pronunciation and to grammar, and there are listeners who write angry letters to the BBC or the newspapers to complain about «incorrect» pronunciations such as «loranorder» for «law and order». Although the attitude that the BBC has a responsibility to preserve some imaginary pure form of English for posterity is extreme, there is much to be said for using the «formal» BBC accent as a model for foreign learners wishing to acquire an English accent. The old standard «Received Pronunciation (RP)» is based on a very old-fashioned view of the language; the present-day BBC accent is easily accessible and easy to record and examine. It is relatively free from class-based associations and it is available throughout the world where BBC broadcasts can be received; however, in recent years, the Overseas Service of the BBC has taken to using a number of newsreaders and announcers who are not native speakers of English and have what is, by British standards, a foreign accent. The BBC nowadays uses quite a large number of speakers from Celtic countries (particularly Ireland, Scotland and Wales), and the description of «BBC Pronunciation» should not be treated as including such speakers.

The Corporation has its own Pronunciation Research Unit, but contrary to some people's belief its function is to advise on the pronunciation of foreign words and of obscure British names and not to monitor pronunciation standards. Broadcasters are not under any obligation to consult the Unit.

Bilabial

A sound made with both lips.

Binary

Phonologists like to make clear-cut divisions between groups of sounds, and usually this involves «either-or» choices: a sound is either voiced or voiceless, consonantal or non-consonantal, rounded or unrounded. Such choices are binary choices. In the study of phonetics, however, it is acknowledged that sounds differ from each other in «more or less» fashion rather than «either-or»: features like voicing, nasality or rounding are scalar or multi-valued, and a sound can be, for example, fully voiced, partly voiced, just a little bit voiced or not voiced at all.

When distinctive features of sounds are given binary values, they are usually marked with the plus and minus signs + and - , so a voiced consonant is classed as +voice and a voiceless one as -voice.

Boundary

The notion of the boundary is very important in phonetics and phonology. At the segmental level, we need to know where one segment ends and another begins, and this can be a difficult matter: in a word like 'hairier' heəriə, which contains no plosives or fricatives, each sound seems to merge gradually into the next. In dividing words into syllables we have many difficulties, resulting in ideas like juncture and ambisyllabicity to help us solve them. In intonation we have many different units at different levels, and dividing continuous speech into tone-units separated by boundaries is one of the most difficult problems.

Breathing

This is the movement of air into and out of the lungs. Speech is something which is imposed on normal breathing, resulting in a reduced rate of air-flow out of the body. Mostly the air pressure that pushes air out and allows us to produce speech sounds is caused by the chest walls pressing down on the lungs, but we can give the air an extra push with the diaphragm, a large sheet of muscle lying between the lungs and the stomach.

Breathy

This is one of the adjectives used to describe voice quality or phonation type. In breathy voice, the vocal folds vibrate but allow a considerable amount of air to escape at the same time; this adds «noise» (similar to loud breathing) to the sound produced by the vocal folds. It is conventionally thought that breathy voice makes women's voices sound attractive, and it is used by speakers in television advertisements for «soft» products like toilet paper and baby powder.

Cardinal vowel

Early in the 20th century, the English phonetician Daniel Jones worked out a set of «cardinal vowels» that students learning phonetics could be taught to make and which would serve as reference points that other vowels could be related to, rather like the corners and sides of a map.

The cardinal vowel diagram is used both for rounded and unrounded vowels, and Jones proposed that there should be a primary set of cardinal vowels and a secondary set. The primary set includes the front unrounded vowels, the back unrounded vowel and the rounded

back vowels, while the secondary set comprises the front rounded vowel, the back rounded and the back unrounded. For the sake of consistency, I believe it would be better to abandon the «primary/secondary» division and simply give a «rounded» or «unrounded» label (as appropriate) to each vowel on the quadrilateral.

Central

A vowel is central if it is produced with the central part of the tongue raised (it is neither front like [i] nor back like [u]). All descriptions of vowel quality recognise a vowel that is both central (between front and back) and mid (half-way between close and open), usually named schwa (for which the symbol is [ə]). Phonetic symbols exist also for central vowels which are close - either rounded or unrounded – and for open-mid to open unrounded, as well as close-mid and open-mid.

Chart

It is usual to display sets of phonetic symbols on a diagram made of a rectangle divided into squares, usually called a chart, but sometimes called a matrix or a grid. The best-known phonetic chart is that of the alphabet of the International Phonetic Association – the IPA chart. On this chart the vertical axis represents the manner of articulation of a sound (plosive, nasal) and the horizontal axis represents the place of articulation (bilabial, velar). Within each box on the chart it is possible to have two symbols, of which the left hand one will be voiceless and the right hand voiced.

Chest pulse

This is a notion used in the 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.

Clear l

This is a type of lateral sound (such as the English l in ‘lily’), in which the air escapes past the sides of the tongue. In the case of an alveolar lateral (English l) the blade of the tongue is in contact with the alveolar ridge, but the rest of the tongue is free to take up different shapes. One possibility is for the front of the tongue (the part behind the blade) to be raised in the same shape as that for a close front vowel [i]. This gives the l an [i]-like sound, and the result is a «clear l». It is found in BBC English only before vowels, but in some other accents, notably Irish and Welsh ones, it is found in all positions.

Close vowel

In a close vowel the tongue is raised as close to the palate as is possible without producing fricative noise. Close vowels may be front (when the front of the tongue is raised), either unrounded [i] or rounded [y], or they may be back (when the back of the tongue is raised), either rounded [u] or unrounded [ɯ]. There are also close central vowels: rounded []

and unrounded []. English i and u are often described as close vowels, but are rarely fully close in English accents.

Cluster

In some languages (including English) we can find several consonant phonemes in a sequence, with no vowel sound between them: for example, the word ‘stray’ strei begins with three consonants, and ‘sixths’ siksθs ends with four. Sequences of two or more consonants within the same syllable are often called consonant clusters. It is not usual to refer to sequences of vowels as vowel clusters.

Yod -coalescence

Speech sounds rarely have clear-cut boundaries that mark them off from their neighbours. It sometimes happens that adjacent phonemes slide together (coalesce) so that they seem to happen simultaneously. An example is what is sometimes called yod-coalescence, where a sound preceding a j («yod») becomes palatalised: thus the s at the end of ‘this’ can merge with the j of ‘year’ to give a pronunciation ðiʃʃiə or ðiʃiə.

Commutation

When we want to demonstrate that two sounds are in phonemic opposition, we normally do this with the commutation test; this means substituting one sound for another in a particular phonological context. For example, to prove that the sounds p, b, t, d are different contrasting phonemes we can try them one at a time in a suitable context which is kept constant; using the context -n we get ‘pin’, ‘bin’, ‘tin’ and ‘din’, all of which are different words.

There are serious theoretical problems with this test. One of them is the widespread assumption that if you substitute one allophone of a phoneme for another allophone of the same phoneme, the meaning will not change; this is sometimes true (substituting a «dark l» where a «clear l» is appropriate in BBC pronunciation, for example, is unlikely to change a perceived meaning) but in other cases it is at least dubious: for example, the unaspirated allophones of p, t, k found after s at the beginning of syllables such as sp, st, sk are phonetically very similar to b, d, , and pronouncing one of these unaspirated allophones followed by -il, for example, would be likely to result in the listener hearing ‘bill’, ‘dill’, ‘gill’ rather than ‘pill’, ‘till’, ‘kill’.

Complementary distribution

Two sounds are in complementary distribution if they never occur in the same context. A good example is provided by the allophones of the l phoneme in BBC pronunciation: there is a voiceless allophone when l occurs after p, t, k at the beginning of a syllable, «clear l» which occurs before vowels and «dark l» which occurs elsewhere (before consonants or a pause). Leaving aside less noticeable allophonic variation, these three allophones together account for practically all the different ways in which the l phoneme is realised; 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.

In conventional phoneme theory, sounds which are in complementary distribution are likely to belong to the same phoneme; thus «voiceless l», «clear l» and «dark l» in the example given above will be classed as members of the same phoneme. There are problems in the argument, however: we can find quite a lot of sounds in English, for example, which are in complementary distribution with each other but are still not considered members of the same phoneme, a frequently quoted case being that of h (which cannot occur at the end of a syllable) and ŋ (which cannot occur at the beginning of a syllable) – this forces us to say that sounds which are in complementary distribution and are to be considered as allophones of the same phoneme must be phonetically similar to each other (which h and ŋ clearly are not). But measuring phonetic similarity is itself a very problematical area.

Consonant

There are many types of consonant, but what all have in common is that they obstruct the flow of air through the vocal tract. Some do this a lot, some not very much: those which make the maximum obstruction (plosives, which form a complete stoppage of the airstream) are the most consonantal. Nasal consonants result in complete stoppage of the oral cavity but are less obstructive than plosives since air is allowed to escape through the nose. Fricatives make a considerable obstruction to the flow of air, but not a total closure. Laterals obstruct the flow of air only in the centre of the mouth, not at the sides, so obstruction is slight. Other sounds classed as approximants make so little obstruction to the flow of air that they could almost be thought to be vowels if they were in a different context (English w or r).

The above explanation is based on phonetic criteria. An alternative approach is to look at the phonological characteristics of consonants: for example, consonants are typically found at the beginning and end of syllables while vowels are typically found in the middle. See also contoid.

Contour

It is usual to describe a movement of the pitch of the voice in speech as a contour. In the intonation of a language like English many syllables are said with a fairly level tone, but the most prominent syllables are said with a tonal contour (which may be continued on following syllables). In the study of tone languages it is usual to make a distinction between register languages which generally use only phonologically level tones (many West African languages) and those which also use contour tones such as rises, falls, fall–rises and rise–falls (many East Asian languages, such as Chinese).

Contrast

A notion of central importance in traditional phoneme theory is that of contrast: while it is important to know what a phoneme is (in terms of its sound quality, articulation and so on), it is vital to know what it is not – what other sounds it is in contrast with. For example, English t contrasts with p and k in place of articulation, with d (in the matter of voicing or force of articulation), n (by being plosive rather than nasal), and so on.

Some phonologists state that a theoretical distinction must be made between contrast and opposition. In their use of the terms, ‘opposition’ is used for the «substitutability»

relationship described above, while ‘contrast’ is reserved to refer to the relationship between a sound and those adjacent to it.

Conversation

The interest in conversation for the phonetics specialist lies in the differences between conversational speech and monologue. Much linguistic analysis in the past has concentrated on monologue or on pieces of conversational speech taken out of context. Specialised studies of verbal interaction between speakers 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.

Creak

Creak is a special type of vocal fold vibration that has proved very difficult to define though easy to recognise. In English it is 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. It appears to be possible to produce creak at any pitch, and a number of languages in different parts of the world make use of it contrastively (to change meanings). Some languages have creaky-voiced (or ‘laryngealised’) consonants (the Hausa language of West Africa), while some tone languages (Vietnamese) have creaky tones that contrast with normally-voiced ones.

Dark l

In the description of «clear l» it is explained that while the blade and tip of the tongue are fixed in contact with the alveolar ridge, the rest of the tongue is free to adopt different positions. If the back of the tongue is raised as for an [u] vowel, the quality is [u]-like and «dark»; this effect is even more noticeable if the lips are rounded at the same time. This sound is typically found in English (BBC and similar accents) when l occurs before a consonant (‘help’) or before a pause (‘hill’). In several accents of English, particularly in the London area, the dark l has given way to a w sound, so that ‘help’ and ‘hill’ might be transcribed hewp and hiw.

Devoicing

A devoiced sound is one which would normally be expected to be voiced but which is pronounced without voice in a particular context: for example, the l in ‘blade’ bleid is usually voiced, but in ‘played’ pleid the l is usually voiceless because of the preceding voiceless plosive. The notion of devoicing leads to a rather confusing use of phonetic symbols in cases where there are separate symbols for voiced and voiceless pairs of sounds: a devoiced d can be symbolised by adding a diacritic that indicates lack of voice.The usual reason for doing this is to leave the symbol looking like the phoneme it represents.

Dialect

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.

Diglossia

This word is used to refer to the case where speakers of a language regularly use (or at least understand) more than one variety of that language. In one sense this situation is found in all languages: it would always be strange to talk to one’s boss in the same way as one spoke to one’s children. But in some languages the differences between varieties are much more sharply defined, and many societies have evolved exclusive varieties which may only be used by one sex, or in conversation between people of a particular status or relationship relative to the speaker.

