Е.С. РЯБОВА

ТИПОЛОГИЧЕСКИЕ ИССЛЕДОВАНИЯ ЛИНГВИСТИЧЕСКИХ ЕДИНИЦ АНГЛИЙСКОГО ЯЗЫКА

Рекомендовано редакционно-издательским советом федерального государственного автономного образовательного учреждения высшего образования «Самарский национальный исследовательский университет имени академика С.П. Королева» в качестве практикума для обучающихся по основной образовательной программе высшего образования по направлению подготовки 11.04.03 Конструирование и технология электронных средств

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Практикум предназначен для магистров института информатики и кибернетики, изучающих академический иностранный язык (английский).

Состоит из 10 подразделов и включает разноплановые задания практического характера, часть которых охватывает самые важные проблемы типологии. Вторая часть "Do it on your own" («Сделай это самостоятельно») предусматривает обращение к необходимым дополнительным источникам (печатным и электронным) и рассчитана как на домашнюю работу, так и на выполнение во время аудиторных занятий.

Тексты для типологического анализа отвечают тематике специальности, посвящены проблемам информационных технологий.

Подготовлен на кафедре иностранных языков и русского как иностранного.

СОДЕРЖАНИЕ

ПРЕДИСЛОВИЕ

Настоящий практикум предназначен для магистров института информатики и кибернетики.

Сопутствующей целью изучения дисциплины выступает формирование у студентов готовности к решению конкретных задач профессионально-практической и научно-методической деятельности.

Основное внимание уделяется развитию умения применять полученные знания на практике: пользуясь методиками сравнительно-сопоставительного метода, анализировать языковые явления фонологического, морфологического, синтаксического, лексического и лексико-семантического уровней. Учитывая специфику подготовки студентов, ряд заданий ориентированы на работу с текстами по специальности.

Компетентностный подход предполагает самостоятельную работу студентов, развитие способности ориентироваться в отечественных и зарубежных научных концепциях / точках зрения и использовать эти знания на практике. Вследствие этого включены достаточно разнообразные задания, рассчитанные на самостоятельную работу студентов.

Завершается практикум тестом на проверку полученных знаний теоретического и практического характера, в котором предлагаются задания для контроля сформированных компетенций по изучаемой дисциплине.

По завершению данного курса студенты смогут сформировать все необходимые компетенции, предусмотренные требованиями программы «Академический иностранный язык» и подготовятся к сдаче итоговой аттестации по данной дисциплине.

ЗАНЯТИЕ 1.
ТИПОЛОГИЯ АНГЛИЙСКОГО
И РУССКОГО ЯЗЫКОВ

Task 1. *Read the text and explain the difference between "absolute" and "statistical" universals. Find examples of both the types. Which sphere of linguistics – phonetics, grammar, semantics – do they belong to?*

The number of universals so far discovered is very large, but not all of them are of equal cognitive value. For instance, the statement that "all languages consist of phonemes" seems rather trivial as compared with another universal stating that "if a language has a dual number, it also has a singular and a plural numbers".

Besides, it is necessary to say that the number of universals in the true sense of the word, i.e. absolute universals applicable to all languages without exception, is comparatively small. More numerous are universals which may be called quasi- or statistical universals that can be applied to a limited group of languages.

Absolute universals include such statements as, for example, the proposition that all languages have no less than 10 and no more than 70 phonemes. Or, according to Ch.Hocket, absolute is a historical tendency towards phonological symmetry. L.V. Shcherba considered universal the dependence of the free word order in such languages as Latin and Russian upon the highly developed inflexional systems of these languages. An example of a statistical universal is the occurrence of at least one nasal consonant in almost every language.

Phonological universals. The outstanding Czeck linguist B.Trnka tired to establish some general laws of phonemic combinations. But another scholar, N.Trubetskoi, pointed out that of all the laws discovered by B.Trnka only one might be considered a universal law, namely

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the one which states that a language is impossible without combinations consisting of a vowel and a consonant.

R. Jakobson adduces several examples of universal laws, affirming, for instance, that there may exist languages without fricatives, but there are no languages without plosives. He also asserts that there are no languages with labialized front vowels which would not have labialized back vowels.

Universals which hold in a limited number of tongues are more numerous: for example, languages which admit CC clusters at the beginning of the word and CC clusters at the end of the word, admit such clusters in the middle of the word (B. Trnka).

J. Greenberg came to the conclusion that shorter consonant clusters are preferred to longer ones.

Grammatical universals. J.Greenberg, after investigating about thirty languages of different families, discovered forty-five universals, six of which, as was found out later, do not hold in all languages, i.e. are not absolute laws.

A large proportion of the universals put forward by the linguist are of implicational type, that is, they have the formula 'given x in a particular language, we always find y'. When nothing further is said, it is understood that the converse, namely, given y we always find does not hold.

Several universals found by the linguist are concerned with word order. Thus, one of them says that the majority of languages have several variant word orders but a single dominant one. There are six possible orders: SVO, SOV, VSO, VOS, OSV, OVS. Of these six only three occur as dominant orders: SVO, SOV, VSO, in which the subject precedes the object. The three which seldom occur are VOS, OSV and OVS in which the object precedes the subject. This universal runs as follows: "In declarative sentences with normal subject and object the dominant order is always the one in which the subject precedes the ob-

ject". Languages with dominant VSO order are always prepositional. Languages with SOV order are usually postpositional. All languages with dominant VSO order have SVO as an alternative or as the only alternative basic order.

The universals mentioned above deal with basic word order. Other universals are concerned with syntax and morphology. A syntactical universal asserts that in conditional statements, the conditional clause precedes the conclusion as the normal order in all languages. Universal 18 runs as follows: "When the descriptive adjective precedes the noun, the demonstrative, and the numeral, with overwhelmingly more than chance frequency, does likewise. When any or all of these three types of qualifiers precede the noun, the order among them is always the same: demonstrative, numeral and adjective, as in English, *these five beautiful houses"'* [16].

Task 4. *Read the text and find examples of linguistic universals. Write them out classifying into Phonological, Lexical, Grammatical. Which of them are absolute and which are statistical?*

Eventually, he rose and strolled backwards out of the park.

On the street a boy backed past him, unwhistling snatches of a popular song.

He backed up the stairs to his apartment, his hangover growing worse again, undrank his coffee, unshowered, unswallowed his aspirins, and got into bed, feeling awful.

Let this be it, he decided.

A faintly-remembered nightmare ran in reverse though his mind, giving it an undeserved happy ending.

It was dark when he awakened.

He was very drunk.

He backed over to the bar and began spitting out his drinks, one by one into the same glass he had used the night before, and pouring them from the glass back into the bottles again. Separating the gin and ver-

mouth was no trick at all. The liquids leapt into the air as he held the uncorked bottles above the bar.

And he grew less and less drunk as this went on.

Then he stood before an early Martini and it was 10:07 in the P.M. There, within the hallucination, he wondered about another hallucination. Would time loop-the-loop, forward and then backward again, through his previous seizure?

No.

It was as though it had not happened, had never been.

He continued on back through the evening, undoing things.

He raised the telephone, said "good-bye", untold Murray that he would not be coming to work again tomorrow, listened a moment, recradled the phone and looked at it as it rang.

The sun came up in the west and people were backing their cars to work.

He read the weather report and the headlines, folded the evening paper and placed it out in the hall.

It was the longest seizure he had ever had, but he did not really care. He settled himself down within it and watched as the day unwound itself back to morning.

His hangover returned as the day grew smaller, and it was terrible when he got into bed again.

When he awakened the previous evening the drunkenness was high upon him again. Two of the bottles he refilled, recorked, resealed. He knew he would take them to the liquor store soon and get his money back.

As he sat there that day, his mouth uncursing and undrinking and his eyes unreading, he knew that new cars were being shipped back to Detroit and disassembled, that corpses were awakening into their death-throes, and that priests the world over were saying black mass, unknowing.

He wanted to chuckle, but he could not tell his mouth to do it.

He unsmoked two and a half packs of cigarettes.

Then came another hangover and he went to bed. Later, the sun set in the east.

Time's winged chariot fled before him as he opened the door and said "good-bye" to his comforters and they came in and sat down and told him not to grieve overmuch.

And he wept without tears as he realized what was to come.

Despite his madness, he hurt.

...Hurt, as the days rolled backward.

...Backward, inexorably.

...Inexorably, until he knew the time was near at hand.

He gnashed the teeth of his mind.

Great was his grief and his hate and his love (from "Divine Madness" by R. Zelazny) [30].

Task 2. Read the text and answer the questions:

1. Что понимается под термином «контенсивная типология»?

2. Каково содержание классификационной типологии? В чем ее недостатки?

3. Что является объектом изучения характерологической типологии? В чем ее недостатки?

4. В чем отличие типологии универсалий от классификационной типологии? Характерологической типологии? В чем ее преимущества и недостатки?

'DO IT ON YOUR OWN' Section

Task 1. Read the statements below and say which of them cannot be referred to as linguistic universals. Give your reasons.

1. Where humans exist, language exists.

2. Every language has a way of referring to past time, forming questions, issuing commands.

3. All languages change through time.

4. *Any* normal child, born anywhere in the world, of any racial, geographical, social, or economic background, is capable of learning any language to which he or she is exposed.

5. Every spoken language includes discrete sound segments like **p, n,** or **a**, which can be defined by a finite set of sound properties (from Fromkin and Rodman, 1988, cited by Scherba de Valenzuela, pp. 18–19) [28].

Task 2. *Read Chapter 2 from the book «Сравнительная типология английского и русского языков» by В.Д.Аракин [3] and search the Internet for additional data about the scientists that lay the foundation of modern typology (see the list below). Be ready to give a 10-minute talk in class.*

Фридрих Шлегель	Т. Милевский
Август Шлегель	Ф.Ф. Фортунатов
Вильгельм Гумбольдт	Н.Я. Марр
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Н.С. Трубецкой	В.Н. Ярцева
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ЗАНЯТИЕ 2.
ТИПОЛОГИЯ ФОНОЛОГИЧЕСКИХ СИСТЕМ АНГЛИЙСКОГО И РУССКОГО ЯЗЫКОВ

Task 1. *Answer the following questions.*

1. What is the difference between "phonological" and "phonetic" levels of language structure?

2. What do we mean by "transitions"? Why is the data about transitions important for teachers? Give examples of the four types of transitions.