Digraph

It has sometimes been found necessary to combine two symbols together to represent a single sound. This can happen with alphabetic writing – the term seems mainly to be used for letter pairs in words where in Roman inscriptions the letters were regularly written (or carved) joined together (spellings such as ‘oe’ in ‘foetid’ or ‘ae’ in ‘mediaeval’), though the writing of Anglo-Saxon also involves extra symbols. It seems unlikely that anyone would call the ‘ae’ in ‘sundae’ a digraph. In the development of printed symbols some digraphs have been created, notably the combination of ‘a’ and ‘e’ in and ‘o’ and ‘e’ in oe; the resulting symbol when used in phonetics for vowels is supposed to signify an «intermediate» or «combined» quality. In the case of the two symbols simply represent the phonetic sequence of events.

Diphthong

The most important feature of a diphthong is that it contains a glide from one vowel quality to another one. BBC English contains a large number of diphthongs: there are three ending in i (ei, ai, ɔi), two ending in ʊ (əʊ, aʊ) and three ending in ə (iə, eʊ, ʊə). Opinions differ as to whether these should be treated as phonemes in their own right, or as combinations of two phonemes.

Distinctive feature

In any language it seems that the sounds used will only differ from each other in a small number of ways. If for example a language had 40 phonemes, then in theory each of those 40 could be utterly different from the other 39. However, in practice there will usually be just a small set of important differences: some of the sounds will be vowels and some consonants; some of the consonants will be plosives and affricates, and the rest will be continuants; some of the continuants will be nasal and some not, and so on. These differences are identified by phonologists, and are known as distinctive features.

Distribution

A very important aspect of the study of the phonology of a language is examining the contexts and positions in which each particular phoneme can occur: this is its distribution. In looking at the distribution of the r phoneme, for example, we can see that there is a major difference between BBC pronunciation and General American: in the former, r can only occur

before a vowel, whereas in the latter it may occur in all positions like other consonants. It is possible to define the concepts of ‘vowel’ and ‘consonant’ purely in terms of the distributions of the two groups of sounds: as a simple example, one could list all the sounds that may begin a word in English – this would result in a list containing all the consonants except ŋ and all the vowels except ʊ. Next we would look at all the sounds that could come in second place in a word, noting which initial sound each could combine with. After the sound , for example, only consonants can follow, whereas after ʃ, with the exception of a few words beginning ʃr, such as ‘shrew’, only a vowel can follow. If we work carefully through all the combinatory possibilities we find that the phonemes of English separate out into two distinct groups (which we know to be vowels and consonants) without any reference to phonetic characteristics – the analysis is entirely distributional.

Duration

The amount of time that a sound lasts for is a very important feature of that sound. In the study of speech it is usual to use the term length for the listener’s impression of how long a sounds lasts for, and duration for the physical, objectively measurable time.

Elision

Elision of vowels in English usually happens when a short, unstressed vowel occurs between voiceless consonants: in the first syllable of ‘perhaps’, ‘potato’, the second syllable of ‘bicycle’, or the third syllable of ‘philosophy’. In some cases we find a weak voiceless sound in place of the normally voiced vowel that would have been expected. Elision also occurs when a vowel occurs between an obstruent consonant and a sonorant consonant such as a nasal or a lateral: this process leads to syllabic consonants, as in ‘sudden’ sdn! , ‘awful’ ɔfl! (where a vowel is only heard in the second syllable in slow, careful speech).

Elision of consonants in English happens most commonly when a speaker «simplifies» a complex consonant cluster: ‘acts’ becomes ks rather than kts, ‘twelfth night’ becomes twelθnait or twelfnait rather than twelfθnait. It seems much less likely that any of the other consonants could be left out: the l and the n seem to be unelidable.

It is very important to note that sounds do not simply «disappear» like a light being switched off. A transcription such as ks for ‘acts’ implies that the t phoneme has dropped out altogether, but detailed examination of speech shows that such effects are more gradual: in slow speech the t may be fully pronounced, with an audible transition from the preceding k and to the following s, while in a more rapid style it may be articulated but not given any audible realisation, and in very rapid speech it may be observable, if at all, only as a rather early movement of the tongue blade towards the s position.

Epenthetic

When a speaker inserts a redundant sound in a sequence of phonemes, that process is known as epenthesis; redundant in this context means that the additional sound is unnecessary, in that it adds nothing to the information contained in the other sounds. It happens most often when a word of one language is adopted into another language whose rules of phonotactics do not allow a particular sequence of sounds, or when a speaker is speaking a foreign language which is phonotactically different.

As an example of the first, we can look at examples where English words (which often have clusters of several consonants) are adopted by languages with a much simpler syllable structure: Japanese, for example, with a basic consonant-vowel syllable structure, tends to change the English word ‘biscuit’ to something like bisuketo.

Consonant epenthesis is also possible, and in BBC Pronunciation it quite frequently happens that in final nasal plus voiceless fricative clusters an epenthetic voiceless plosive is pronounced, so that the word ‘French’, phonemically frenʃ, is pronounced as frentʃ. Such speakers lose the distinction between minimal pairs such as ‘mince’ mins and ‘mints’ mints, pronouncing both words as mints.

Estuary English

Many learners of English have been given the impression that Estuary English is a new accent of English. In reality, there is no such accent, and the term should be used with care. 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.

Experimental phonetics

Quite a lot of the work done in phonetics is descriptive (providing an account of how different languages and accents are pronounced), and some is prescriptive (stating how they ought to be pronounced). But an increasing amount of phonetic research is experimental, aimed at the development and scientific testing of hypotheses. Experimental phonetics is quantitative (based on numerical measurement). It makes use of controlled experiments, which means that the experimenter has to make sure that the results could only be caused by the factor being investigated and not by some other. For example, in an experimental test of listeners’ responses to intonation patterns produced by a speaker, if the listeners could see the speaker’s face as the items were being produced it would be likely that their judgements of the intonation would be influenced by the facial expressions produced by the speaker rather than (or as well as) by the pitch variations. This would therefore not be a properly controlled experiment.

Experimental research is carried out in all fields of phonetics: in the articulatory field, we measure and study how speech is produced, in the acoustic field we examine the relationship between articulation and the resulting acoustic signal, and look at physical properties of speech sounds in general, while in the auditory field we do perceptual tests 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 and laboratory facilities, though in principle it is possible to carry out reasonably well controlled experiments with no instruments. A classic example is Labov’s study of the pronunciation of r in the words ‘fourth floor’ in New York department stores of different levels of prestige, a piece of low-cost research that required only a notebook and pencil.

Fortis

It is claimed that in some languages (including English) there are pairs of consonants whose members can be distinguished from each other in terms of whether they are «strong» (fortis) or «weak» (lenis). These terms refer to the amount of energy used in their production, and are similar to the terms tense and lax more usually used in relation to vowels. The fortis/lenis distinction does not (in English, at least) cut across any other distinction, but rather it duplicates the voiceless/voiced distinction. It is argued that English b, d, , v, ð, z, often have little or no voicing in normal speech, and it is therefore a misnomer to call them voiced; since they seem to be more weakly articulated than p, t, k, f, θ, s, ʃ it would be appropriate to use the term lenis (meaning «weak») instead. Counter-arguments to this include the following: the term voiced could be used with the understood meaning that sounds with this label have the potential to receive voicing in appropriate contexts even if they sometimes do not receive it; no-one has yet provided a satisfactory way of measuring strength of articulation that could be used to establish that there is actually such a physical distinction in English; and it is, in any case, confusing and unnecessary to use Latin adjectives when there are so many suitable English ones.

Free variation

If two sounds that are different from each other can occur in the same phonological context and one of those sounds may be substituted for the other, they are said to be in free variation. A good example in English is that of the various possible realisations of the r phoneme: in different accents and styles of speaking we find the post-alveolar approximant ɹ which is the most common pronunciation in contemporary BBC pronunciation and General American, the tap ɾ which was typical of carefully spoken BBC pronunciation of fifty years ago, the labiodental approximant $ used by speakers who have difficulty in articulating tongue-tip versions of the r phoneme and by some older upper-class English speakers, the trilled r found in carefully-pronounced Scots accents and the uvular ʁ of the old traditional form of the Geordie accent on Tyneside. Although each of these is instantly recognisable as different from the others, the substitution of one of these for another would be most unlikely to cause an English listener to hear a sound other than the r phoneme. These different allophones of r are, then, in free variation. However, it is important to remember that the word «free» does not mean «random» in this context – it is very hard to find examples where a speaker will pronounce alternative allophones in an unpredictable way, since even if that speaker always uses the same accent, she or he will be monitoring the appropriateness of their style of speaking for the social context.

Fricative

This type of consonant is made by forcing air though a narrow gap so that a hissing noise is generated. This may be accompanied by voicing (in which case the sound is a voiced fricative, such as z& or it may be voiceless (s). The quality and intensity of fricative sounds varies greatly, but all are acoustically composed of energy at relatively high frequency – an indication of this is that much of the fricative sound is too high to be transmitted over a phone (which usually cuts out the highest and lowest frequencies in order to reduce the cost), giving rise to the confusions that often arise over sets of words like English ‘fin’, ‘thin’, ‘sin’ and ‘shin’. In order for the sound quality to be produced accurately the size and direction of the jet of air has to be very precisely controlled; while this is normally something we do without

thinking about it, it is noticeable that fricatives are what cause most difficulty to speakers who are getting used to wearing false teeth.

A distinction is sometimes made between sibilant or strident fricatives (such as s, ʃ) which are strong and clearly audible and others which are weak and less audible (such as θ, f). BBC pronunciation has nine fricative phonemes: f, θ, s, ʃ, h (voiceless) and v, ð, z, (voiced).

Front

One of the most important articulatory features of a vowel is determined by which part of the tongue is raised nearest to the palate. If it is the front of the tongue the vowel is classed as a front vowel.

Function word

This class of words is distinguished from «lexical words» such as verbs, nouns, adjectives and adverbs, though it is difficult to be precise about how the distinction is to be defined. Function words include such types as conjunctions ('and', 'but'), articles ('a/an', 'the') and prepositions ('to', 'from', 'for', 'on'. Many function words have the characteristic that they are pronounced sometimes in a strong form (as when the word is pronounced in isolation) and at other times in a weak form (when pronounced in context, without stress); for example, the word 'and' is pronounced nd in isolation (strong form) but as ən or n! (weak form) in a context such as 'come and see', 'fish and chips'.

Fundamental frequency (F0)

When voicing is produced, the vocal folds vibrate; since vibration is an activity in which a movement happens repeatedly, it is possible in principle to count how many times per second (or other unit of time) one cycle of vibration occurs; if we do this, we can state the frequency of the vibration. 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.

All speech sounds are complex sounds made up of energy at many different component frequencies (unlike a «pure tone» such as an electronic whistling sound); 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.

General American

Often abbreviated as GA, this accent is usually held to be the «standard» accent of American English; it is interesting to note that the standard that was for a long time used in the description of British English pronunciation (Received Pronunciation, or RP) is only spoken by a small minority of the British population, whereas GA is the accent of the majority of Americans. It is traditionally identified as the accent spoken throughout the USA except in the north-east (roughly the Boston and New England area) and the south-eastern states. Since it is widely used in broadcasting it is also known as «Network English».

Glide

We think of speech in terms of individual speech sounds such as phonemes, and it is all too easy to assume that they have clear boundaries between them like letters on a printed page. Sometimes in speech we can find clear boundaries between sounds, and in others we can make intelligent guesses at the boundaries though these are difficult to identify; in other cases, however, it is clear that a more or less gradual glide from one quality to another is an essential part of a particular sound. An obvious case is that of diphthongs: in their case the glide is comparatively slow. Some sounds which are usually classed as consonants also involve glides: these include «semivowels»; some modern works on phonetics and phonology also class the glottal fricative h and the glottal stop ʔ as glides.