3. What are the four components of the phonological system of the language?

4. What are the main principles of vowel classification? Consonant classification? (Use the book: Морозова А.Н., Гусева Е.В. Английское произношение) [12].

5. Which components of intonation are used in typology to show the difference between English and Russian intonation patterns?

6. What are the functions of word-stress in English and in Russian? Give examples.

7. Which sounds are syllabic (capable of forming syllables) in English and in Russian?

Task 2. *Speak on the topics.*

1. Phonetic and phonological levels of the language.

2. Typological features distinguishing the subsystems of a) English and Russian vowels; b) English and Russian consonants.

3. Linguistic-didactic aspects of a) intonation; b) word-stress; c) syllable division (Use the book: Морозова А.Н., Гусева Е.В. Английское произношение) [12].

Task 3. *a) Intone the sentences and read them. What typological mistakes are Russian learners of English apt to make while pronouncing them?*

– Can you come? – Yes, I can.

– What's the weather like today? – It's fine.

b) Which English final tone (tune, intonation) was the most difficult for you to master? Explain the cause from the point of view of typology

Task 4. *Why are transitions important in teaching English as a foreign language? Which transitions are practised in the following exercises? Why must they be practised?*

1) dik, 'siti 2) ˋdɑːk ͜ gɑːdn ‖ 3) ði· ˋounli ˎbɔi ‖

Task 5. *a) Which words are more difficult for a Russian learner of English to pronounce? Why?*

desk [desk] – day [dei]

put [put] – poor [puə]

b) Are the underlined combinations of sound identical in English and Russian?

"I want to d<u>ie</u>!" [dai] "Д<u>ай</u> мне книгу!"

Task 6. *Which linguistic universal connected with aspiration and palatalization do you know? Which phonetic phenomenon - aspiration or palatalization - is of more importance and difficulty in teaching a Russian student of English ?*

Task 7. *a) Why do we practise the tongue-twister "Tell Tom to come at ten tomorrow"?*

b) Give your examples of words that should be pronounced: with aspiration, - with palatalized sounds, - with no aspiration, - with no palatalization. Can all these examples be found in English?

Task 8. *a) Why do beginners practise the following words and combinations:*

<u>at th</u>e	<u>tr</u>ee	<u>tw</u>enty
<u>in th</u>e	<u>cr</u>eam	

Comment on the mechanism of assimilation and state its character (progressive, regressive, progressive-regressive).

b) Find examples of assimilation in the English text from Task 4,занятие 1. Are there identical (parallel) assimilation processes in the Russian translation?

Task 9. *Which typological mistakes are Russian students of English apt to make while pronouncing such pairs of words as:* [pi:t] - [pit], [bi:t] - [bit], [ni:t] – [nit]?

Task 10. *Why must we put a word-stress in the word "garden" ['ga:dn] and must not do that in the word "сон"?*

Task 11. *Which other way can you read the sentence by shifting the stress? [wɒt ən `eim] (It means: It's honourable on your part!) What have you changed by shifting the stress?*

'DO IT ON YOUR OWN' Section

Task 1. *Search the Internet for some additional information about English and Russian sound classifications and prepare a detailed analysis about the difference between these two systems.*

Task 2. *Read the texts and speak about the inventory and distributional changes in the subsystem of English vowels. Which of them should be taken into account when teaching at school? Explain your choice.*

INVENTORY CHANGES IN THE SYSTEM OF ENGLISH VOWELS

Inventory changes take place in the stock of phonemes and their pronunciation. The following changes in the inventory of the English vowel phonemes have been observed in the past few decades:

1. The vowels [i:] and [u:] have almost completely become diphthongoids, especially at the end of words. Now they are mostly pronounced [i ᵢ ʲ] and [u ᵤ ʷ] respectively, where as in the past years many Englishmen pronounced them as pure monophthongs: *he* [hi:] > [hi ᵢ ʲ], *who* [hu:] > [hu ᵤ ʷ].

2. The vowel [e] has become more open, thus resembling [ə] in the word *это* but not in the word *эти,* e.g. *better* ['betə] > ['betə].

3. The   vowel [æ] in the speech of many young people and children has become a more retracted vowel, close to the Russian [a], e.g. *have* [hæv] > [hav],

4. The   vowel [a:] has become a little more advanced, thus approaching the Russian [a] from the opposite direction. Now it resembles [a] in the word *галка*.

5. The vowel [o:] has become somewhat higher, resembling now [o] in the word *гол*.

6. The back-advanced, mid-open [ʌ] has become still more advanced, closer to the Russian [a] or the English [ə] in such words as *рана*, *runner* ['rʌnə].

7. The nucleus of the diphthong [ei] has become more open (> [ɛ]), like [э] in *этот*. The glide of the diphthong tends to become weak in the pronunciation of young people. Sometimes it disappears altogether which causes the lengthening of the nucleus, especially in the word-final position. As a result of this tendency words like *day* [dei] > [dɛi] are pronounced by some Englishmen as [dɛ].

8. The nucleus of the diphthong [ou], a back-advanced, mid-open vowel of narrow variation, has become still more advanced, virtually coinciding in quality with the mixed, mid-open vowel of narrow variation [ə:]. This change is so widespread that it has been recorded in the latest editions of English-Russian dictionaries where the diphthong is transcribed as [əʊ], e.g. *home* [həʊm]. This phonetical change may be safely introduced into language-teaching practice not only due to its stability but also in keeping with the principle of pedagogical expedience. The fact is that the nucleus of the diphthong [əʊ], differing in quality from both the Russian [o] and the English [ɒ], is usually introduced as a separate phoneme which offers an unnecessary difficulty. The difficulty is, however, removed if we substitute [ə:] for [o], saying to the pupils that they will be able to pronounce the diphthong in question if they add the vowel [ʊ] to the already familiar vowel making the

latter half-long. For example, add [ʊ] to [ə:] in *her* [ha:] > [h] *hoe*; or *learn* [1ə:n] > [ləʊ] *low,* etc.

9. The so-called "triphthongs" [aiə] and [aʊə] are often replaced by the diphthongs [a · ə] and [ɑ·ə] respectively, e.g. *tyre* ['taiə] > ['ta·ə], *tower* ['taʊə] > ['taɑ·ə]. The words like *tyre* and *tower* do not become homophones because the nuclei of the diphthongs differ: [a·] in [a·ə] remains a front, open vowel of broad variation, whereas the nucleus in [ɑ·ə] is close to the back, open vowel [a:]. This change is advisable for teaching purposes in order to avoid a mistake made by Russian pupils, namely, the substitution of [j] and [w] for the glides [i] and [ʊ] respectively in the triphthongs [aiə] and [aʊə], e.g. *tyre* ['taiə] > [tajə], *tower* ['taʊə] > ['tɑwə].

DISTRIBUTIONAL CHANGES IN THE SYSTEM OF VOWELS

Distributional changes occur in certain combinations and positions in words and their forms.

1. The unstressed [i] at the end of words is often replaced by the long diphthongoid [i ᵢ ʲ] which is possibly due to the American influence, e.g. ['priti] > [priti ᵢ ʲ] *pretty*.

2. There is a tendency to substitute [ə] for [i] in some of the prefixes and suffixes, e.g. *become* [bə'kʌm], *goodness* ['gʊdnəs]. But this is not done with -es and -ed to maintain the distinction between [iz] and [z], e.g. *offices* ['ɒfisiz] and *officers* ['ɒfisəz].

The most widespread distributional changes occur under the influence of spelling. In this case a letter or a digraph acquires its most typical pronunciation.

3. The second component -day in *Sunday, Monday,* etc. is pronounced [dei] because the digraph -ay is usually read as [ei] but not as [i]. Therefore, *Sunday* ['sʌndi] > [sʌndei], *holiday* ['hɒlidi] > ['hɒlidei].

4. In the unstressed prefix con- the vowel [ɒ] is pronounced instead of [ə], e.g. *consider* [kən'sidə] > [kɒn'sidə].

5. The substitution of [e] for [i] in the initial unstressed syllable, e.g. *excuse* [iks'kju:z] > [eks'kju:z].

6. There is a tendency to use lowered varieties of [i] in unstressed positions: *waited* ['weited], *ladies* ['leidez], *become* [bə'kʌm], etc. Such speakers have weak forms for *it, this, in, if,* when these words are unstressed: *I'll get it in the morning* [ail 'gɛtet en ðə 'mo:neŋ)].

Some distributional changes are caused by the tendency of bringing the pronunciation of borrowed words closer to the original, e.g. the former pronunciation of *Prague* (cf. *Hague* [heig], *vague* [veig]) was [preig]. Now it has changed into [pra:g] which is closer to the Czeck *Praha*. A similar tendency can be traced in the Russian language, e.g. *Лос Энджелес, Карибское море*, *Перу* instead of the former *ЛIос Анжелос*, *Караибское море, Перу* for *Los Angeles, Caribbean Sea, Peru.*

Shift of word-stress almost invariably involves distributional changes in vowels. Thus, possibly due to the influence of American pronunciation, some many-syllable adverbs formed from adjectives in -ary, are now pronounced with a secondary stress on the vowel of this suffix. As a result, the neutral vowel in this syllable is substituted by the monophthong [e], e.g. *temporarily* ['tempərərili] > [ˌtempə'rerili], *necessarily* ['nesəsərili] > [ˌnesə'serili].

Such variants are not phonetical innovations in the strict sense of the word because they were recorded in pronouncing dictionaries many years ago, but they are worthy of note. Nowadays they become more and more frequent in colloquial speech [14].

Task 3. *Read the text and speak about the distributional changes in the subsystem of English consonants. Which of them should be taken into account when teaching at school? Explain your choice.*

Consonants do not so easily change within so short a period of time as the lifetime of three or four generations. Consequently, changes of consonants are exclusively distributional.

1. The sonorant [r] regularly appears at the end of a word ending in a vowel, before the initial vowel of the following word, though the first word is spelt without [r] at the end, e.g. *the idea of it* [ai'diər əv it], *law and order* ['lo:r and 'o:də], *Asia and Africa* [eiʃə r ənd 'æfrikə], etc.

Parallel with it there appears to be an increasing tendency, especially among young people, not to use linking [r] at all, particularly when the vowel following the word ending in [r] is unstressed. Thus some speakers say ['mo: ən 'mo:] for ['mo:r ən 'mo:], [ə 'pɛə əv bu:ts], instead of [a 'pɛər əv 'bu:ts], ['wɛə it iz] for ['wɛər it iz],

2. When the [h] phoneme occurs medially between voiced sounds, a voiced [ɦ] is used by most English people, e.g. *behind* [bi'ɦaind], *inhabit* [in'ɦæbit]. Now the voiced [ɦ] often occurs after a voiceless consonant, e.g. *at home* [at ɦoum].