Glottal stop

One of the functions of a closure of the vocal folds is to produce a consonant. In a true glottal stop there is complete obstruction to the passage of air, and the result is a period of silence. The phonetic symbol for a glottal stop is ʔ. In casual speech it often happens that a speaker aims to produce a complete glottal stop but instead makes a low-pitched creak-like sound. Glottal stops are found as consonant phonemes in some languages (Arabic); elsewhere they are used to mark the beginning of a word if the first phoneme in that word is a vowel (this is found in German). 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 (‘captive’ kʔptiv, ‘catkin’ kʔtkin, ‘arctic’ ɑʔktik); a similar case is that of tʃ when following a stressed vowel (or when syllable-final), as in ‘butcher’ bʊtʃə. This addition of a glottal stop is sometimes called glottalisation or glottal reinforcement. In some accents, the glottal stop actually replaces the voiceless alveolar plosive t as the realisation of the t phoneme when it follows a stressed vowel, so that ‘getting better’ is pronounced eʔiŋ beʔə – this is found in many urban accents, notably London (Cockney), Leeds, Glasgow, Edinburgh and others, and is increasingly accepted among relatively highly-educated young people.

Glottis

The glottis is the opening between the vocal folds. Apart from the fully closed state, the vocal folds may be put in the position appropriate for voicing, with narrowed glottis; the glottis may be narrowed but less so than for voicing – this is appropriate for whisper and for the production of the glottal fricative h, while it tends to be more open for voiceless consonants. For normal breathing the glottis is quite wide, usually being wider for breathing in than for breathing out. When producing aspirated voiceless plosive consonants, it is usual to find a momentary very wide opening of the glottis just before the release of the plosive.

Head

In the standard British treatment of intonation, the head is one of the components of the tone-unit; if one or more stressed syllables precedes the tonic syllable (nucleus), the head comprises all syllables from the first stressed syllable up to (but not including) the tonic.

If there are unstressed syllables preceding the head, or if there are no stressed syllables before the head but there are some unstressed ones, these unstressed syllables constitute a pre-head.

Hesitation

We pause in speaking for many reasons, and pauses have been studied intensively by psycholinguists. Some pauses are intentional, either to create an effect or to signal a major syntactic or semantic boundary; but hesitation 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 voiced sound: different languages and cultures have very different hesitation sounds.

Instrumental phonetics

The field of phonetics can be divided up into a number of sub-fields, and the term 'instrumental' is used to refer to the analysis of speech by means of instruments; this may be 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). Instrumental phonetics is a quantitative approach – it attempts to characterise speech in terms of measurements and numbers, rather than by relying on listeners' impressions.

Many different instruments have been devised for the study of speech sounds. The best known technique for acoustic analysis is spectrography, in which a computer produces a «picture» of speech sounds. Such computer systems can usually also carry out the analysis of fundamental frequency for producing «pitch displays». For analysis of articulatory activity there are many instrumental techniques in use, including 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 airflow from the vocal tract and of air pressure within it also give us a valuable indirect picture of other aspects of articulation.

Instrumental techniques are usually used in experimental phonetics, but this does not mean that all instrumental studies are experimental: when a theory or hypothesis is being tested under controlled conditions the research is experimental, but if one simply makes a collection of measurements using instruments this is not the case.

Intensity

Intensity is a physical property of sounds, and is dependent on the amount of energy present. Perceptually, there is a fairly close relationship between physical intensity and perceived loudness. The intensity of a sound depends both on the amplitude of the sound wave and on its frequency.

Interdental

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 a dental fricative in their native language, but it is comparatively rare to find interdental fricatives in native speakers of English (it is said to be typical of the Californian accent of American English, though I have never observed this myself); most English speakers produce θ and ð by placing the tip of the tongue against the back of the front teeth.

International Phonetic Association and Alphabet

The International Phonetic Association was established in 1886 as a forum for teachers who were inspired by the idea of using phonetics to improve the teaching of the spoken language to foreign learners. As well as laying the foundations for the modern science of phonetics, the Association had a revolutionary impact on the language classroom in the early decades of its existence, where previously the concentration had been on proficiency in the written form of the language being learned.

Since its beginning, the Association has taken the responsibility for maintaining a standard set of phonetic symbols for use in practical phonetics, presented in the form of a chart (see the chart on p. xi of English Phonetics and Phonology, or find it on the IPA website referred to below). The set of symbols is usually known as the International Phonetic Alphabet (and the initials IPA are therefore ambiguous). The alphabet is revised from time to time to take account of new discoveries and changes in phonetic theory.

The website of the IPA is http://www2.arts.gla.ac.uk/IPA/ipa.html

Intonation

There is confusion about intonation caused by the fact that the word is used with two different meanings: in its more restricted sense, ‘intonation’ refers simply to the variations in the pitch of a speaker’s voice used to convey or alter meaning, but in its broader and more popular sense it is used to cover much the same field as ‘prosody’, where variations in such things as voice quality, tempo and loudness are included.

It is certainly possible to analyse pitch movements (or their acoustic counterpart, fundamental frequency) and find regular patterns that can be described and tabulated. Many attempts have been made at establishing descriptive frameworks for stating these regularities. Some analysts look for an underlying basic pitch melody (or for a small number of them) and then describe the factors that cause deviations from these basic melodies; others have tried to break down pitch patterns into small constituent units such as «pitch phonemes» and «pitch morphemes», while the approach most widely used in Britain takes the tone unit as its basic unit and looks at the different pitch possibilities of the various components of the tone unit (the pre-head, head, tonic syllable/nucleus and tail).

Another approach to intonation is to concentrate on its role in conversational discourse: this 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. As with the signalling of attitudes, it seems that though analysts concentrate on pitch movements there are many other prosodic factors being used to create these effects.

Juncture

It is often necessary in describing pronunciation to specify how closely attached one sound is to its neighbours: for example, k and t are more closely linked in the word ‘acting’ than in ‘black tie’, and t and r are more closely linked in ‘nitrate’ than in ‘night rate’. Sometimes there are clearly observable phonetic differences in such examples: in comparing ‘cart rack’ with ‘car track’ we notice that the vowel in ‘cart’ is short (being shortened by the t that follows it) while the same phoneme in ‘car’ is longer, and the r in ‘track’ is devoiced (because it closely follows t) while r in ‘rack’ is voiced.

It seems natural to explain these relationships in terms of the placement of word boundaries, and in modern phonetics and phonology this is what is done; studies have also been made of the effects of sentence and clause boundaries. However, it used to be widely believed that phonological descriptions should not be based on a prior grammatical analysis, and the notion of juncture was established to overcome this restriction: where one found in continuous speech phonetic effects that would usually be found preceding or following a pause, the phonological element of juncture would be postulated. Using the symbol + to indicate this juncture, the transcription of ‘car track’ and ‘cart rack’ would be kɑ+ trk and kɑt + rk. There was at one time discussion of whether spaces between words should be abolished in the phonetic transcription of connected speech except where there was an observable silence; juncture symbols could have replaced spaces where there was phonetic evidence for them.

Since the position of juncture (or word boundary) can cause a perceptual difference, and therefore potential misunderstanding, it is usually recommended that learners of English should practise making and recognising such differences, using pairs like ‘pea stalks/peace talks’ and ‘great ape/grey tape’.

Labial

This is a general label for 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, it is called bilabial (plosives and fricatives of this type are regularly encountered); if another articulator is brought into contact or near-contact with the lips, we use terms such as labiodental (lips and teeth) or linguo-labial (tongue and teeth).

Another use of the lips is to produce the effect of lip-rounding, and this is often called labialisation; the term is more often used in relation to consonants, since the term «rounded» tends to be used for vowels with rounded lips.

Labiodental

A consonant articulated with contact between one or both of the lips and the teeth is labiodental. By far the most common type of labiodental articulation is one where the lower lip touches the upper front teeth, as in the fricatives f and v. Labiodental plosives, nasals and approximants are also found

Larynx

The larynx is a major component of our speech-producing equipment and has a number of different functions. It is located in the throat and its main biological function is to act as a valve that can stop air entering or escaping from the lungs and also (usually) prevents food and other solids from entering the lungs. It consists of a rigid framework or box made of cartilage and, inside, the vocal folds, which are two small lumps of muscular tissue like a very small pair of lips with the division between them (the glottis) running from front to back of the throat. There is a complex set of muscles inside the larynx that can open and close the vocal folds as well as changing their length and tension.

Loss of laryngeal function (usually through surgical laryngectomy) has a devastating effect on speech, but patients can learn to use substitute sources of voicing either from oesophageal air pressure («belching») or from an electronic artificial voice source.

Lateral

A consonant is lateral if there is obstruction to the passage of air in the centre (mid-line) of the air-passage and the air flows to the side of the obstruction. In English the l phoneme is lateral both in its «clear» and its «dark» allophones: the blade of the tongue is in contact with the alveolar ridge as for a t, d or n but the sides of the tongue are lowered to allow the passage of air. When an alveolar plosive precedes a lateral consonant in English it is usual for it to be laterally released: this means that to go from t or d to l we simply lower the sides of the tongue to release the compressed air, rather than lowering and then raising the tongue blade.

Lax

A lax sound is said to be one 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 in relation to some other sounds that are articulated with a comparatively greater amount of energy (the term tense is used for this). It is mainly American phonologists who use the terms lax and tense in describing English vowels: the short vowels like i, e, ɒ, ʊ, ə are classed as lax, while what are usually referred to as the long vowels and the diphthongs are tense. The terms can also be used of consonants as equivalent to fortis (tense) and lenis (lax), though this is not commonly done in present-day description.

Length

The scientific measure of the amount of time that an event takes is called duration; it is also important to study the time dimension from the point of view of what the listener hears – length is a term sometimes used in phonetics to refer to a subjective impression that is distinct from physically measurable duration. Usually, however, the term is used as if synonymous with duration. Length is important in many ways in speech: in English and most other languages, stressed syllables tend to be longer than unstressed.

Perhaps the most interesting example of length differences comes from Estonian, which has traditionally been said to have a three-way distinction between short, long and extra-long consonants and vowels.

Lenis

A lenis sound is a weakly articulated one (the word comes from Latin, where it means «smooth, gentle»). The opposite term is fortis. In general, the term lenis is used of voiced consonants (which are supposed to be less strongly articulated than voiceless ones), and is resorted to particularly for languages such as German, Russian and English where «voiced» phonemes like b, d are not always voiced.

Level (tone)

Many tone languages possess level tones; these are produced with an unchanging pitch level, and some languages have a number (some as many as four or five) of contrasting level

tones. In the description of English intonation it is also necessary to recognise the existence of level tone: as a simple demonstration, consider various common one-syllable utterances such as ‘well’, ‘yes’, ‘no’, ‘some’. Most English speakers seem to be able to recognise a level-tone pronunciation as something different from the various moving-tone possibilities such as fall, rise, fall–rise etc., and to ascribe some sort of meaning to it (usually with some feeling of boredom, hesitation or lack of surprise). It is probable that from the perceptual point of view a level tone is more closely related to a rising tone than to a falling one.

Level tone presents a problem in that the tones used in the intonation of a language like English are usually defined in terms of pitch movements, and there is no pitch movement on a level tone. It is therefore necessary to say, in identifying a syllable as carrying a level tone, that it has the prominence characteristic of the moving tones and occurs in a context where a tone would be expected to begin.

Lingual

This is the adjective used of any articulation in which the tongue is involved.

Lips

The lips are extremely mobile and active articulators in speech. In addition to being used to make complete closure for p, b, m they can be brought into contact with the teeth or the tongue. The ring of muscles around the lips makes it possible for them to be rounded and protruded. They are so flexible that they can be used to produce a trill.

Liquid

This is an old-fashioned phonetic term that has managed to survive to the present day despite the lack of any scientific definition of it. Liquids are one type of approximant, which is a sound closely similar to vowels: some approximants are glides, in that they involve a continuous movement from one sound quality to another (j in ‘yet’ and w in ‘wet’). Liquids are different from glides in that they can be maintained as steady sounds – the English liquids are r and l.

Loudness

We have instrumental techniques for making scientific measurements of the amount of energy present in sounds, but we also need a word for the impression received by the human listener, and we use loudness for this. We all use greater loudness to overcome difficult communication conditions (for example, a bad telephone line) and to give strong emphasis to what we are saying, and it is clear that individuals differ from each other in the natural loudness level of their normal speaking voice. Loudness plays a relatively small role in the stressing of syllables, and it seems that in general we do not make very much linguistic use of loudness contrasts in speaking.