3. The voiced noise consonants [b, d, g, ʤ, v, ð, z, ʒ] show an increasing tendency to appear partially devoiced in word-final position. It may be accounted for by their opposition to the corresponding voiceless consonants [p, t, k, tʃ, f, θ, s, ʃ] based mainly on the fortis character of the voiceless and the lenis character of the voiced consonants, while their voiced vs. voiceless opposition is but a secondary feature. Although somewhat devoiced [b] in *rib* is not mixed up with [p] in *rip*, or [g] in *bag* with [k] in *back*, and the words like *rib - rip, bag - back* do not become homophones like Russian *луг — лук, сноб — сноп*.

4. At the junction of two noise plosives the first plosive often retains plosion as it always occurs in Russian, e.g. in *fact* both [k] and [t] have separate plosions.

There are other fluctuations in the phonemic system. The sonorant [j] is sometimes dropped, especially after [s], e.g. [sju:t] > [su:t]. Many people pronounce [t] in *often,* though this tendency is not observed in other words ending in -ften: *soften* ['sofn] [16].

ЗАНЯТИЕ 3.
ТИПОЛОГИЯ ЛЕКСИЧЕСКИХ СИСТЕМ.
ЭТИМОЛОГИЧЕСКИЕ ХАРАКТЕРИСТИКИ
КАК СОСТАВЛЯЮЩИЕ ЯЗЫКОВОЙ СТРУКТУРЫ

Task 1. Read the text and explain why the mixed character of the English vocabulary is considered one of its main typological features.

Basically, the etymological characteristics of the vocabulary systems of the English and Russian languages are alike because of the similarity of their structure – they comprise both native and borrowed words. But there are peculiarities as well.

One of the peculiar features of the English vocabulary is *its mixed character* (смешанный характер английского вокабуляра), though Russian words also include the native and borrowed element. In order to see the difference we are to analyze the quantitative and qualitative relationships of the native and borrowed element. If we do it we are sure to find out that in English the percentage of borrowed words is extremely high – about 70%; it's higher than in Russian and most of the European languages. So, the result achieved (70%) made the status of the English language dubious: there was once an opinion that English is a Romanic-Germanic language (as the majority of borrowed words came from Latin and French).

The application of the *quantitative analysis* did away with the ambiguity. In actual speech the number of native words (including form-words and notional words) is greater and reaches 80% (as was found out in the works of W. Shakespeare, for example).

Native words are also very important in speech due to their semantics (they denote basic everyday notions), wide sphere of usage and high frequency value. That makes up its *qualitative aspect* – vital need for communication.

The most important thing is that native and borrowed words in English have their *specific linguistic characteristics*.

As for the Russian language the etymological aspect of its vocabulary system does not show its mixed character so vividly; the number of borrowed words is not so big and there are no striking linguistic differences between native and borrowed words.

Task 2. *Prove that a) English is a Germanic language and not a Romanic-Germanic one; b) the typological characteristics of native and borrowed words are different. Use the text given below.*

Note: *The typological characteristics of native and borrowed words can manifest themselves in different ways: in the length of the word and the position of the word-stress; the paradigm of the word and the volume of its semantic structure; the degree of word-building activity and so on.*

'DO IT ON YOUR OWN' Section

Search the Internet for some additional information about words in Russian borrowed from English and words in English borrowed from Russian in the sphere of Radioelectronics. Prepare a short report. What spheres do they belong to?

ЗАНЯТИЕ 4.
ТИПОЛОГИЯ ЛЕКСИЧЕСКИХ СИСТЕМ. МОРФОЛОГИЧЕСКАЯ СТРУКТУРА АНГЛИЙСКИХ И РУССКИХ СЛОВ. СЛОВООБРАЗОВАНИЕ

Task 1. *Speak on the topics.*

1. Morphological level of the language;

2. Morphology of the English and Russian word: Prof. V.D.Arakin's theory, its strong and weak points.

3. Word-building: types of forming new words in English and in Russian. Types of word-building relevant for the construction of the "type within the English language".

4. Typological 'passport' of the English and Russian languages.

Task 2. A. *Analyse the structural type of the words:*

greyish, pen, kitchen-garden, gold-seeker, lilly-of-the-valley, M-day, Anglo-American, toytoon.

Can you give examples of Russian words belonging to the structural types mentioned?

B. *Analyse the structural type of the compounds:*

statesman, snowfall, Jack-of-all-trades, V-day, writing-table. *Are there derivational morphological compounds in English?*

Task 3. A. *Give examples of English and Russian derivatives made by prefixation; suffixation.*

B. *What part of speech is prefixation typical of in Russian? What can you say about the lexico-grammatical (part - of - speech) characteristics of the derivatives in both languages?*

Task 4. A. *Supply the missing word in a conversion pair and state its part of speech and meaning.*

?	- brush (v)	find (v)	- ?
?	- pocket (v)	help (v)	- ?
?	- elbow (v)	contest (v)	- ?

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B. Can we speak about conversion in the Russian language? If we can, give examples .

Task 5. *Give examples of shortening, sound interchange, reduplication and blending in English and, if possible, in Russian.*

'DO IT ON YOUR OWN' Section

Task 1. *Analyse the word-building patterns of the noun in English and Russian. Follow the given instructions.*

Note: *The instructions are worked out on the basis of typological indices method by J.Greenberg [5, 6]. The latter presupposes the analysis of the quantitative characteristics of the language with the aim of finding out parameters of a general character.*

I. Качественная характеристика: классифицировать существительные на корневые, производные, сложные и дать их словообразовательные модели в символах: W – корень, P – префикс, S – суффикс.

II. Количественная характеристика: 1) определить, какие существительные и их словообразовательные модели преобладают; 2) установить индекс деривации (словообразования) существительных в текстах, включающих каждый 100 слов. Если буквами Sw – обозначить количество корневых существительных на 100 слов текста, а буквой S – количество всех существительных на 100 слов текста, то отношение $^{Sw}/_S$ является индексом деривации существительных; 3) установить индекс префиксации существительных. Если буквами Sp – обозначить количество префиксальных существительных, а буквой S – общее количество существительных на 100 слов текста, то отношение $^{Sp}/_S$ является индексом префиксации существительных; 4) установить индекс суффиксации существительных. Если буквами Ss – обозначить количество суффиксальных существительных, а буквой S – общее количество существительных на 100 слов текста, то отношение $^{Ss}/_S$ является индексом суффиксации существительных; 5) установить индекс словосложения количество существительных на 100 слов текста, то

отношение $^{Ss}/s$ является индексом суффиксации существительных; б) установить индекс словосложения существительных. Если буквами Sz – обозначить количество сложных существительных, а буквой S – общее количество существительных на 100 слов текста, то отношение $^{Sz}/s$ является индексом словосложения существительных.

III. Дать общий вывод о характере сходств и различий между английским и русским языками в подсистеме словообразования существительного [22].

Analyze this paragraph in the respect of word-building. Translate the text.

For quantum computers to perform as hoped, they will probably need millions of quantum bits, or "qubits," as well as ways to conduct operations between qubits distributed across large-scale machines and networks. Teleportation of logic operations is one way do that without direct quantum mechanical connections (physical connections for the exchange of classical information will still be needed). The NIST team teleported a quantum controlled-NOT (CNOT) logic operation, or logic gate, between two beryllium ion qubits located more than 340 micrometers (millionths of a meter) apart in separate zones of an ion trap, a distance that rules out any substantial direct interaction. A CNOT operation flips the second qubit from 0 to 1, or vice versa, only if the first qubit is 1; nothing happens if the first qubit is 0. In typical quantum fashion, both qubits can be in "superpositions" in which they have values of both 1 and 0 at the same time. The NIST teleportation process relies on entanglement, which links the quantum properties of particles even when they are separated. A "messenger" pair of entangled magnesium ions is used to transfer information between the beryllium ions (see infographic).

Task 2. *Is the word-building activity of analyticized and synthetic words the same (identical) in the English language? Prove your point of view using a one-page text from the book you are reading now.*

ЗАНЯТИЕ 5.
ТИПОЛОГИЯ ЛЕКСИЧЕСКИХ СИСТЕМ.
СЕМАНТИКА АНГЛИЙСКИХ И РУССКИХ СЛОВ.
ТИПЫ СЕМАНТИЧЕСКИХ ИЗМЕНЕНИЙ

Task 1. *Answer the questions.*

1. What is "meaning"? How is lexical meaning of the word different from its grammatical meaning?

2. Which linguistic universal connected with polysemy do you know? Which words – polysemantic or monosemantic predominate in English? In Russian? Why?

3. How can you account for the fact that native words have a well-developed semantic structure while borrowed words possess a poorly-developed semantic volume?

Task 2. *Read the text and explain the difference between the three examples showing the relationship between the form and meaning of the word. Which is of interest for comparative semantic analysis in different languages?*

First, there is in every language a certain lexical subsystem, which is more or less independent to the linguistic form in which it exists. Thus, for example, in cases like *two, seventy-five,* or *one hundred and two,* etc. we deal with those subdivisions of the word-stock of the language, for which in a civilized society there is a well-established secondary semiotic system. Whenever we have something, which exists in other civilized societies in the form of a secondary semiotic system we have to admit that although there is a certain difference between these lexical subsystems (*French: deux,* soixante quinze, sent-deux; Russian: два, семьдесят пять, сто два) it is, by and large, immaterial.

The second type can be conveniently exemplified by the "arm-hand" situation. We look at the upper limb of the human body which has been "reverberated" by the human mind since time immemorial, and find that in English it is divided into two parts: *hand* and *arm.* In

Russian the whole limb is indiscriminately called *рука*. The difference between *рука,* on the one hand and *arm* and *hand*, on the other, clearly indicates that the meaning of words is the particular reverberation which consists in slicing up, cutting up reality in this or that way. In our case the Russian language does not cut it up and has only one word - *рука,* while the English language cuts it up into two parts - *hand* and *arm.* This is, comparatively speaking, a simple case of relationship between form and content because in this case we can actually see what happens. We look at the object and say: this is the arm and this is the hand, or this is the leg, and this is the foot, while in Russian the whole limb is merely *рука* or *нога*. What in English is called *little finger* is monolexemically expressed in Russian as *мизинец.* Conversely, in English we do not speak of *a big finger* but *a thumb.*

The situation becomes far more complicated when we reach the third category - word like *fancy, disdain, horrible, terror,* etc. because their referent, that is the object of thought correlated with a certain linguistic expression, is not directly cognoscible. The content of these words is such a complex combination of different "reverberations" that to understand the difference between *to fancy* and *to like*, or *horrible* and *terrible* a serious lexicological investigation has to be carried out.

This is the reason why some people say that words of this kind in general cannot be referred to anything in objective reality, that in this case it is not a question of reverberation, but of primacy of language, of "mind" before "matter". Nothing, however, can be further from the truth. The difference between 1, 2, and 3 is just in different **kinds** of reverberation, degrees of complexity of reverberation [11].

'DO IT ON YOUR OWN' Section

Task 1. A. Read the text and explain the difference between a polysemantic word and a word with a wide scope of meaning.

Side by side with polysemantic words there are words with a *wide scope of meaning* (широкозначные слова). To discriminate between a

polysemantic word and a word with a wide scope of meaning we are to remember that the former (a polysemantic word) expresses several notions while the latter (a word with a wide scope of meaning) expresses one notion which is wide. It may be so wide that it embraces severel notions expressed by different words in another language. For example, 'to go' as a polysemantic word expresses the notions: 1) "to move", 2) "to extend", 3) "to work" etc. It is semantically wide when it is connected with one and the same notion – that of *movement*. Compare: "It's time for me <u>to go</u>", said the boy (<u>идти</u>); "It's time for me <u>to go</u>", said the bird (<u>лететь</u>); "It's time for me <u>to go</u>", said the fish (<u>плыть</u>); "It's time for me <u>to go</u>", said the snail (<u>ползти</u>).

B. Translate the sentences into Russian. Pay attention to the word "thing".

1. She was a pretty little *thing*.

2. The *thing* is that I was ill.

3. – The *thing* that he was holding in his hand looked familiar.

– Yes, it was my handkerchief.

C. Analyse the following examples (borrowed from Oscar Wilde) and say which - an English verb or its Russian equivalent - has a wider scope of meaning. What linguistic means help to render shades of concrete meaning in both the languages?

1. All day long he <u>flew.</u>

Целый день <u>летела</u> она.

2. Then, when the autumn came, they all <u>flew away.</u>

Потом наступила осень и ласточки <u>улетели</u>.

3. <u>Fly over</u> the city.

<u>Облети</u> же мой город.

4. When she saw it she <u>flew over</u> to it.

Соловей увидел его, <u>подлетел</u> к нему.

5. After they <u>had gone</u> he felt lonely.

Когда они <u>улетели,</u> Ласточка почувствовала себя сиротою.

6. "I <u>am going</u> to Egypt", cried the Swallow.

– *Я <u>улетаю</u> в Египет! – сообщила им ласточка.*

7. She sang of the big whales that <u>come down</u> from the north seas.

Она пела об огромных китах, <u>приплывающих</u> из северных морей.

8. … All the tunny-fish <u>came in from</u> the deep to listen to her.

Стаи тунцов, чтобы послушать ее, <u>выплывали из</u> морских глубин [19].

D. *Prepare your own examples of this kind.*

Task 2. *Study the text below. After you have read it find your own examples of that kind using Oxford English Dictionary.*

As Howard Jackson points out in Lexicography: An Introduction (2002), "Etymology … merely provides some passing insight for the interested dictionary browser with the requisite background knowledge and interpretative skills."

Of course you don't have to be a misguided purist to take an interest in word histories. For example, a brief tour of the Oxford English Dictionary can help us understand why, etymologically, there's:

• No **Good** in Goodbye Goodbye is a contraction of the blessing "God be with ye".

• No **Male** in Female "Female" comes from the diminutive of the Latin word "femina" ("woman"). It made its way into English through French as femelle.

• No **Limp** in Limpid Limp (an unsteady walk) is a word that goes back to Middle English. It's unrelated to the adjective "limpid" (clear or calm), which comes from the Latin word "limpidus".

• No **Noise** in Noisome The adjective "noisome" has more to do with the sense of smell than the sense of sound. It's derived from the Old French word for "annoy," and means "objectionable, unwholesome, foul-smelling".

Still, it's best not to take such passing insights too seriously. (And whether you like it or not, don't be surprised if one day noisome, for

example, shows up in your dictionary as a rather pretentious synonym for noisy.) [27]

Task 3. *Translate the text*

The new compound, which was tested in an animal model of melanoma, could make current chemotherapies more powerful. It works by thwarting cancer's ability to survive, evolve, and adapt to the DNA damage created by traditional chemotherapy drugs like cisplatin. "Chemotherapies are often effective the first time around, but then the cancers mutate and become resistant to that drug, and the next, and the next," said senior study co-author Pei Zhou, Ph.D., a professor of biochemistry at Duke University School of Medicine. "It reminds me of Boggarts, those shapeshifting creatures from Harry Potter that morph from one scary thing to another. The beauty of this approach is that you essentially freeze the Boggart in its current form, so you can kill it off for good." The study was published June 6 in Cell. In their simplest form, cancer cells are normal cells that are growing out of control. Each time these cells divide, the DNA within them must replicate to generate new copies to go inside each new cell. The first chemotherapy drugs were based on the rationale that rapidly growing cancer cells would be more sensitive to damage to their DNA. Drugs like cisplatin are designed to damage DNA, causing the sensitive replication machinery normally tasked with copying each strand to stall. If DNA replication is stalled for too long, cell division halts, and cells die. The strategy is brutal and effective, even curative in some cases. But long-term, it often fails, as cancer cells figure out a way to proliferate even in the presence of DNA damage.

ЗАНЯТИЕ 6.
ТИПОЛОГИЯ ЛЕКСИКО-СЕМАНТИЧЕСКИХ СИСТЕМ

Task 1. *Answer the questions.*

1. What do we mean by 'paradigmatic connections of words'? 'Syntagmatic connections of words'? Give your examples.

2. What types of synonyms do you know? Give your examples.

3. What is 'linguistic context'? Give your examples.

Task 2. *Read the text and explain what is understood under "inter-linguistic synonymy".*

INTERLINGUISTIC SYNONYMY

Translations from English into Russian with all certainty reveal a tendency to substitute a concrete and expressive Russian word for a more abstract and neutral English synonym. Thus, a girl is called *wild* in the original. The dictionary gives a variety of synonyms for it: *дикая, буйная, необузданная, неистовая, бешеная* all of which lack freshness and expressiveness, but the translator rises to the occasion finding *шальная* yet another synonym, more emotionally coloured and to the point. Likewise, English *horse* is not invariably *лошадь* but *конь, жеребец, рысак, вороной, скакун*: *multitude* is not always *множество,* but – *уйма, бездна, тьма, прорва.*

On the contrary, as we can often see in English translations of Russian prose, a concrete and expressive Russian word tends to be rendered by a more abstract English synonym. For example Russian *говорить, сказать, молвить, промолвить, выговорить, произнести* are translated by means of one and the same verb *to say:*

– Хорошо! – *сказал* я в недоумении.

– Вот она всегда так, – *проговорила* Мария Дмитриевна.

"All right" *said* I, perplexed.

"That is how she always is" *said* Marya Dmitrievna.

"You don't recognize me",

– Вы меня не узнаете, – *промолвил* он, снимая шляпу.

«Прошу, умоляю вас, – *выговорил,* наконец, Старцев, – будьте моей женой!».

– Советую вам подумать о вашей матери, – *произнес* он.

he *said,* taking off his hat.

"I beg, I beseech you" Startsev *said* at last, "be my wife".

"I'd advise you to think of your mother", he *said* [14].

Task 3. *Read the text and speak about the two types of antonyms described in it. In what meaning is the term "antithesis" used in it?*

ANTONYMY

Some authors reasonably contend that if there are universal laws of thought which are reflected in the laws of change of meaning, the contradictory opposition lies at the basis of antonymy.

Antonyms express contrary and contradictory notions. Contradictory notions utterly deny one another: *artistic :: inartistic.* Contrary notions which are as inconsistent as contradictory ones may have intermediary elements, e.g. *beautiful: ugly* have as intermediary notions *pretty, good-looking, plain*, etc.

There is nothing intermediary between *холостой* and *женатый, мертвый* and *живой* which makes the negation of one state practically equal to the affirmation of the opposite state. It is not accidental, therefore, that a word of this type (x) may have two antonyms: one expressed by a word of a different root (y), the other by the word itself with the negative particle (не x): *женатый – холостой = неженатый, живой – мертвый = неживой, зрячий – слепой = незрячий.*

The negative particle *не-* as a means of expressing antonymic relations plays a very important part in the sphere of Russian qualitative adjectives rich in antonyms: *терпеливый – нетерпеливый, удачный – неудачный, знакомый – незнакомый,* etc. It is evident that the above pairs do not present the same opposition as *белый – не белый, говорить – не говорить,* etc. The wide use of the particle is accounted for

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by the fact that the negative particle and the negative prefix are homonymous as a result of the fusion of *не* and *нн>* formerly phonetically different. The prefix *не-* expresses various shades of negative colouring: *нетерпеливый, небольшой,* etc., whereas the negative particle *не* expresses various degrees of negation. This homonymy nowadays leads to misunderstanding, i.e. nominal predicates may be interpreted in two ways - both positively and negatively: *он не ловкий* and *он неловкий (il n'est pas adroit* and *il est maladroit), он мне не приятель* and *он мне неприятель.* The ambiguity depends first of all upon the absence in modem Russian of the verb *быть* in the positive and the negative forms. The participle *не* functions negatively as the substitute of the 3rd person singular *(нн>, нн>сть).*

Whereas in Russian the negative particle and the negative prefix are homomorphemes, the English negative particle *not* is morphologically unrelated to the prefixes *dis-, il-/im-/in-/ir-* and *un-.* Syntactic negation by means of this particle (*not to believe)* is weaker than lexical antonymy *(to disbelieve).* Nevertheless, the negative particles and other negative morphemes make it possible to express the same idea in English and Russian by means of antonyms:

And now that I am *dead* they have set me up here...	И вот теперь, когда я уже *не живой,* меня поставили здесь.
"How very silly of him not *to stay* here" said the Rocket (OW).	Как это глупо, что она *улетела!* – сказала Ракета.