Lungs

The biological function of the lungs is to absorb oxygen from air breathed in and to excrete carbon dioxide into the air breathed out. From the speech point of view, their major function is to provide the driving force that compresses the air we use for generating speech

sounds. They are similar to large sponges, and their size and shape are determined by the rib cage that surrounds them, so that when the ribs are pressed down the lungs are compressed and when the ribs are lifted the lungs expand and fill with air. Although they hold a considerable amount of air (normally several litres, though this differs greatly between individuals) we use only a small proportion of their capacity when speaking – we would find it very tiring if we had to fill and empty the lungs as we spoke, and in fact it is impossible for us to empty our lungs completely.

Manner of articulation

One of the most important things that we need to know about a speech sound is what sort of obstruction it makes to the flow of air: a vowel makes very little obstruction, while a plosive consonant makes a total obstruction. The type of obstruction is known as the manner of articulation. Apart from vowels, we can identify a number of different manners of articulation, and the consonant chart of the International Phonetic Association classifies consonants according to their manner and their place of articulation.

Minimal pair

In establishing the set of phonemes of a language, it is usual to demonstrate the independent, contrastive nature of a phoneme by citing pairs of words which differ in one sound only and have different meanings. Thus in BBC English ‘fairy’ feəri and ‘fairly’ feəli make a minimal pair and prove that r and l are separate, contrasting phonemes; the same cannot be done in, for example, Japanese since that language does not have distinct r and l phonemes.

Monophthong

This word, which refers to a single vowel, would be pretty meaningless on its own: it is used only in contrast with the word diphthong, which literally means a «double sound» in Ancient Greek. If we find a vowel that is not a diphthong, we can call it a monophthong.

Nasal

A nasal consonant is one in which the air escapes only through the nose. For this to happen, two articulatory actions are necessary: firstly, the soft palate (or velum) must be lowered to allow air to escape past it, and secondly, a closure must be made in the oral cavity to prevent air from escaping through it. The closure may be at any place of articulation from bilabial at the front of the oral cavity to uvular at the back (in the latter case there is contact between the tip of the lowered soft palate and the raised back of the tongue). A closure any further back than this would prevent air from getting into the nasal cavity, so a pharyngeal or glottal nasal is a physical impossibility.

English has three commonly found nasal consonants: bilabial, alveolar and velar, for which the symbols m, n and ŋ are used.

In English we find nasal release of plosive consonants: when a plosive is followed by a nasal consonant the usual articulation is to release the compressed air by lowering the soft palate; this is particularly noticeable when the plosive and the nasal are homorganic (share the

same place of articulation), as for example in ‘topmost’, ‘Putney’. The result is that no plosive release is heard from the speaker’s mouth before the nasal consonant.

When we find a vowel in which air escapes through the nose, it is usual to refer to this as a nasalised vowel, not a nasal vowel.

Neutralisation

In its simple form, the theory of the phoneme implies that two sounds that are in opposition to each other (t and d in English) are in this relationship in all contexts throughout the language. Closer study of phonemes has, however, shown that there are some contexts where the opposition no longer functions: for example, in a word like ‘still’ stil, the t is in a position (following s and preceding a vowel) where voiced (lenis) plosives do not occur. There is no possibility in English of the existence of a pair of words such as stil and sdil, so in this context the opposition between t and d is neutralised. One consequence of this is that one could equally well claim that the plosive in this word is a d, not a t. Common sense tells us that it is neither, but a different phonological unit combining the characteristics of both. Some phonologists have suggested the word ‘archiphoneme’ for such a unit. The i vowel that we use to represent the vowel at the end of the word ‘happy’ could thus be called an archiphoneme.

Nucleus

Usually used in the description of intonation to refer to the most prominent syllable of the tone-unit, but also used in phonology to denote the centre or peak (vowel) of a syllable. It is one of the central principles of the «standard British» treatment of intonation that continuous speech can be broken up into units called tone-units, and that each of these will have one syllable that can be identified as the most prominent. This syllable will normally be the starting point of the major pitch movement (nuclear tone) in the tone unit. Another name for the nucleus is the tonic syllable.

Occlusion

The term occlusion is used in some phonetics works as a technical term referring to an articulatory posture that results in the vocal tract being completely closed; the fact that the term closure is ambiguous supports the use of ‘occlusion’ for some purposes.

Open

One of the labels used for classifying vowels is open. An open vowel is one in which the tongue is low in the mouth and the jaw lowered. The term ‘low’ is sometimes used instead of ‘open’, mainly by American phoneticians and phonologists.

Opposition

In the study of the phoneme it has been felt necessary to invent a number of terms to express the relationship between different phonemes. Sounds which are in opposition to each other are ones which can be substituted for each other in a given context (t and k in ‘patting’ and ‘packing’), producing different words. When we look at the whole set of phonemes in a

language, we can often find very complex patterns of oppositions among the various groups of sounds.

Oral

Anything that is given the adjective oral is to do with the mouth. The oral cavity is the main cavity in the vocal tract. Consonants which are not nasal, and vowels which are not nasalised, may be called oral.

Palatalisation

It is difficult to give a precise definition of this term, since it is used in a number of different ways. It may, for example, be used to refer to a process whereby the place of an articulation is shifted nearer to (or actually on to) the centre of the hard palate: the s at the end of the word 'this' may become palatalised to ʃ when followed by j at the beginning of 'year', giving ðiʃ jiə. However, in addition to this sense of the word we also find palatalisation being described as a secondary articulation in which the front of the tongue is raised close to the palate while an articulatory closure is made at another point in the vocal tract: in this sense, it is possible to find a palatalised p or b. Palatalisation is widespread in most Slavonic languages, where there are pairs of palatalised and non-palatalised consonants. The release of a palatalised consonant typically has a j-like quality.

Palate

The palate is sometimes known as the «roof of the mouth» (though the word «ceiling» would seem to be more appropriate). It 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, which can be seen in a mirror if you look at yourself with your mouth open. The hard palate is mainly composed of a thin layer of bone (which has a front-to-back split in it in the case of people with cleft palate), and is dome-shaped, as you can feel by exploring it with the tip of your tongue. The soft palate (for which there is an alternative name, velum) can be raised and lowered; it is lowered for normal breathing and for nasal consonants, and raised for most other speech sounds.

Consonants in which the tongue makes contact with the highest part of the hard palate are labelled palatal. These include the English j sound.

Passive articulator

Articulators are the parts of the body that are used in the production of speech. Some of these (the tongue, the lips) can be moved, while others (the hard palate, the teeth) are fixed. Fixed articulators are sometimes called passive articulators, and their most important function is to act as the place of an articulatory stricture.

Pause

The most obvious purpose of a pause is to allow the speaker to draw breath, but we pause for a number of other reasons as well. One type of pause that has been the subject of many studies by psycholinguists is the «planning pause», where the speaker is assumed to be

constructing the next part of what (s)he is going to say, or is searching for a word that is difficult to retrieve. As every actor knows, pauses can also be used for dramatic effect at significant points in a speech.

From the phonetic point of view, pauses differ from each other in two main ways: one is the length of the pause, and the other is whether the pause is silent or contains a «hesitation noise».

Perception

Most of the mental processes involved in understanding speech are unknown to us, but it is clear that discovering more about them can be very important in the general study of pronunciation. It is clear from what we know already that perception is strongly influenced by the listener's expectations about the speaker's voice and what the speaker is saying; many of the assumptions that a listener makes about a speaker are invalid when the speaker is not a native speaker of the language, and it is hoped that future research in speech perception will help to identify which aspects of speech are most important for successful understanding and which type of learner error has the most profound effect on intelligibility.

Pharynx

This is the tube which connects the larynx to the oral cavity. It is usually classed as an articulator; the best-known language that has consonants with pharyngeal (or pharyngal) place of articulation is Arabic, most dialects of which have voiced and voiceless pharyngeal fricatives made by constricting the muscles of the pharynx (and usually also some of the larynx muscles) to create an obstruction to the airflow from the lungs.

Phonation

This is a technical term for the vibration of the vocal folds; it is more commonly known as voicing.

Phoneme

This is the fundamental unit of phonology, which has been defined and used in many different ways. Virtually 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 small, relatively fixed set of these phonemes. Most phonemes can be put into groups; for example, in English we can identify a group of plosive phonemes p, t, k, b, d, a group of voiceless fricatives f, θ, s, ʃ, h, and so on. An important question in phoneme theory is how the analyst can establish what the phonemes of a language are. The most widely accepted view is that phonemes are contrastive and one must find cases where the difference between two words is dependent on the difference between two phonemes. Pairs of words that differ in just one phoneme are known as minimal pairs. Of course, you can only start doing commutation tests like this when you have a provisional list of possible phonemes to test, so some basic phonetic analysis must precede this stage. Other fundamental concepts used in phonemic analysis of this sort are complementary distribution, free variation, distinctive feature and allophone.

Different analyses of a language are possible: in the case of English some phonologists claim that there are only six vowel phonemes, others that there are twenty or more (it depends

on whether you count diphthongs and long vowels as single phonemes or as combinations of two phonemes).

Phonetics

Phonetics is the scientific study of speech. It has a long history, going back certainly to well over two thousand years ago. The central concerns in phonetics are the discovery of how speech sounds are produced, how they are used in spoken language, how we can record speech sounds with written symbols and how we hear and recognise different sounds. Usually in phonetics we are only interested in sounds that are used in meaningful speech, and phoneticians are interested in discovering the range and variety of sounds used in this way in all the known languages of the world. This is sometimes known as linguistic phonetics. The auditory aspect of speech is very important: the ear is capable of making fine discrimination between different sounds, and sometimes it is not possible to define in articulatory terms precisely what the difference is. A good example of this is in vowel classification: while it is important to know the position and shape of the tongue and lips, it is often very important to have been trained in an agreed set of standard auditory qualities that vowels can be reliably related to.

Phonology

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. One can look at suprasegmental phonology – the study of stress, rhythm and intonation, 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 in phonotactics and in the analysis of syllable structure. For some phonologists the most important area is the relationships between the different phonemes – how they form groups, the nature of the oppositions between them and how those oppositions may be neutralised.

Until the second half of the twentieth century most 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 the 1960s the subject has been greatly influenced by generative phonology, in which phonology becomes inextricably bound up with these other 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.

Phonotactics

It has often been observed that languages do not allow phonemes to appear in any order; a native speaker of English can figure out fairly easily that the sequence of phonemes streŋθs makes an English word (‘strengths’), that the sequence bleid would be acceptable as an English word ‘blage’ although that word does not happen to exist, and that the sequence lvm could not possibly be an English word. Knowledge of such facts is important in phonotactics, the study of sound sequences.

Although it is not necessary to do so, most phonotactic analyses are based on the syllable. Phonotactic studies of English come up with some strange findings: certain sequences seem to be associated with particular feelings or human characteristics, for no obvious reason. Why should 'bump', 'lump', 'hump', 'rump', 'mump(s)', 'clump' and others all be associated with large blunt shapes? Why should there be a whole family of words ending with a plosive and a syllabic l all having meanings to do with clumsy, awkward or difficult action ('muddle', 'fumble', 'straddle', 'cuddle', 'fiddle', 'buckle' (vb.), 'struggle', 'wriggle')?

Pitch

Pitch is an auditory sensation: when we hear a regularly vibrating sound such as a note played on a musical instrument, or a vowel produced by the human voice, we hear a high pitch if the rate of vibration is high and a low pitch if the rate of vibration is low. Many speech sounds are voiceless (s), and cannot give rise to a sensation of pitch in this way. The pitch sensation that we receive from a voiced sound corresponds quite closely to the frequency of vibration of the vocal folds; however, we usually refer to the vibration frequency as fundamental frequency in order to keep the two things distinct.

Pitch is used in many languages as an essential component of the pronunciation of a word, so that a change of pitch may cause a change in meaning: these are called tone languages. In most languages (whether or not they are tone languages) pitch plays a central role in intonation.

Pitch range

In studying tone and intonation, it is very important to remember that each person has her or his own pitch range, so that what is high pitch for a person with a low-pitched voice may be the same as low pitch for a person with a high-pitched voice. Consequently, whatever we say about a speaker's use of pitch must be relative to that person's personal pitch range. Each of us has a highest and a lowest pitch level for speaking, though we may occasionally go outside that range when we are very emotional.