Antonyms are often used in English and Russian to express an antithesis, i.e. an opposition of ideas expressed by parallelism of strongly contrasted words. Absolute antonyms are regularly contrasted in idiomatic expressions which itself may be considered a proof of their antonymy. Contextual co-occurrence of antonyms may be completely identical in English and Russian:

heads or tail – орел или решка

sooner or later – рано или поздно

ups and downs – взлеты и падения

In many cases an English pair is paralleled by a pair of different antonyms in Russian having the same meaning in English:

neither here, nor there – ни к селу, ни к городу

to sink or swim – была ни была

for better, for worse – на горе и радость

Typical of modern Russian are hyphenated antonyms: *прием-выдача, вопросы-ответы, экспорт-импорт,* some of which have antonymic counterparts in English:

купля-продажа – sale and purchase

приход-расход – debit and credit

вперед-назад – to and fro [14].

Task 4. *Read the texts and speak about international and national idioms. Bring back to memory academician V.V.Vinogradov's classification of phraseological units. To which group of this classification would you refer national phraseological units? International phraseological units? Why?*

INTERNATIONAL IDIOMS

International idioms may be similar not only in structure but in imagery and meaning. A high degree of such equivalence is observed in English and Russian phraseological units ascending to antiquity, biblical tales or other foreign sources. Such idioms are called internationalisms, or interlingual phraseological equivalents:

a) Mythological:

the heal of Achilles – ахиллесова пята – a vulnerable spot

to cut the Gordian knot – разрубить гордиев узел – to sole a problem by force

an apple of discord – яблоко раздора – smth to quarrel about

b) Biblical:

a wolf in sheep's clothing – волк в овечьей шкуре

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a voice of one crying in the wilderness – глас вопиющего в пустыне

lost sheep – заблудшая овца

the root of all evil – корень зла

the root of the matter – суть дела

men of good will – люди доброй воли

the slaughter of the innocents – избиение младенцев

the salt of the earth – соль земли

in the sweat of one's brow – в поте лица

a doubting Thomas – Фома неверующий

in the twinkling of an eye – в мгновение ока

All these expressions form part and parcel of English as well as Russian phraseology. Their common feature is that they can be easily translated from one language into another [14].

NATIONAL PHRASEOLOGICAL UNITS

Equivalence of phraseological units containing obsolete words is reduced practically to nought. Such expressions as Russian *ни зги* English *hue and cry* comprising the words *зга* and *hue*, no longer used as free lexemes, constitute the greater part of idioms. Their overall meaning appears, at least to a present-day speaker of the language, as totally unmotivated, i.e. their meaning is not connected with the meaning of the component words.

Russian unmotivated idioms are paralleled by motivated English counterparts or free word-combinations and words:

бить баклуши	to twiddle one's fingers
точить балясы	to talk nonsense
очертя голову	head foremost
неровен час	one can never be too sure
и никаких гвоздей	and that's all there's to it
попасть впросак	to put one's foot into one's

перемывать косточки   mouth to pick somebody to pieces

Likewise, it is next to impossible to find a Russian equivalent to some English praseological units:

rank and file – рядовые люди,

in a trice – в одно мгновение (в мгновение ока),

not a whit – ничуть [11].

'DO IT ON YOUR OWN' Section

Task 1. Study the English and Russian texts given below and do the following:

1. Choose several analogues in these texts and compare their semantic volume and semantic structure. Do the semantic structures coincide in all their meanings? What principle is the main one in your analysis?

Note: *analogues should be notional words - nouns, verbs, adjectives.*

2. Choose several native and borrowed nouns (verbs, adjectives...) in the English text. What can you say about their semantic volumes?

3. Are there synonyms in these texts? Are they registered in dictionaries or contextual? Are their shades of meaning and stylistic connotations preserved when translating from Russian into English ?

4. Are there antonyms in the texts? Do they express contrary or contradictory notions?

5. Are there homonyms in these texts? What type of homonyms are they?

В. СОЛОУХИН. БАРОМЕТР

Дождь – не от слова ли «даждь»? Дай, подай, подари. Дождь, дожди, дождичек, задождило. Обложные дожди. Накрапывает, моросит, льет как из ведра. Теплый ночной дождичек – открыть окно – шуршит в крапиве, в листве деревьев... А то совсем прозаическая фраза из школьного учебника для четвертого класса: «Круговорот

воды в природе». Эта казенная фраза всегда была для меня исполнена глубокой поэзии. Когда я повторял ее то про себя, то вслух по нескольку раз, мне казалось, что этой фразой можно назвать книгу стихов, поэму. «Круговорот воды в природе, круговорот воды в природе», твердил я, и одновременно рисовались мне сквозь стеклянную прозрачность слов (как одновременно мы видим, что лежит за большим стеклом витрины и что на нем отражено) белые кучевые облака, плывущие, словно паруса, по синему летнему небу. Потом начинает синеть, темнеть, наливаться лиловой чернотой один край неба, начинает тянуть оттуда прохладой и влагой, свежий ветер неожиданными короткими порывами тревожит листву, и вот уже половина небесной сферы занята нависающей и как бы несущей угрозу тучей, и начинают ударять молнии сверху вниз, и первые крупные капли свертываются в шарики дорожной пыли, прежде чем хлынет, освежит, напоет, смоет; потечет ручьями, засверкает лужами, засветится на траве и листьях, после того как туча уже прошла над нами и поливает теперь земли других деревень и сел. Начинает все крутиться легким парком, испаряется, обсыхает, возносится кверху. Круговорот воды в природе... [19: 37].

V. Soloukhin. The Barometer

There are many words to denote rain. Rain, showers, downpours. Rainy spells. It's trickling, drizzling, pelting down. A warm night rain - you open the window - it patters in the nettles and tree leaves... Then there is the flat definition from the fourth-form text-book. "The circulation of water in nature". This stiff phrase has always been full of profound poetry for me. I used to repeat it sometimes to myself, sometimes aloud, thinking it would make a good title for a book of verse, or a long poem. "The circulation of water in nature", I said over and over again, and through the glasslike transparence of the words (as we see not only what is behind a shop window but what is reflected in it) I saw white cumulus sailing over a blue summer sky. Then the sky turns a deeper

shade of blue, darkens, and one edge is shot with a lilac blackness, coolness and dampness spread, a fresh wind disturbs the leaves with short sudden gusts, and now half the heavenly sphere is covered by a menacing cloud, the lightning flashes downwards, and the first heavy drops cluster in the dusty road, before the rain comes pelting down, refreshing, quenching and cleaning all around. It runs in rivulets, shines in puddles, gleams on grass and leaves, while the thunder cloud, that has passed over, is watering the soil of other villages and hamlets. Everything begins to steam lightly, evaporate, dry up, and be borne aloft. The circulation of water in nature... [19: 38]

Task 2. *Find homonyms for the following words. Give their Russian equivalents. Is it possible to find homonyms for them in the Russian language as well?*

Band – a company of musicians; *seal* – a warm-blooded, fsh-eating sea-animal, found chiefly in cold regions; *ear* – the grain-bearing spike of a cereal plant, as in corn; *cut* – the result of cutting; *to bore* – to make a long round hole, esp. with a pointed tool that is turned round; *a corn* – a hard, horny thickening of the skin, esp. on the foot; *fall* – the act of falling, dropping or coming down; *to hail* – to greet, salute, shout an expression of welcome; *ray* – any of several cartilaginous fishes, as the stingray, skate, etc.; *draw* – something that attracts attention [1:178].

Task 3. Translate this text paying attention to the Russian equivalents of the technical terms

Without any thought, we can gently stroke a puppy or firmly shake someone's hand, but today's robots are unable to distinguish these types of touch. The absence of simultaneous monitoring of tactile pressure and temperature change is the main obstacle, according to Kuniharu Takei, a professor in OPU's Department of Physics and Electronics and the head of the research group. Creating elastic, flexible soft robotic hands was the barrier for the integration of multiple sensors.

OPU researchers have for the first time successfully integrated multiple nanotube-based tactile and temperature sensors into a pneumatic balloon-based soft robotic hand without sensitivity to bending of the structure of the hand. An array of four tactile sensors and one temperature sensor based on highly conductive single wall carbon nanotubes can monitor sliding or slipping movements of an object from a robotic hand by detecting the time delay of the tactile force. This provides real-time feedback so that the robotic hand can adjust the actuation force to prevent dropping the object.

Furthermore, a robotic hand with nanotube-based sensors can detect the tactile force and temperature generated by a human hand, while each sensor measures the tactile force generated by a human finger independently. These functionalities give the soft robotic hand the capability to imitate human fingers and shake hands with a human. The sensing mechanism for tactile sensors utilizes the contact resistance change between silver thread and paper with a flexible, conductive single wall carbon nanotube layer. For temperature sensing, a mixture of single wall carbon nanotubes and tin (IV) oxide (SnO2) enhances the temperature sensitivity and also enhances the stability of long-time sensing. For both devices, TUBALLTM single wall carbon nanotubes, produced by OCSiAl, were used.

ЗАНЯТИЕ 7.
ТИПОЛОГИЯ ГРАММАТИЧЕСКИХ СИСТЕМ. КАТЕГОРИИ СУЩЕСТВИТЕЛЬНОГО, ГЛАГОЛА, ПРИЛАГАТЕЛЬНОГО В АНГЛИЙСКОМ И РУССКОМ ЯЗЫКАХ

Task 1. *Answer the questions.*

1. What are the typical features of an analytical type of language that English has?

2. How many cases are there in English? What makes up for such a limited number of cases in English?

3. What nouns are called 'pluralia tantum'? "Collective nouns"? "Nouns of multitude"? Give examples.

4. How do common and perfective, continuous and imperfective aspects correlate in English and in Russian?

5. What do we understand by 'absolute tenses'? 'Relative tenses'?

6. How many voices does an English verb have? A Russian verb? What are they called?

7. What kind of object can become the subject of a passive construction in English? Of a construction with *страдательный залог* in Russian?

8. What are the grammatical categories of adjective in English? In Russian?

9. How are the comparative and superlative degrees of comparison of adjectives expressed in English and in Russian?

10. What is 'elative degree of quality'? How is it expressed in the languages under comparison?

Task 2. *Write the words in the plural.*

a) boy, day, Sunday, city, puppy, cry, berry, valley, monkey, story, storey, Gypsy, fly, butterfly, sky, ski, penny;

b) potato, piano, hero, photo, Negro, cargo, kangaroo, cuckoo;

c) knife, roof, life, cliff, chief, handkerchief, wolf, thief, wife.