Place of articulation

Consonants are made by producing an obstruction to the flow of air at some point in the vocal tract, and when we classify consonants one of the most important things to establish is the place where this obstruction is made; this is known as the place of articulation, and in conventional phonetic classification each place of articulation has an adjective that can be applied to a consonant. To give a few examples of familiar sounds, the place of articulation for p, b is bilabial, for f, v labiodental, for θ, ð dental, for t, d alveolar , for ʃ, post-alveolar, for k, velar, and for h glottal. The full range of places of articulation can be seen on the IPA chart.

Sometimes it is necessary to specify more than one place of articulation for a consonant, for one of two reasons: firstly, there may be a secondary articulation – a less extreme obstruction to the airflow, but one which is thought to have a significant effect; secondly, some languages have consonants that make two simultaneous constrictions, neither of which could fairly be regarded as taking precedence over the other.

Plosive

In many ways it is possible to regard plosives as the most basic type of consonant. They are produced by forming a complete obstruction to the flow of air out of the mouth and nose, and normally this results in a build-up of compressed air inside the chamber formed by the closure. When the closure is released, there is a small explosion (see plosion) that causes a sharp noise. Plosives are among the first sounds that are used by children when they start to speak (though nasals are likely to be the very first consonants). The basic plosive consonant type can be exploited in many different ways: plosives may have any place of articulation, may be voiced or voiceless and may have an egressive or ingressive airflow. The airflow may be from the lungs (pulmonic), from the larynx (glottalic) or generated in the mouth (velaric).

Polysyllabic

A linguistic unit such as a word, morpheme or phrase is polysyllabic if it contains more than one syllable.

Prominence

«Stress» or «accentuation» depends crucially on the speaker's ability to make certain syllables more noticeable than others. A syllable which «stands out» in this way is a prominent syllable. An important thing about prominence, at least in English, is the fact that there are many ways in which a syllable can be made prominent: experiments have shown that prominence is associated with greater length, greater loudness, pitch prominence (having a pitch level or movement that makes a syllable stand out from its context) and with «full» vowels and diphthongs (whereas the vowels ə «schwa», i, u and syllabic consonants are only found in unstressed syllables). Despite the complexity of this set of interrelated factors, it seems that the listener simply hears syllables as more prominent or less prominent.

Pronunciation

It is not very helpful to be told that pronunciation is the act of producing the sounds of a language. The aspects of this subject that concern most people are (1) standards of pronunciation and (2) the learning of pronunciation. In the case of (1) standards of pronunciation, the principal factor is the choice of model accent: once this decision is made, any deviation from the model tends to attract criticism from people who are concerned with standards; the best-known example of this is the way people complain about «bad» pronunciation in an «official» speaker of the BBC, but similar complaints are made about the way children pronounce their native language in school, or the way immigrant children fail to achieve native-speaker competence in the pronunciation of the «host» language. These are areas that are as much political as phonetic, and it is difficult to see how people will ever agree on them. In the area of (2) pronunciation teaching and learning, a great deal of research and development has been carried out since the early 20th century by phoneticians. It should be remembered that, useful though practical phonetics is in the teaching and learning of pronunciation, it is not essential, and many people learn to pronounce a language that they are learning simply through imitation and correction by a teacher or a native speaker.

Prosody

It is traditional in the study of language to regard speech as being basically composed of a sequence of sounds (vowels and consonants); the term prosody and its adjective prosodic is then used to refer to those features of speech (such as pitch) that can be added to those sounds, usually to a sequence of more than one sound. This approach can sometimes give the misleading impression that prosody is something optional, added like a coat of paint, when in reality at least some aspects of prosody are inextricably bound up with the rest of speech. The word suprasegmental has practically the same meaning.

A number of aspects of speech can be identified as significant and regularly used prosodic features; the most thoroughly investigated is intonation, but others include stress, rhythm, voice quality, loudness and tempo (speed).

Received Pronunciation (RP)

RP has been for centuries the accent of British English usually chosen for the purposes of description and teaching, in spite of the fact that it is only spoken by a small minority of the population; it is also known as the «public school» accent, and as «BBC pronunciation». There are clear historical reasons for the adoption of RP as the model accent: in the first half of the twentieth century virtually any English person qualified to teach in a university and write textbooks would have been educated at private schools: RP was (and to a considerable extent still is) mainly the accent of the privately educated. It would therefore have been a bizarre decision at that time to choose to teach any other accent to foreign learners. It survived as the model accent for various reasons: one was its widespread use in «prestige» broadcasting, such as news-reading; secondly, it was claimed to belong to no particular region, being found in all parts of Britain (though in reality it was very much more widespread in London and the south-east of England than anywhere else); and thirdly, it became accepted as a common currency – an accent that (it was claimed) everyone in Britain knows and understands.

Some detailed descriptions of RP have suggested that it is possible to identify different varieties within RP, such as «advanced», or «conservative». Another suggestion is that there is an exaggerated version that can be called «hyper-RP». But these sub-species do not appear to be easy to identify reliably.

Reduction

When a syllable in English is unstressed, it frequently happens that it is pronounced differently from the «same» syllable when stressed; the process is one of weakening, where vowels tend to become more schwa-like (they are centralised), and plosives tend to become fricatives. The reduced forms of vowels can be clearly seen in the set of words ‘photograph’ (fəʊtərɑf, ‘photography’ fə(tɒrəfi, ‘photographic’ -fəʊtə(rfik – when one of the three syllables does not receive stress its vowel is reduced to ə. This is felt to be an important characteristic of English phonetics, and something that is not found in all languages. It is possible that the difference between languages which exhibit vowel reduction and those which do not is closely parallel to the proposed difference between «stress-timed» and «syllable-timed» languages.

Retroflex

A retroflex articulation is one in which the tip of the tongue is curled upward and backward. The r sound of BBC English and General American is sometimes described as being retroflex, though in normal speech the degree of retroflexion is relatively small. Other languages have retroflex consonants with a more noticeable auditory quality, the best known examples being the great majority the languages of the Indian sub-continent. The sound of retroflex consonants is fairly familiar to English listeners, since first-generation immigrants from India and Pakistan tend to carry the retroflex quality into their pronunciation of English and this is often mimicked.

In American English and some accents of south-west England it is common for vowels preceding r (ɑ in 'car', or in 'bird') to be affected by the consonant so that they have a retroflex quality for most of their duration. This «r-colouring» is most common in back or central vowels where the forward part of the tongue is relatively free to change shape.

Rhotic

This term is used to describe varieties of English pronunciation in which the r phoneme is found in all phonological contexts. In BBC Pronunciation, r is only found before vowels (as in 'red' red, 'around' əraʊnd), but never before consonants or before a pause. In rhotic accents, on the other hand, r may occur before consonants (as in 'cart' kɑrt) and before a pause (as in 'car' kɑr). While BBC pronunciation is non-rhotic, many accents of the British Isles are rhotic, including most of the south and west of England, much of Wales, and all of Scotland and Ireland. Most speakers of American English speak with a rhotic accent, but there are non-rhotic areas including the Boston area, lower-class New York and the Deep South.

Rhythm

Speech is perceived as a sequence of events in time, and the word rhythm is used to refer to the way events are distributed in time. Obvious examples of vocal rhythms are chanting as part of games (for example, children calling words while skipping, or football crowds calling their team's name) or in connection with work (sailors' chants used to synchronise the pulling on an anchor rope). In conversational speech the rhythms are vastly more complicated, but it is clear that the timing of speech is not random. An extreme view (though a quite common one) is that English speech has a rhythm that allows us to divide it up into more or less equal intervals of time called feet, each of which begins with a stressed syllable: this is called the stress-timed rhythm hypothesis. Languages where the length of each syllable remains more or less the same as that of its neighbours whether or not it is stressed are called syllable-timed. Most evidence from the study of real speech suggests that such rhythms only exist in very careful, controlled speaking, but it appears from psychological research that listeners' brains tend to hear timing regularities even where there is little or no physical regularity.

Rounding

Practically any vowel or consonant may be produced with different amounts of lip-rounding. The lips are rounded by muscles that act rather like a drawstring round the neck of a bag, bringing the edges of the lips towards each other. Except in unusual cases, this results not only in the mouth opening adopting a round shape, but also in a protrusion or «pushing

forward» of the lips; Swedish is described as having a rounded vowel without lip protrusion, however. In theory any vowel position (defined in terms of height and frontness/backness) may be produced rounded or unrounded, though we do not necessarily find all possible vowels with and without rounding in natural languages. Consonants, too, may have rounded lips (in w, the basic consonantal articulation itself consists of lip-rounding): this lip-rounding in consonants is regarded as a secondary articulation, and it is usual to refer to it as labialisation. In BBC pronunciation, it is common to find ʃ, tʃ, d and r with slight lip-rounding.

Schwa

One of the most noticeable features of English pronunciation is the phonetic difference between stressed and unstressed syllables. In most languages, any of the vowels of the language can occur in any syllable whether that syllable is stressed or not; in English, however, a syllable which bears no stress is more likely to have one of a small number of weak vowels, and the most common weak vowel is one which never occurs in a stressed syllable. That vowel is the schwa vowel (symbolised ə), which is generally described as being unrounded, central (between front and back) and mid (between close and open). Statistically, this is reported to be the most frequently occurring vowel of English (over 10% of all vowels). It is ironic that the most frequent English vowel has no regular letter for its spelling. The name schwa comes from Hebrew, which does have a symbol for this sound.

Semivowel

It has long been recognised that most languages contain a class of sound that functions in a way similar to consonants but is phonetically similar to vowels: in English, for example, the sounds w and j (as found in ‘wet’ and ‘yet’) are of this type: they are used in the first part of syllables, preceding vowels, but if w and j are pronounced slowly, it can be clearly heard that in quality they resemble the vowels [u] and [i] respectively. (See also contoid and vocoid.) The term semivowel has been in use for a long time for such sounds, though it is not a very helpful or meaningful name; the term approximant is more often used today. Americans usually use the symbol y for the sound in ‘yes’, but European phoneticians reserve this symbol for a close front rounded vowel.

English has words which are pronounced differently according to whether they are followed by a vowel or a consonant: these are ‘the’ ði or ðə and the indefinite article ‘a/an’, and it is the pre-consonantal form that we find before j and w. In addition, «linking r», which is found in BBC and other non-rhotic accents, does not appear before semivowels. It is by looking at evidence such as this that we can conclude that as far as English is concerned, j and w are in the same phonological class as the other consonants despite their vowel-like phonetic nature.

Sentence stress

The main question that is asked in studying sentence stress is which syllable (or word) of a particular sentence is most strongly stressed (or accented). We should be clear that in any given sentence of more than one syllable there is no logical necessity for there to be just one syllable that stands out from all the others. Much writing on this subject has been done on the

basis of short, invented sentences designed to have just one obvious sentence stress, but in real life we often find exceptions to this. In a sentence of more than five or six words we tend to break the string of words into separate tone-units, each of which will be likely to have a strong stress.

It is widely believed that the most likely place for sentence stress to fall is on the appropriate syllable of the last lexical word of the sentence: in this case, «appropriate syllable» refers to the syllable indicated by the rules for word stress, while lexical word refers to words such as nouns, verbs, adjectives and adverbs. This rule accounts for the stress pattern of many sentences, but there is considerable controversy over how to account for the many exceptions: some linguists say that the sentence stress tends to be placed on the word which is most important to the meaning of the sentence, while others say that the placement of the stress is determined by the underlying syntactic structure.

Soft palate

Most of the roof of the mouth consists of hard palate, which has bone beneath the skin. Towards the back of the mouth, the layer of bone comes to an end but the layer of soft tissue continues for some distance, ending eventually in a loose appendage that can easily be seen by looking in a mirror: this dangling object is the uvula, but the layer of soft tissue to which it is attached is called the soft palate (it is also sometimes named the velum). In normal breathing it is allowed to hang down so that air may pass above it and escape through the nose, but for most speech sounds it is lifted up and pressed against the upper back wall of the throat so that no air can escape through the nose. This is necessary for a plosive, for example, so that air may be compressed within the vocal tract. However, for nasal consonants (m, n) the soft palate must be lowered since air can escape only through the nose in these sounds. In nasalised vowels (such vowels are found in considerable numbers in French, for example) the soft palate is lowered and air escapes through the mouth and the nose together.

Sonorant

Many technical terms have been invented in phonology to refer to particular groups or families of sounds. A sonorant is a sound which is voiced and does not cause enough obstruction to the airflow to prevent normal voicing from continuing. Thus vowels, nasals, laterals and other approximants such as English j, w, r are sonorants, while plosives, fricatives and affricates are non-sonorants.