Task 3. Write and pronounce, using the nouns in bold type, first, in the singular, then in the plural.

1. Bring a small **knife** from the kitchen. 2. There was a high **cliff** in the sea. 3. The yellow **leaf** fell from the tree. 4. The President wants to speak to the **chief of** the **staff.** 5. Your **handcuff** is unbuttoned. 6. I want to buy a new **handkerchief.** 7. The cow had one **calf.** 8. The rain fell on the **roof** of the **house.** 9. Can you give me any **proof** of that? 10. This **thief** can open any **safe.**

Task 4. Put "one" or "several" before the given words. *sheep, deer, fish, cod, pike, trout, means, series.*

Task 5. Read the sentences changing the number of the nouns in bold type.

1. Have you ever seen how a **wolf** runs after a deer? 2. We stopped our car because a **sheep** was crossing the road. 3. I caught a big **fish** yesterday. 4. In old times an **ox** was often used in agricultural work. 5. A **trout** sparkled in the stream. 6. These **women** had their **teeth** filled yesterday. 7. There is a well-known **means** how to do this. 8. Television is now showing a new **series** of the film.

Task 6. Put in one of the words given in brackets.

1. A fish ... not really a silent animal (is / are). 2. Fish usually ... silent when they hear a ship coming near (fall / falls). 3. Some not begin to make sounds until the sun sets (fish / fishes) (do / does). 4. Grown-up fish ... able to produce sounds (is / are). 5. Some ... able to produce ultrasounds (fish / fishes) (is / are). 6. There ... a lot of frozen fish in the shops, but not... fresh fish (is / are) (much / many). 7. Fish... not live without water (do / does). 8. How ... fish have you caught since morning? (much / many). – Only three little ... (fish / fishes). 9. How many ... there in your aquarium? (fish / fishes) (is / are). 10. Freshwater... cannot live in the sea (fish / fishes).

Task 7. *Put the nouns in bold type in the plural.*

1. I heard the **voice** of a **passer-by.** 2. This young **man** was a **boy-messenger** for the **commander-in-chief.** 3. I sometimes visit the **family** of my **fellow-student.** 4. In this **park** your **child** can ride on a **merry-go-round.** 5. They found a terrible **draw-back** in my **plan.** 6. What kind of **thing** is called a **tin-opener?** 7. Is it true that a **boy** usually likes to have a **man-teacher** and a **girl** prefers a **woman-teacher?** 8. In what country does a **Dutchman** live? 9. In what town does a **Roman** live?

Task 8. *Choose a suitable verb form.*

1. My family ... of my sister and me. (consist / consists). 2. My family ... great music lovers, (is / are) 3. The crowd ... moving to the center of the city, and the police ... trying to stop them, (was / were) (was / were) 4. We must wait till our luggage ... taken out of the airplane, (is / are) S. The crew of the ship ... having a rest on the shore, (was / were) 6. Our team ... playing with your team next Sunday, (is / are) 7. Any people ... a right to be independent, (has / have) 8. My hair ... very fast, (grow / grows) 9. The cattle ... now in the field, (is / are) 10. What fruit. . . there in your garden? (grow / grows) [7: 368–379].

'DO IT ON YOUR OWN' Section

Task 1. *Replace the Active by the Passive and vice versa.*

When Mr. Otis, the American Minister, **bought** the castle Canterville, its owner, Lord Canterville, **explained** to him that a ghost **haunted** the place. 'We have not lived here ourselves,' he said, 'since my aunt **was frightened** by two skeleton hands that **were put** on her shoulders while she was dressing for dinner.' Seeing that Mr. Otis did not believe him, he added, 'I must tell you, Mr. Otis, that the ghost **has been seen** by several members of my family. It **has** well **been known** for three centuries, and it appears before the death of any member of our family.'

However, the house **was bought,** and a few weeks later the family went down to Canterville. Besides Mr. Otis and his wife there was their

eldest son, who **had been named** Washington in a moment of patriotism, and **was known** as a fine dancer; also their little daughter and the twin brothers, who **were** usually **called** 'The Stars and Stripes', because they **were** *whipped* *regularly.*

The family entered the house and **were met** by the old housekeeper, who said that the tea **was laid out** for them. They sat down and began to look round. Suddenly Mrs. Otis noticed a red stain on the floor and said to the housekeeper, 'I am afraid something **has been spilt** there.' 'Yes, madam,' replied the housekeeper in a low voice, 'blood **has been spilt** there.' 'How terrible,' cried Mrs. Otis, 'It **must be removed** at once.'The old woman answered smiling, 'It is the blood of Lady Eleanore, who **was murdered** here **by** her husband in 1575. He disappeared, and his body **has never been found,** but his spirit continues to haunt the house. This bloodstain **has been** much **admired** by tourists, and **cannot be removed.'**

'That is all nonsense,' cried young Washington Otis as he fell on his knees and began to clean the floor with some cosmetic. In a few moments no blood stain **could be seen.** 'I told you it **could be easily removed!'** he said. But at this moment a sadden flash of lightning **was seen,** and a terrible peal of thunder **was heard,** and the housekeeper fainted. [7: 215–233].

Task 2. Read the text and speak about the common mistakes in the use of English tenses. What can the techer do to prevent such mistakes?

COMMON MISTAKES IN THE USE OF THE TENSES

Russian student of English make a lot of mistakes in the use of the tenses, some of the them being typical:

A.   The following examples show the tendency of Russian students to confuse an action taking place at a given moment in the present or in the past with a habitual action or a simple fact.

Correct	Wrong
I *wash* myself every day.	I *am washing* myself every day.
I always *take* a cold bath.	I *am* always *taking* a cold bath.
It *snows* in winter.	It *is snowing* in winter.
Do you *speak* English at home?	*Are* you *speaking* English at home?
When I was ill my doctor *came* to see me every day.	When I was ill my doctor *was coming* to see me every day.

This mistake is in all probability caused by the identity of the two forms in Russian:

Я *перевожу* с английского сейчас (Present Continuous).

Я *перевожу* с английского каждый день　　　(Present Indefinite).

But the Continuous tenses add much to the expressiveness of English. They are used instead of the Indefinite tenses in emphatic speech: *This dog always barks at strangers* (a habitual action). *This dog is always barking at strangers* (a habitual action, with a shade of displeasure).

B.　　The given examples account for a most common mistake. So far as the English consider a future tense in the principle clause enough to make the meaning of the whole sentence future.

Correct	Wrong
When I *am* free I shall come to see you.	When I *shall be* free I shall come to see you.
If the weather *is* fine I shall come to see you.	If the weather *will be* fine I shall come to see you.

It is well known that we generally use the present instead of the future after *if* and conjunctions of time such as *when, as soon as, after, before, while* and *until.* In fact, the rule is much more general than this.

We use the present instead of the future in most subordinate clauses, if the main verb of the sentence is future or has a future meaning. The present is used, in these cases, not only after *if* and conjunctions of time, but also after relative pronouns, after *as, than, whether, where* and in reported speech. In other words if the whole of the sentence is about the future, one future tense is enough to show this.

The first person who *opens* that door *will get* a shock. (Russian – *откроет*);

I'll *have* a good time whether I *win or lose.* (Russian – *выиграю или проиграю*);

I'll go where you *go.* (Russian – *пойдете*).

When we talk about things that have already been decided we use the *going to* structure or the Present Continuous but not the *shall /will* future:

Correct	Wrong
She's *going to have* a baby in June. Or: She's *having* a baby in June.	She'll *have* a baby in June.

If we say *She's going to have a baby* or *The Browns are coming to dinner*, we are not only talking about a future event but also about an existing present situation: a woman is pregnant or an invitation has been given and accepted. In cases like these we most often use either 1) the Present Continuous or 2) the present form *am/are / is going to + infinitive*:

Correct	Wrong
The Browns *are coming* to dinner.	The Browns *will come* to dinner.
I'm *going* to work this evening.	I *will go* to work this evening.

Russian learners of English mix up these forms because the constructions *She is having, She is going to have, She 41 have* are all equivalent to Russian: *У нее будет. У нее будут.*

   C.   These examples show that Russian students are apt to use the Present Perfect tense instead of the Past Indefinite and vice versa because in Russian there is only one form: *Я <u>видел</u> ее на этой неделе. Я <u>видел</u> ее на прошлой неделе.*

Correct	Wrong
I *saw* Mary yesterday.	I *have seen* Mary yesterday.
When *did* you *see* him?	When *have* you *seen* him?

   In British English, the Present Perfect is used with *just* to talk about very recent events. Americans usually use the Past Indefinite with *just: "Where is Lucy? " – "She's just gone out"* (US: *"She just went out")*. The Past Indefinite is used with *just now* which means the same as *just: I fell downstairs just now = I've just fallen downstairs (Wrong: I've just now fallen downstairs).*

   D.

Correct	Wrong
I've *known* her for a long time.	I *know* her for a long time.
We've *lived* in this street for fifteen years.	We *live* in this street for fifteen years.
When she arrived I *had been waiting* for two and a half hours.	When she arrived I *was waiting* for two and a half hours.
He *has been living* in his aunt's flat for the last month.	He *is living* in his aunt's flat for the last month.
His parents *have lived* in Bristol all their lives.	His parents *live* in Bristol all their lives.

   The mistakes in the above examples are probably due to the identical translation of the English tense forms into Russian:

I know / I've known – Я знаю.

We live / We have lived / We have been living – Мы живем

I was waiting / I had been waiting – Я ждал.

The Present Perfect Continuous is used especially for more temporary actions and occupations: *for the last month* (example 4), whereas the Present Perfect is preferred for more permanent situations: *all their lives* (example 5) [16: 28–36].

Accordingly, in the part "Activities" we offer tasks based mostly on the use of frequent tenses,, i.e. covering the first three groups of the English tenses mentioned above: the Present Indefinite, the Present Continuous, the Present Perfect, the Past Indefinite, the Future Indefinite, the Past Continuous, the Past Perfect, the Present Perfect Continuous, the Past Perfect Continuous.

Task 3. A. *Put the verbs in brackets into the correct tense: Present Perfect or Past Simple. (In some cases the Present Perfect Continuous is also possible.)*

1. Paul: I (play) football since I was five years old.

Tom: You (play) since you (come) to England?

Paul: Oh, yes. I (play) quite a lot. I (join) a club the day after I (arrive).

Tom: You (play) any matches?

Paul: We (play) about ten. We have two more to play. We (have) a very good season, we (win) all our matches so far, though we (not really deserve) to win the last one.

Tom: I (play) football when I (be) at school but when I (leave) school I (drop) it and (take) up golf.

2. Ann: Hello, Jack! I (not see) you for ages! Where you (be)?

Jack: I (be) in Switzerland. I (mean) to send you a postcard but I (not have) your address with me.

Ann: Never mind. You (have) a good time in Switzerland? How long you (be) there?

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Jack: I (be) there for a month. I only just (get) back. Yes, I (enjoy) it thoroughly. I (ski) all day and (dance) all night.

Ann: I (ski) when I (be) at the university, but I (break) a leg five years ago and since then I (not do) any.

3. When I first (come) to this house, it (be) a very quiet area. But since then a new housing estate (be) built and it (become) very noisy.

4. My son (not start) work yet. He's still at High School.

– How long he (be) at school?

– He (be) at High School for six years; before that he (spend) five years at the Primary School in Windmill Street.

5. – I just (hear) that Peter is in Australia.

– Oh, you (not know)? He (fly) out at the beginning of the month.

– You (hear) from him? Does he like the life?

– Yes, I (get) a letter last week. He (tell) me about his job. But he (not say) whether he (like) the life or not. Perhaps it's too soon to say. He only (be) there three weeks.

B. *Put the verbs in brackets into the correct tense: Past Simple, Past Perfect or Past Perfect Continuous.*

1. He (give) me back the book, (thank) me for lending it to him and (say) that he (enjoy) it very much; but I (know) that he (not read) it because most of the pages (be) still uncut. 2. When he (see) his wife off at the station, he (return) home as he (not have) to be at the airport till 9.30. 3. He (not have) to pack, for his wife already (do) that for him and his case (be) ready in the hall. 4. He (not have) to check the doors and windows either, for his wife always (do) that before she (leave) the house. 5. All he (have) to do (be) to decide whether or not to take his overcoat with him. In the end he (decide) not to. 6. At 8.30 he (pick) up his case, (go) out of the house and (slam) the door behind him. 7. Then he (feel) in his pockets for the key, for his wife (remind) him to double-lock the front door. 8. When he (search) all his pockets and (find) no key he (remember) where it (be). 9. He (leave) it in his overcoat pocket.

10. Then he (remember) something else; his passport and tickets (be) in his overcoat pocket as well [29: 47–61].

Task 4. *Read the text and speak about the types of adjectives in English and in Russian.*

In Russian there are four types of adjectives.

1. *Qualitative* adjectives express quality as such, for ex.: большой – маленький, толстый – тонкий, горячий – холодный.

2. *Relative* adjectives express quality through its relation to other things and actions, for.ex.: каменный (сделанный из камня), весенний (характерный для этого времени года), злой (несущий зло).

3. *Possessive* adjectives denote the possession of some object by a person, for ex.: отцов (пиджак), женина (сумка).

4. *Evaluative* adjectives denote the speaker's attitude to things and actions, for ex.: хороший – плохой, прекрасный – безобразный.

Unlike their Russian counterparts, English adjectives may be subdivided into three classes.

1. *Qualitative* adjectives: big – small, thick – thin, hot – cold.

2. *Relative* adjectives: biological (connected with Biology), phonetic (connected with Phonetics or Phonology).

3. *Evaluative* adjectives: good – bad, beautiful – ugly.

Possessive adjectives are not to be found in English, their absence is compensated by the possessive case of nouns: *отцов пиджак – father's coat*.

The comparatively insignificant number of relative adjectives is made up for by a specific type of attributive word-combination – N+N. In such combinations it is the noun and not the adjective that performs the function of an attribute: *stone wall* – каменная стена, *spring flowers* – весенние цветы. Such word-combinations may be treated as «нестойкие сложные слова» [18: 114–115].

ЗАНЯТИЕ 8.
ТИПОЛОГИЯ ГРАММАТИЧЕСКИХ СИСТЕМ. ТИПОЛОГИЯ СИНТАКСИЧЕСКИХ СИСТЕМ АНГЛИЙСКОГО И РУССКОГО ЯЗЫКОВ

Task 1. *Answer the questions.*

1. What types of subject do you know?

2. What types of subject are characteristic of both – English and Russian?

3. What types of subject can be called 'specifically English'?

Task 2. **A.** *Translate into English using the construction "there is".*

1. Над дверью магазина была вывеска. 2. На этих равнинах очень солнечно (sunshine) круглый год. 3. В доме была большая веранда. 4. Дул холодный ветер. 5. В комнате стояла тишина (silence). 6. В ее голосе была приятная хрипотца (huskiness). 7. И как раз в этот момент появился Джеймс. 8. Казалось, конца не будет ее жалобам. 9. В комнату вбежали дети, весело смеясь. 10. В то время не было никакой возможности получить работу. 11. Кажется, нет причины откладывать решение этого вопроса. 12. Оставалось только посадить (to put) Мэри в экипаж.

B. *Translate the following sentences paying attention to the model: there is + negation + gerund.*

1. There's no telling when I'll be out. 2. There was no denying that Constance had a lovely figure. 3. When he saw that there was no persuading him to stay, he ceased to urge it. 4. There was never any telling when he would turn up. 5. There was no evading his impudence. 6. Finally, he decided there was no knowing whether she believed the story or not. 7. Mildred felt her tears coming now. There was no resisting them. 8. To him there is no escaping the fact that man is an evil animal.

Task 3. *Change the sentences according to the model:*

It was easy to get on with him. – *He was easy to get on with.*

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1. It was difficult to persuade him. 2. It is impossible to understand such things.3. It was unusual to find the collection in the house of a planter. 4. It was good to bask in the sun of the Indian summer. 5. It was almost impossible to obtain these small luxuries now. 6. It is very difficult to get wine these days. 7. It was impossible to approach her on the subject. 8. It was hard to put up with her temper. 9. But it was hard now even to imagine that time. 10. It was hard to bear her malice all the same. 11. It was not easy to enforce the laws. 12. It's amusing to talk to her and it's nice to look at her. 13. It was very hard to please him. 14. It was not so easy to catch him as all that. 15. It was wonderful to behold Mrs. Towler's face.

Task 4. *Translate into Russian. Mind that the main meaning of the verb "to be*" (быть) *is realized only in certain contexts.*

1. Harris Boulton had been to school and university with Tom. 2. They had been on a motoring holiday in Canada. 3. "Where the hell" – she was on her knees poking under the bed. 4. The rest of the afternoon we were east and west worming out of reluctant grocers cans of peanut butter, a wartime scarcity. 5. She was through the doors before I recognized her. 6. The words were hardly out of her mouth before he had sprung upon her and snatched the revolver out of her hand. 7. And Leo too was suddenly there, through the door and into the large hall-like room. 8. He was the first through the customs, and before the other passengers arrived, he could arrange with the guard for a sleeping compartment to himself. 9. If children are clever, they continue to receive free education until they are eighteen, and even while they are at the university. 10. She was almost to the comer when his voice stopped her.

Task 5. *Translate the following sentences paying attention to the italicized verbs.*

1. "The point is, though," she went on hastily, "I've suddenly *decided* to – to run this troupe – I mean concert party. That horrid woman *decided* me." 2. Wasn't that enough *to decide* him that life wasn't

worth living? 3. Robert Jordan could *walk* well enough himself and he knew from following him since before daylight that the old man could *walk* him to death. 4. I offered *to walk* her home. 5. Mammy *hurried* Scarlett up the stairs. 6. And Soames *hurried,* ever constitutionally uneasy beneath his cousin's glance. 7. That was why I *hurried* you about Grayhailock. 8. I have no money *to waste* on such trifles. 9. What a lot of time that *wastes.* 10. The evening papers *sell* well because they print, throughout the day, the latest sports results. 11. My father *sells* vegetables from a wagon. 12. The magazine was attacked on all sides. It *sold* very poorly. 13. They farmed their own land and *worked* it themselves. 14. The control sector which Keith regularly *worked* comprised a segment of the Pittsburgh-Baltimore area. 15. You can't possibly *work* here. 16. He *had worked* the elevator in the house all afternoon.

Task 6. A. *Translate into Russian. Pay attention to the use of the verb "to look*".

1. Don't look at him. 2. I know I'm looking like hell. 3. It looks like rain. 4. Elliott in his well-cut dinner jacket looked elegant as he alone could look. 5. He was a very learned man, but he didn't look it any more than he looked like my idea of a monk. 6. You don't look an old man.

B. *Translate into English. Make use of the verb "to look".*

1. Он смотрел прямо на меня. 2. Вы выглядите чудесно. 3. Это платье не очень тебе идет (не смотрится на тебе). 4. Он неважно выглядит. 5. Похоже на то, что будет дождь. 6. Вам можно дать лет 16. 7. Изабел казалась очень хорошенькой.

C. *Translate into Russian. Pay attention to the use of the verb "to feel* ".

1. How do you feel? 2. I felt her trembling. 3. I'm not feeling well. 4. Feel the cloth. It's very soft. 5. You must feel very cold. 6. It didn't feel right – a dentist's room without some stained glass. 7. It felt just as it did at school when a bully I had been afraid of was turned out. 8. It

feels like someone kisses me there. 9. There are moments when it gives you confidence to feel your fingers round the butt of a revolver. 10. His lips felt dry. 11. Just for a shock of a second it felt like treading on a snake. 12. The water felt good. 13. It was the first time in his life he felt cold and hot at the same time.

D. *Translate into English, using the verb "to feel".*

1. Я почувствовал, что краснею. 2. Ей, должно быть, очень жарко. 3. Он снова пощупал портфель. 4. У вас, должно быть, очень замерзли руки. 5. Как ты себя чувствуешь? 6. Я положил руку ей на голову. Волосы ее были такими мягкими и теплыми. 7. Ощущение было такое, будто мой сон сбывался наяву (to come true). 8. Тем временем он вынимал из чемодана одежду и быстро ее ощупывал. 9. На самом деле в больнице не было холодно, но казалось, что холодно [20: 41–42; 47–49].

ЗАНЯТИЕ 9.
СРАВНИТЕЛЬНАЯ ТИПОЛОГИЯ
И ОСОБЕННОСТИ ПЕРЕВОДА
ТЕХНИЧЕСКИХ ТЕКСТОВ

Task 1. *Read Chapter 8 in the text-book «Сравнительная типология» by В.Д.Аракин [3] and answer the questions.*

1. Какие типы ошибок вы знаете? Приведите примеры.