Sonority

It is possible to describe sounds in terms of how powerful they sound to the listener; a vowel sound such as a is said to be more sonorant than the fricative f, for example. It is said that if we hear a word such as ‘banana’ as consisting of three syllables, it is because we can hear three peaks of sonority corresponding to the vowels. Some phonologists claim that there is a sonority hierarchy among classes of sound that governs the way they combine with other sounds: in descending order of sonority, we would find firstly open vowels like a, then closer vowels (i, u); «liquids» such as l, r, followed by nasals, fricatives and finally plosives (the least sonorant).

Spectrography

In the development of the laboratory study of speech, the technique that has been the most fundamental tool in acoustic analysis is spectrography. In its earliest days, this was carried out on special machines that analysed a few seconds of speech and burned patterns on heat-sensitive paper, but all spectrography is now done by computers. A spectrography program on a computer produces a sort of picture, in shades of grey or in a variety of colours, of the recorded sounds, and this spectrogram is shown on the computer screen and can be printed. With practice, an analyst can identify many fine details of speech sounds.

Stop

This term is often used as if synonymous with plosive. However, some writers on phonetics use it to refer to the class of sounds in which there is complete closure specifically in the oral cavity. In this case, sounds such as m, n are also stops; more precisely, they are nasal stops.

Stress

Stress is a large topic and despite the fact that it has been extensively studied for a very long time there remain many areas of disagreement or lack of understanding. To begin with a basic point, it is almost certainly true that in all languages some syllables are in some sense stronger than other syllables; these are syllables that have the potential to be described as stressed. It is also probably true that the difference between strong and weak syllables is of some linguistic importance in every language – strong and weak syllables do not occur at random. However, languages differ in the linguistic function of such differences: in English, for example, the position of stress can change the meaning of a word, as in the case of ‘import’ (noun) and ‘import’ (verb), and so forms part of the phonological composition of the word. It is usually claimed that in the case of French there is no possibility of moving the stress to different syllables except in cases of special emphasis or contrast, since stress (if there is any that can be detected) always falls on the last syllable of a word. In tone languages it is often difficult or impossible for someone who is not a native speaker of the language to identify stress functioning separately from tone: syllables may sound stronger or weaker according to the tone they bear.

It is necessary to consider what factors make a syllable count as stressed. It seems likely that stressed syllables are produced with greater effort than unstressed, and that this effort is manifested in the air pressure generated in the lungs for producing the syllable and also in the articulatory movements in the vocal tract. These effects of stress produce in turn various audible results: one is pitch prominence, in which the stressed syllable stands out from its context (for example, being higher if its unstressed neighbours are low in pitch, or lower if those neighbours are high; often a pitch glide such as a fall or rise is used to give greater pitch prominence); another effect of stress is that stressed syllables tend to be longer – this is very noticeable in English, less so in some other languages; also, stressed syllables tend to be louder than unstressed, though experiments have shown that differences in loudness alone are not very noticeable to most listeners. It has been suggested by many writers that the term accent should be used to refer to some of the manifestations of stress (particularly pitch prominence), but the word, though widely used, never seems to have acquired a distinct meaning of its own.

One of the areas in which there is little agreement is that of levels of stress: some descriptions of languages manage with just two levels (stressed and unstressed), while others use more. In English, one can argue that if one takes the word ‘indicator’ as an example, the first syllable is the most strongly stressed, the third syllable is the next most strongly stressed and the second and fourth syllables are weakly stressed, or unstressed. This gives us three levels: it is possible to argue for more, though this rarely seems to give any practical benefit.

In terms of its linguistic function, stress is often treated under two different headings: word stress and sentence stress. These two areas are discussed under their separate headings.

Stress-shift

It quite often happens in English that the stress pattern of a word is different when the word occurs in particular contexts compared with its stress pattern when said in isolation: for example, the word ‘fifteenth’ in isolation is stressed on the second syllable, but in ‘fifteenth place’ the stress is on the first syllable. This also happens in place names: the name ‘Wolverhampton’ is stressed on the third syllable, but in the name of the football team ‘Wolverhampton Wanderers’ the stress is usually found on the first syllable. This is known as stress-shift. Explanations by proponents of metrical phonology have suggested that the shift is made in order to avoid two strong stresses coming close together and to preserve the rhythmical regularity of their speech, but such explanations, though attractive, do not have any experimental or scientific justification. English speakers are quite capable of producing strong stresses next to each other when appropriate.

Stress-timing

It is sometimes claimed that different languages and dialects have different types of rhythm. Stress-timed rhythm is one of these rhythmical types, and is said to be characterised by a tendency for stressed syllables to occur at equal intervals of time.

Strong form

English has a number of short words which have both strong and weak forms: for example, the word ‘that’ is sometimes pronounced ðt (strong) and sometimes ðət (weak). The linguistic context generally determines which one is to be used. The difference between strong and weak forms is explained under weak form.

Style

Something which every speaker is able to do is speak in different styles: there are variations in formality ranging from ceremonial and religious styles to intimate communication within a family or a couple; most people are able to adjust their speech to overcome difficult communicating conditions (such as a bad telephone line), and most people know how to tell jokes effectively. But at present we have very little idea what form this knowledge might have in the speaker’s mind.

Suprasegmental

The term suprasegmental was invented to refer to aspects of sound such as intonation that did not seem to be properties of individual segments (the vowels and consonants of which

speech is composed). The term has tended to be used predominantly by American writers, and much British work has preferred to use the term prosodic instead. There has never been full agreement about how many suprasegmental features are to be found in speech, but pitch, loudness, tempo, rhythm and stress are the most commonly mentioned ones.

Syllable

The syllable is a fundamentally important unit both in phonetics and in phonology. It is a good idea to keep phonetic notions of the syllable separate from phonological ones. Phonetically we can observe that the flow of speech typically consists of an alternation between vowel-like states (where the vocal tract is comparatively open and unobstructed) and consonant-like states where some obstruction to the airflow is made. Silence and pause are to be regarded as being of consonantal type in this case. So from the speech production point of view a syllable consists of a movement from a constricted or silent state to a vowel-like state and then back to constricted or silent. From the acoustic point of view, this means that the speech signal shows a series of peaks of energy corresponding to vowel-like states separated by troughs of lower energy (see sonority). However, this view of the syllable appears often not to fit the facts when we look at the phonemic structure of syllables and at speakers' views about them. One of the most difficult areas is that of syllabic consonants.

Phonologists are interested in the structure of the syllable, since there appear to be interesting observations to be made about which phonemes may occur at the beginning, in the middle and at the end of syllables. The study of sequences of phonemes is called phonotactics, and it seems that the phonotactic possibilities of a language are determined by syllabic structure; this means that any sequence of sounds that a native speaker produces can be broken down into syllables without any segments being left over. Phonological treatments of syllable structure usually call the first part of a syllable the onset, the middle part the peak and the end part the coda; the combination of peak and coda is called the rhyme.

Syllables are claimed to be the most basic unit in speech: every language has syllables, and babies learn to produce syllables before they can manage to say a word of their native language. When a person has a speech disorder, their speech will still display syllabic organisation, and slips of the tongue also show that syllabic regularity tends to be preserved even in «faulty» speech.

Tail

In the analysis of intonation, all syllables that follow the tonic syllable (also called nuclear syllable) up to the tone-unit boundary constitute the tail. Thus in the utterance 'I want two of them', the tail is 'of them'.

Tempo

Every speaker knows how to speak at different rates, and much research has been done in recent years to study what differences in pronunciation are found between words said in slow speech and the same words produced in fast speech. While some aspects of speaking rate are not linguistically important (one individual speaker's speaking rate when compared with some other individual's), there is evidence to suggest that we do use such variation contrastively to help to convey something about our attitudes and emotions. This linguistic

use of speaking rate is frequently called tempo. In research in this area it is felt necessary to use two different measures: the rate including pauses and hesitations (speaking rate) and the rate with these excluded (articulation rate). Although typing speed is often measured in words per minute, 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, or ten to twelve phonemes per second.

Tamber

It is sometimes useful to have a general word to refer to the quality of a sound, and timbre is sometimes used in that role. It is one of the many words that phonetics has adopted from musical terminology. The word is sometimes spelt timbre.

Tone

Although this word has a very wide range of meanings and uses in ordinary language, its meaning in phonetics and phonology is quite restricted: it refers to an identifiable movement or level of pitch that is used in a linguistically contrastive way. In some languages (known as tone languages) the linguistic function of tone is to change the meaning of a word: in Mandarin Chinese, for example, ¯ma said with high pitch means 'mother' while ma said on a low rising tone means 'hemp'. In other languages, tone forms the central part of intonation, and the difference between, for example, a rising and a falling tone on a particular word may cause a different interpretation of the sentence in which it occurs. In the case of tone languages it is usual to identify tones as being a property of individual syllables, whereas an intonational tone may be spread over many syllables.

In the analysis of English intonation, tone refers to one of the pitch possibilities for the tonic (or nuclear) syllable, a set usually including fall, rise, fall–rise and rise–fall, though others are suggested by various writers.

Tone unit

In the study of intonation it is usual to divide speech into larger units than syllables. If one studies only short sentences said in isolation it may be sufficient to make no subdivision of the utterance, unless perhaps to mark out rhythmical units such as the foot, but in longer utterances there must be some points at which the analyst marks a break between the end of one pattern and the beginning of the next. These breaks divide speech into tone-units, and are called tone-unit boundaries. The most obvious factor to look for in trying to establish boundaries is the presence of a pause, and in slow careful speech (in lectures, sermons and political speeches) this may be done quite regularly. However, it seems that we detect tone-unit boundaries even when the speaker does not make a pause, if there is an identifiable break or discontinuity in the rhythm or in the intonation pattern.

There is evidence that we use a larger number of shorter tone-units in informal conversational speech, and fewer, longer tone units in formal styles.

Tongue

The tongue is such an important organ for the production of speech that many languages base their word for 'language' on it. It is composed almost entirely of muscle tissue, and the

muscles can achieve extraordinary control over the shape and movement of the tongue. The mechanism for protruding the tongue forward out of the mouth between the front teeth, for example, is one which would be very difficult for any engineer to design with no rigid components and no fixed external point to use for pulling.

The tongue is usually subdivided for the purposes of description: the furthest forward section is the tip, and behind this is the blade. The widest part of the tongue is called the front, behind which is the back, which extends past the back teeth and down the forward part of the pharynx. Finally, where the tongue ends and is joined to the rear end of the lower jaw is the root, which has little linguistic function, though it is suggested that this can moved forward and backward to change vowel quality, and that this adjustment is used in some African languages.

The manner of articulation of many consonants depends on the versatility of the tongue. Plosives involving the tongue require an air-tight closure: in the case of those made with the tongue tip or blade, a closure between the forward part of the tongue and the palate or the front teeth is made, as well as one between the sides of the tongue and inner surfaces of the upper molar teeth. Velar and uvular plosives require an air-tight closure between the back of the tongue and the underside of the soft palate. Other articulations include laterals (where the tongue makes central contact but allows air to escape over its sides), and tongue-tip trill, tap and flap. Retroflex consonants are made by curling the tip of the tongue backwards. Finally, the tongue is also used to create an airstream for «click» consonants.

It is sometimes necessary for the tongue to be removed surgically (usually as a result of cancer) in an operation called glossectomy; surprisingly, patients are able to speak intelligibly after this operation when they have had time to practise new ways of articulating.

Tonic

This adjective is used in the description of intonation. A tonic syllable is one which carries a tone, has a noticeable degree of prominence. In theories of intonation where only one tone may occur in a tone-unit, the tonic syllable therefore is the point of strongest stress.

Transcription

In present-day usage, transcription is the writing down of a spoken utterance using a suitable set of symbols. In its original meaning the word implied converting from one representation (written text) into another (phonetic symbols). Transcription exercises are a long-established exercise for teaching phonetics. There are many different types of transcription: the most fundamental division that can be made is between phonemic and phonetic transcription. In the case of the former, the only symbols that may be used are those which represent one of the phonemes of the language, and extra symbols are excluded. In a phonetic transcription the transcriber may use the full range of phonetic symbols if these are required; a narrow phonetic transcription is one which carries a lot of fine detail about the precise phonetic quality of sounds, while a broad phonetic transcription gives a more limited amount of phonetic information.

Triphthong

A triphthong is a vowel glide with three distinguishable vowel qualities – in other words, it is similar to a diphthong but comprising three rather than two vowel qualities. In English there are said to be five triphthongs, formed by adding ə to the diphthongs ei, ai, ɔi, əʊ, aʊ, these triphthongs are found in the words ‘layer’ leiə, ‘liar’ laiə, ‘loyal’ lɔiəl, ‘power’ paʊə, ‘mower’ məʊə.

Utterance

The sentence is a unit of grammar, not of phonology, and is often treated as an abstract entity. There is a need for a parallel term that refers to a piece of continuous speech without making implications about its grammatical status, and the term utterance is widely used for this purpose.

Uvula

The uvula (a little lump of soft tissue that you can observe in the back of your mouth dangling from the end of your soft palate, if you look in a mirror with your mouth open) is something that the human race could probably manage perfectly well without, but one of the few useful things it does is to act as a place of articulation for a range of consonants articulated in the back of the mouth. There are uvular plosives: the voiceless one q is found as a phoneme in many dialects of Arabic, while the voiced one g is rather more elusive. Uvular fricatives are found quite commonly: German, Hebrew, Dutch and Spanish, for example, have voiceless ones, and French, Arabic and Danish have voiced ones. The uvular nasal n is found in some Inuit languages. The uvula itself moves only when it vibrates in a uvular trill.

Velar

Velum is another name for the soft palate, and velar is the adjective corresponding to it. The two terms velum and soft palate can be used interchangeably in most contexts, but only the word velum lends itself to adjective formation, giving words such as velar which is used for the place of articulation of, for example, k and velic, used (rarely) for a closure between the upper surface of the velum and the top of the pharynx, and velaric, for the airstream produced in the mouth with a closure between the tongue and the soft palate.

Vocal cords

The terms ‘vocal cord’ and ‘vocal fold’ are effectively identical, but the latter term is more often used in present-day phonetics. The vocal folds form an essential part of the larynx, and their various states have a number of important linguistic functions. They may be firmly closed to produce what is sometimes called a glottal stop, and while they are closed the larynx may be moved up or down to produce an egressive or ingressive glottalic airstream as used in ejective and implosive consonants. When brought into light contact with each other the vocal folds tend to vibrate if air is forced through them, producing phonation or voicing. This vibration can be made to vary in many ways, resulting in differences in such things as pitch, loudness and voice quality. If a narrow opening is made between the vocal folds, friction noise can result and this is found in whispering and in the glottal fricative h. A more widely open glottis is found in most voiceless consonants.

Vocal tract

It is convenient to think of the passage from the lungs to the lips as a tube (or a pair of tubes if we think of the nasal passages as a separate passage); below the larynx is the trachea, the air passage leading to the lungs. The part above the larynx is called the vocal tract.

Voice quality

Speakers differ from each other in terms of voice quality (which is the main reason for our being able to recognise individuals' voices even over the telephone), but they also introduce quite a lot of variation into their voices for particular purposes, some of which could be classed as linguistically relevant. A considerable amount of research in this field has been carried out in recent years, and we have a better understanding of the meaning of such terms as creak, breathy voice and harshness, as well as longer-established terms such as falsetto.

Many descriptions of voice quality have assumed that all the relevant variables are located in the larynx, while above the larynx is the area that is responsible for the quality of individual speech sounds; however, it is now clear that this is an oversimplification, and that the supralaryngeal area is responsible for a number of overall voice quality characteristics, particularly those which can be categorised as articulatory settings.

Good examples of the kinds of use to which voice quality variation may be put in speaking can be heard in television advertising, where «soft» or «breathy» quality tends to be used for advertising cosmetics, toilet paper and detergents; «creaky voice» tends to be associated with products that the advertisers wish to portray as associated with high social class and even snobbery (expensive sherry and luxury cars), accompanied by an exaggeratedly «posh» accent, while products aimed exclusively at men (beer, men's deodorants) seem to aim for an exaggeratedly «manly» voice with some harshness.

Voicing

This term refers to the vibration of the vocal folds, and is also known as phonation. Vowels, nasals and approximants (sonorants) are usually voiced, though in particular contexts the voicing may be weak or absent. Sounds such as voiceless fricatives and voiceless plosives are the most frequently found sounds that do not have voicing.

Vowel

Vowels are the class of sound which makes the least obstruction to the flow of air. They are almost always found at the centre of a syllable, and it is rare to find any sound other than a vowel which is able to stand alone as a whole syllable. In phonetic terms, each vowel has a number of properties that distinguish it from other vowels. These include the shape of the lips, which may be rounded (as for an uvowel), neutral (as for ə) or spread (as in a smile, or an ivowel – photographers traditionally ask their subjects to say «cheese» ʧiz so that they will seem to be smiling). Secondly, the front, the middle or the back of the tongue may be raised, giving different vowel qualities: the BBC vowel ('cat') is a front vowel, while the ɑ of 'cart' is a back vowel. The tongue (and the lower jaw) may be raised close to the roof of the mouth, or the tongue may be left low in the mouth with the jaw comparatively open.

Weak form

Many very common words have not only a strong or full pronunciation (which is used when the word is said in isolation), but also one or more weak forms which are used when the word occurs in certain contexts. Words which have weak forms are, for the most part, function words such as conjunctions ('and', 'but', 'or'), articles ('a', 'an', 'the'), pronouns ('she', 'he', 'her', 'him'), prepositions ('for', 'to', 'at') and some auxiliary and modal verbs ('do', 'must', 'should'). Generally the strong form of such words is used when the word is being quoted (the word 'and' is given its strong form in the sentence «We use the word 'and' to join clauses»), when it is being contrasted ('for' in «There are arguments for and against») and when it is at the end of a sentence ('from' in «Where did you get it from»). Often the pronunciation of a weak-form word is so different from its strong form that if it were heard in isolation it would be impossible to recognise it: for example, 'and' can become n - in 'us and them', 'fish and chips', and 'of' can become f - or v - in 'of course'. The reason for this is that to someone who knows the language well these words are usually highly predictable in their normal context.

Word stress

Not all languages make use of the possibility of using stress on different syllables of a polysyllabic word: in English, however, the stress pattern is an essential component of the phonological form of a word, and learners of English either have to learn the stress pattern of each word, or to learn rules to guide them in how to assign stress correctly (or, quite probably, both). Sentence stress is a different problem, and learners also need to be aware of the phenomenon of stress-shift in which stress moves from one syllable to another in particular contexts.

It is usual to treat each word, when said on its own, as having just one primary (strongest) stress; if it is a monosyllabic word, then of course there is no more to say. If the word contains more than one syllable, then other syllables will have other levels of stress, and secondary stress is often found in words like – overwhelming (with primary word stress on the 'whelm' syllable and secondary stress on the first syllable).

X-ray

In the development of experimental phonetics, 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. In the last twenty years there has been a sharp decline in the amount of radiographic research in speech since the risk from the radiation is now known to be higher than was suspected before. The technique known as the X-ray Microbeam, developed in Japan and the USA revived this research for some time: a computer controls the direction of a very narrow beam of low-intensity radiation and builds up a picture of articulatory movements through rapid scanning. The equipment was extremely expensive, but produced valuable results. In present-day research, other techniques such as measuring the movements of articulators by means of electromagnetic tracking or magnetic resonance imaging (MRI) are more widely used.

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APPENDIX A

THE INTERNATIONAL PHONETIC ALPHABET (2005)

CONSONANTS (PULMONIC)

	LABIAL		CORONAL				DORSAL			RADICAL		LARYNGEAL
	Bilabial	Labio-dental	Dental	Alveolar	Palato-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Epi-glottal	Glottal
Nasal	m	ɱ		n		ɳ	ɲ	ŋ	ɴ			
Plosive	p b	pˑ bˑ		t d		ʈ ɖ	c ɟ	k g	q ɢ		ʔ	ʔ
Fricative	ɸ β	f v	θ ð	s z	ʃ ʒ	ʂ ʐ	ç ʝ	x ɣ	χ ʁ	ħ ʕ	H ʢ	h ɦ
Approximant		ʋ		ɹ		ɻ	j	ɰ				
Trill	ʙ			r					R		ʀ	
Tap, Flap		ⱱ		ɾ		ɽ						
Lateral fricative				ɬ ɮ								
Lateral approximant				l		ɭ	ʎ	ʟ				
Lateral flap				ɺ								

Where symbols appear in pairs, the one to the right represents a modally voiced consonant, except for murmured *fi*. Shaded areas denote articulations judged to be impossible. Light grey letters are unofficial extensions of the IPA.

Fig. 1. The International Phonetic Alphabet (IPA)

CONSONANTS (NON-PULMONIC)

Anterior click releases (require posterior stops)	Voiced implosives	Ejectives
ʘ Bilabial fricated	ɓ Bilabial	ˈ *Examples:*
ǀ Laminal alveolar fricated ("dental")	ɗ Dental or alveolar	pˈ Bilabial
ǃ Apical (post)alveolar abrupt ("retroflex")	ʄ Palatal	tˈ Dental or alveolar
ǂ Laminal postalveolar abrupt ("palatal")	ɠ Velar	kˈ Velar
ǁ Lateral alveolar fricated ("lateral")	ʛ Uvular	sˈ Alveolar fricative

Fig. 2. Non-Pulmonic Consonants (IPA Chart)

CONSONANTS (CO-ARTICULATED)

ʍ Voiceless labialized velar approximant

w Voiced labialized velar approximant

ɥ Voiced labialized palatal approximant

ɕ Voiceless palatalized postalveolar (alveolo-palatal) fricative

ʑ Voiced palatalized postalveolar (alveolo-palatal) fricative

ɧ Simultaneous x and ʃ (disputed)

k͡p t͡s Affricates and double articulations may be joined by a tie bar

Fig. 3. Co-Articulated Consonants (IPA Chart)

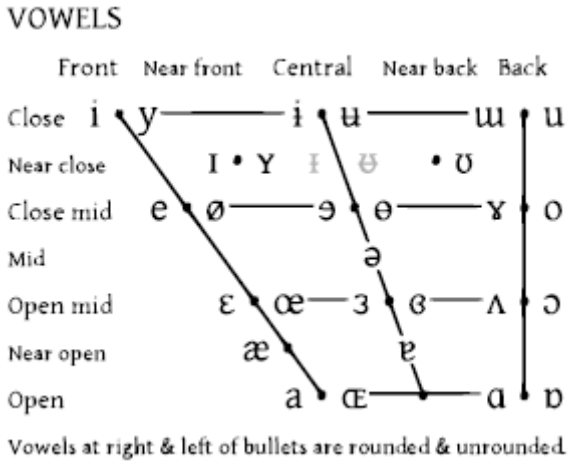

Fig. 4. Vowels (IPA Chart)

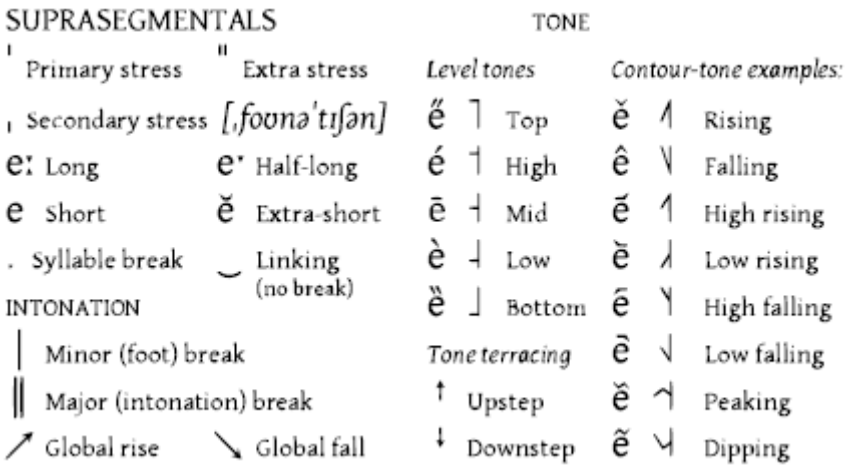

Fig. 5. Suprasegmentals (IPA Chart)

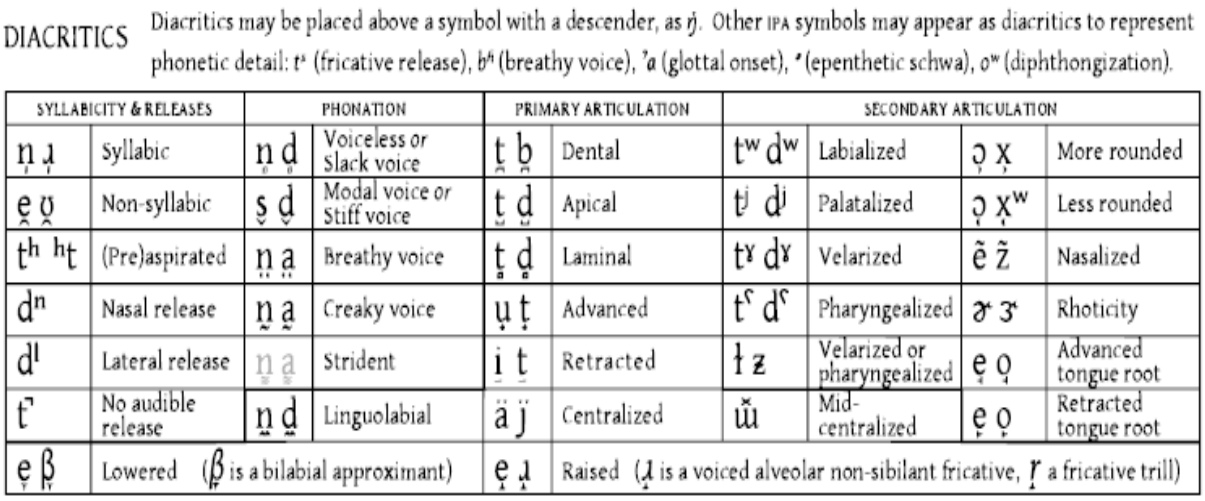

Fig. 6. Diacritics (IPA Chart)

All figures in Appendix A are taken from [73-76; 93; 105].

APPENDIX B

Additional texts to be used for practical assignments in tests.

1. The teachers were useful there. Bands of them wandered through the mountains, along with the tinkers, portable blacksmiths, miracle medicine men, cloth peddlers, fortune-tellers and all the other travelers who sold things people didn't need every day but occasionally found useful.

They went from village to village delivering short lessons on many subjects. They kept apart from the other travelers, and were quite mysterious in their ragged robes and strange square hats. They used long words, like 'corrugated iron'. They lived rough lives, surviving on what food they could earn from giving lessons to anyone who would listen. When no one would listen, they lived on baked hedgehog. They went to sleep under the stars, which the maths teachers would count, the astronomy teachers would measure and the literature teachers would name. The geography teachers got lost in the woods and fell into bear traps.

People were usually quite pleased to see them. They taught children enough to shut them up, which was the main thing after all. But they always had to be driven out of the villages by nightfall in case they stole chickens [120, p. 3].

2. Fermi discovered that interesting things happen when substances are bombarded with 'slow neutrons', subatomic particles emitted by radioactive beryllium, and passed through paraffin to slow them down. Slow neutrons, Fermi discovered, were just what you needed to persuade other elements to emit their own radioactive particles. That looked interesting, so he squirted streams of slow neutrons at everything he could think of, and eventually he tried the then obscure element uranium, up until then mostly used as a source of yellow pigment. By something apparently like alchemy, the uranium turned into something new when the slow neutrons cannoned into it, but Fermi couldn't work out what [121, p. 4].

3. Four years later three Germans, Otto Hahn, Lise Meitner, and Fritz Strassmann, repeated Fermi's experiments, and being better chemists, they worked out what had happened to the uranium. Mysteriously, it had turned into barium, krypton, and a small quantity of other stuff. Meitner realized that this process of 'nuclear fission' produced energy, by a remarkable method. Everyone knew that chemistry could turn matter into other kinds of matter, but now some of the matter in uranium was being transformed into energy, something that nobody had seen before [121, p. 4].

4. It so happened that Albert Einstein had already predicted this possibility on theoretical grounds, with his famous formula, an equation which the orangutan Librarian of Unseen University would render as 'Ook'. Einstein's formula tells us that the amount of energy 'contained' in a given amount of matter is equal to the mass of that matter, multiplied by the speed of light and then multiplied by the speed of light again. As Einstein had immediately noticed, light is so fast it doesn't even appear to move, so its speed is decidedly big ... and the speed multiplied by itself is huge. In other words: you can get an awful lot of energy from a tiny bit of matter, if only you can find a way to do it. Now Meitner had worked out the trick [121, p. 4].

5. "Let me tell you about the Nightside, Joanna. They call London the Smoke, and everyone knows there's no smoke without fire. The Nightside is a square mile of narrow streets and back alleys in the centre of city, linking slums and tenements that were old when the last century was new. That's if you believe the official maps. In practice, the Nightside is

much bigger than that, as though space itself has reluctantly expanded to fit in all the darkness and evil and generally strange stuff that has set up home there. There are those who say the Nightside is actually bigger than the city that surrounds it, these days. Which says something very disturbing about human nature and appetites, if you think about it. Not to mention inhuman appetites. The Nightside has always been a cosmopolitan kind of place [115, p. 14].

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7. The girls took their suitcases from the car and followed Mrs. Hayes inside. Although the furnishings looked rather worn, they were still very beautiful. The high-ceilinged rooms opened off a center hall and in a quick glance Nancy saw lovely damask draperies, satin-covered sofas and chairs, and on the walls, family portraits in large gilt frames of scrollwork design. Aunt Rosemary went to the foot of the shabbily carpeted stairway, took hold of the handsome mahogany balustrade, and called, "Mother, the girls are here!" [117, p. 26].

8. Cambridge University Press has no responsibility for the persistence or accuracy of urls for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate [123, p. 5].

9. Mr. Speaker, Mr. President Pro Tempore, members of Congress, and fellow Americans: In the normal course of events, presidents come to this chamber to report on the state of the Union. Tonight, no such report is needed. It has already been delivered by the American people. We have seen it in the courage of passengers who rushed terrorists to save others on the ground. Passengers like an exceptional man named Todd Beamer. And would you please help me welcome his wife Lisa Beamer here tonight? We have seen the state of our Union in the endurance of rescuers working past exhaustion. We've seen the unfurling of flags, the lighting of candles, the giving of blood, the saying of prayers in English, Hebrew and Arabic. We have seen the decency of a loving and giving people who have made the grief of strangers their own. My fellow citizens, for the last nine days, the entire world has seen for itself the state of our Union, and it is strong [111].

APPENDIX C

Additional multiple choice test tasks for "Theoretical Phonetics" (in Russian)

1) ___ — процесс, при котором в поспешной или небрежной речи не реализуется артикуляция какого-либо звука.
    a) элизия
    b) боковой взрыв
    c) редукция
2) ___ — это процесс изменения артикуляции согласного звука в потоке речи под влиянием артикуляции соседнего согласного звука, причем наблюдается уподобление одного звука другому.
    a) оппозиция
    b) ассимиляция
    c) редукция
3) Аллофон — это
    a) вариант фонемы
    b) ударение
    c) интонация
4) Билабиальными (губно-губными) смычными согласными являются:
    a) [p b m]
    b) [f h w]
    c) [z l j]
5) В английском языке существует __ гласных звуков.
    a) 22
    b) 30
    c) 15
6) В английском языке существует _ согласных букв.
    a) 80
    b) 20
    c) 10
7) В слове может быть два ударения — главное и ...
    a) другое
    b) второстепенное
    c) дополнительное
8) Возник в результате ослабления артикуляции самых различных гласных редуцированный гласный:
    a) [u]
    b) [ə]
    c) [a]
9) Восходящий тон ...
    a) выражает законченность, категоричность
    b) выражает незаконченность высказывания (или его части), неуверенность
    c) выражает гнев
10) В английском языке
    a) долгие гласные звуки перед звонкими согласными произносятся дольше, чем перед глухими

b) краткие гласные звуки перед звонкими согласными произносятся дольше, чем перед сонантами

c) долгие гласные звуки перед звонкими согласными не произносятся перед глухими

11) Диграфом называется

a) графическое изображение сочетания двух гласных букв, стоящих в одном ударном слоге и имеющих общее чтение

b) раздельное написание слов

c) подчеркнутое двойной чертой сказуемое

12) Замена одной фонемы другой

a) приводит к изменению грамматической формы слова

b) приводит к изменению значения слова или к искажению звучания слова

c) приводит к изменению функции слова в предложении

13) При артикуляции отдельно взятой фонемы

a) выявляются два этапа: 1) экскурсия или приступ 2) выдержка

b) выявляются три этапа: 1) экскурсия или приступ 2) выдержка 3) рекурсия или отступ

c) выявляется только рекурсия или отступ

14) Выделение одного слога в слове, служащее для объединения этого слова путем подчинения ударному слогу безударных, называют ...

a) словесное ударение

b) интонация

c) темп

15) Гласные звуки классифицируются по:

a) ряду

b) ряду, подъему, наличию/отсутствию лабиализации

c) подъему

16) Гласные звуки типа [u o] являются гласными

a) заднего ряда

b) переднего ряда

c) среднего ряда

17) Гласными верхнего подъема являются:

a) [i u]

b) [ə o ei]]

c) [au oi auə]

18) Гласными переднего ряда являются:

a) [au oi auə]

b) [i y e]

c) [ə]

19) Гласными среднего подъема являются:

a) [e o]

b) [au oi auə]

c) [i y e]

20) Губные согласные делятся на:

a) переднего ряда

b) низкого подъема

c) губно-губные, губно-зубные

21) Диалектом называют:

a) определенную территориальную разновидность данного языка

b) определенную социальную разновидность данного языка

c) американский вариант английского языка

22) Если предшествующий звук уподобляется последующему, то происходит:
    a) прогрессивная ассимиляция
    b) регрессивная ассимиляция
    c) редукция
23) За счет более энергичной подачи воздуха сильные согласные звуки __ произносятся с
    a) аспирацией.
    b) редукцией
    c) ассимиляцией
24) Звук [f] — ____.
    a) щелевой
    b) сонант
    c) смычный
25) Звук [h] — ____.
    a) фарингальный
    b) губно-губной
    c) заднеязычный
26) Звук [j] — ____.
    a) среднеязычный палатальный
    b) смычный взрывной
    c) межзубный
27) Звуки ____ частично приглушаются после глухих взрывных согласных.
    a) [i y e]
    b) [w, l, r]
    c) [k t g]
28) К активным органам речи относят:
    a) мягкое небо, увула, губы, язык
    b) зубы, альвеолы, твердое небо
    c) легкие, бронхи, дыхательное горло
29) К пассивным органам речи относят:
    a) мягкое небо, увула, губы, язык
    b) зубы, альвеолы, твердое небо
    c) легкие, бронхи, дыхательное горло
30) К суперсегментным единицам фонетики относятся:
    a) фонемы
    b) ударение и интонация
    c) академический стиль
31) Компонентами интонации являются:
    a) длительность, интенсивность, мелодика
    b) придыхание, ассимиляция
    c) шумность, рекурсия
32) Место и способ образования является признаком
    a) артикуляционной классификации согласных
    b) артикуляционной классификации гласных
    c) классификации суперсегментных единиц
33) На характер произношения существенное влияние оказывают:
    a) интонация
    b) стили произношения
    c) фонемы
34) Общие условия звукообразования изучает:
    a) общая фонетика
    b) сравнительная фонетика

c) фонология

35) Оканчивается на гласный слог
   a) открытый
   b) закрытый
   c) оба вида слогов

36) Определение слова «фонетика» происходит от греческого слова
   a) «звук»
   b) «фонема»
   c) «песня»

37) Относительно места ударения выделяются языки с:
   a) фиксированным и свободным ударением
   b) нисходящим и восходящим ударением
   c) без ударения

38) При _____ ассимиляции предшествующий звук влияет на последующий.
   a) прогрессивной
   b) регрессивной
   c) взаимной

39) Ряд и подъем является признаком
   a) артикуляционной классификации гласных
   b) артикуляционной классификации согласных
   c) артикуляционной классификации сонантов

40) Уподобление звуков друг другу называется:
   a) ассимиляцией
   b) адаптацией
   c) носовым взрывом

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