2. Что понимается под «интерференцией языков»? Как это понятие связано со сравнительной типологией?

3. Каковы типологические ошибки в области фонетики? Лексики? Грамматики?

4. Что дает сравнительная типология в плане предупреждения ошибок типологического характера?

Task 2. *Read the text and correct it. What are the reasons for these mistakes? What mistakes (typological, personal, stylistic ...) have you found?*

Autumn. Seven a.m. in morning. In street dark and cold. Mother of Pete wake him. He not want get up and go in school. He want sleep more. He angry because rain strong. And now Mother in kitchen cook breakfast. Breakfast she *cook most tastiest.*

Task 3. *Read the text and analyse typological difficulties that Russian students can have while translating it.*

Quantum teleportation transfers data from one quantum system (such as an ion) to another (such as a second ion), even if the two are completely isolated from each other, like two books in the basements of separate buildings. In this real-life form of teleportation, only quantum information, not matter, is transported, as opposed to the Star Trek version of "beaming" entire human beings from, say, a spaceship to a planet. Teleportation of quantum data has been demonstrated previously with ions and a variety of other quantum systems. But the new work is the first to teleport a complete quantum logic operation using ions, a

leading candidate for the architecture of future quantum computers. "We verified that our logic operation works on all input states of two quantum bits with 85 to 87% probability--far from perfect, but it is a start," NIST physicist Dietrich Leibfried said. A full-scale quantum computer, if one can be built, could solve certain problems that are currently intractable. NIST has contributed to global research efforts to harness quantum behavior for practical technologies, including efforts to build quantum computers.

ЗАНЯТИЕ 10.
ПОВТОРЕНИЕ.
КОНТРОЛЬНЫЕ ВОПРОСЫ
ПО СОДЕРЖАНИЮ КУРСА

Task 1. *Answer the fillowing questions:*

1. The main typological characteristics of English intonation are ____.

a) the character of the Head

b) the character of the Head and the Final Tone

c) the character of the Pre-Head, Head, Final Tone

d) lip rounding.

2. In English ____ can become the subject of the passive construction.

a) only direct object

b) direct and indirect objects

c) direct, indirect and prepositional objects

d) the same types of objet as in Russian.

3. Linguistic Typology studies ____.

a) types of languages

b) types of cognate languages

c) types within languages

d) historic development of languages.

4. Comparative study of compounds in English and in Russian shows that ____.

a) their types are identical in these languages

b) compounds with a linking element (joining the stems) are typical of both the languages

c) the so-called 'syntactical compounds' are typical of Russian and are not to be found in English

d) the so-called 'syntactical compounds' are typical of English and are not to be found in Russian.

5. A linguistic universal is ____.

a) the main feature of the language

b) a feature found in many or in all languages

c) the main semantic law of the language

d) the main grammatical law of the language.

6. We speak of the so-called 'mixed character of the English vocabulary' in Typology as ____.

a) there are a great many borrowed words in the English vocabulary

b) borrowed words differ from native words phonetically

c) borrowed words differ from native words in their linguistic characteristics

d) there are so many groups of borrowed words in English that once it was a Romanic-Germanic language.

7. ____ is typical of Russian while in English we find ____.

a) Progressive assimilation only … both progressive and regressive assimilation

b) Regressive assimilation only … both progressive and regressive assimilation

c) Assimilation concerning the work of the vocal cords … assimilation affecting the place of the sound articulation.

d) Assimilation concerning the place of the sound articulation … assimilation affecting the work of the vocal cods.

8. The main method of typological research focuses on ____.

a) finding out the degree of structural likeness between kindred languages

b) investigating identical phenomena in English and in Russian

c) finding out the degree of structural divergence of world languages

d) finding out the degree of structural likeness between any two languages.

9.   Conversion is widely spread in English due to _____.

a) its flectional character

b) the short-word layer that it contains

c) its (mainly) analytical character

d) its partly analytical and partly agglutinative character.

10.   How are the grammatical categories of noun related in English and in Russian ?

a) They are different as the category of gender is absent all together in English.

b) They are practically identical as the category of case is not always spoken about in English.

c) They are different as the category of case is absent all together in English.

d) They are practically identical as the category of gender is not always spoken about in English.

11.   Typological mistakes _____.

a) are made by some students who are not good at English

b) are caused by misunderstanding

c) arise due to differences between the systems of the English and Russian languages

d) arise due to different grammatical laws in the English and Russian languages.

12. Common aspect forms of English verbs correspond to _____ of Russian verbs while their continuous forms correspond to … of Russian verbs.

a) perfective aspect forms … both perfective and imperfective aspect forms

b) imperfective aspect forms … only perfective aspect forms

c) perfective and imperfective aspect forms … any aspect forms

d) perfective and imperfective aspect forms … imperfective aspect forms.

13. Close character of consonant-consonant transition explains ____.

a) absence of aspiration and palatalization in Russian

b) absence of palatalization and aspiration in English

c) presence of aspiration and absence of palatalization in English

d) presence of palatalization and absence of aspiration in Russian.

14. The term 'analytical' presupposes ____.

a) the unity of lexical and grammatical meanings in one form

b) the separation of lexical and grammatical meanings – their realization in different forms

c) different lexical and grammatical combinability of language units

d) identical lexical and grammatical combinability of language units.

15. As in the process of substantivation dependable flexions of Russian adjectives and participles become independent flections of nouns conversion in Russian can be referred to as ____.

a) zero derivation

b) intermediate between zero derivation and affixation

c) intermediate between suffixation and prefixation

d) a type of derivation.

16. Inventory and distributional changes are found ____.

a) only with consonants

b) both with consonants and vowels

c) only with vowels

d) both with sonorants and vowels.

17. Distribution of phonemes is important ____.

a) only for typology

b) for typology and those linguistic disciplines typology obtains data from

c) only for didactics

d) for typology and didactics.

18. The formation of relative tenses in English and in Russian is ____.

a) identical

b) different as the verb in English always stands in Past Simple

c) different as in English Sequence of Tenses rules are observed

d) different as English is an analytic language and Russian is a synthetic one.

19. The existence of such forms as "formula – formulae' and 'formula – formulas' shows that English noun ____.

a) is in the process of assimilation yet

b) can serve an example of the analytic character of the language

c) can serve an example of the synthetic character of the language

d) is the only part of speech in the language having variation of form.

20. The law of synonymic attraction involves ____.

a) verbs pertaining to socially important spheres

b) words pertaining to socially important spheres

c) words belonging to one part of speech which are close in meaning

d) analogues from different languages.

ТЕКСТЫ ДЛЯ ПРОВЕДЕНИЯ
СРАВНИТЕЛЬНО-ТИПОЛОГИЧЕСКОГО АНАЛИЗА

Telecommunication

1. Telecommunication is the transmission of signals over a distance for the purpose of communication. In modern times, this process almost always involves the sending of electromagnetic waves by electronic transmitters but in earlier years it may have involved the use of smoke signals, drums, or semaphore. Today, telecommunication is widespread and devices that assist the process, such as the television, radio, and telephone, are common in many parts of the world. There is also a vast array of networks that connect these devices, including computer networks, public telephone networks, radio networks, and television networks. Computer communication across the Internet, such as e-mail and instant messaging, is just one of many examples of telecommunication.

2. Telecommunication systems are generally designed by telecommunication engineers. Major contributors to the field of telecommunications include Alexander Bell who invented the telephone, John Logie Baird who invented the mechanical television and Guglielmo Marconi who first demonstrated transatlantic radio communication. In recent times, optical fibre has radically improved the bandwidth available for intercontinental communication, helping to facilitate a faster and richer Internet experience. And, digital television has eliminated effects such as snowy pictures and ghosting.

3. The basic elements of a telecommunication system are:
- a transmitter that takes information and converts it to a signal for transmission
- a transmission medium over which the signal is transmitted
- a receiver that receives and converts the signal back into usable information

For example, consider a radio broadcast. In this case the broadcast tower is the transmitter, the radio is the receiver and the transmission medium is free space. Often telecommunication systems are two-way and devices act as both a transmitter and receiver or transceiver. For example, a mobile phone is a transceiver. Telecommunication over a phone line is called point-to-point communication because it is between one transmitter and one receiver, telecommunication through radio broadcasts is called broadcast communication because it is between one powerful transmitter and numerous receivers.

4. Signals can either be analogue or digital. In an analogue signal, the signal is varied continuously with respect to the information. In a digital signal, the information is encoded as a set of discrete values (e.g. l's and 0's) Telecommunications devices convert different types of information, such as sound and video, into electrical or optical signals. Electrical signals typically travel along a medium such as copper wire or are carried over the air as radio waves. Optical signals typically travel along a medium such as strands of glass fibers. When a signal reaches its destination, the device on the receiving end converts the signal back into an understandable message, such as sound over a telephone, moving images on a television, or words and pictures on a computer screen.

5. A collection of transmitters, receivers or transceivers that communicate with each other is known as a network. Digital networks may consist of one or more routers that route data to the correct user. An analogue network may consist of one or more switches that establish a connection between two or more users. For both types of networks a repeater may be necessary to amplify or recreate the signal when it is being transmitted over long distances. This is to combat attenuation that can render the signal indistinguishable from noise.

6. The shaping of a signal to convey information is known as modulation. Modulation is a key concept in telecommunications and is

frequently used to impose the information of one signal on another. Modulation is used to represent a digital message as an analogue waveform. This is known as keying and several keying techniques exist – these include phase-shift keying, amplitude-shift keying and minimum-shift keying. Bluetooth, for example, uses phase-shift keying for exchanges between devices.

Modulation is also used to boost the frequency of analogue signals. This is because a raw signal is often not suitable for transmission over long distances of free space due to its low frequencies. Hence its information must be superimposed on a higher frequency signal (known as a carrier wave) before transmission. There are several different modulation schemes available to achieve this – some of the most basic being amplitude modulation and frequency modulation. An example of this process is a DJ's voice being superimposed on a 96 MHz carrier wave using frequency modulation (the voice would then be received on a radio as the channel "96 FM").

Communication

The word "communication" is used very often in a very broad sense to include the procedures by means of which one mind or mechanism may affect another. This involves not only written and oral speech, but also music, the pictorial arts, the theatre and in fact all human behaviour.

Relative to the broad subject of communication, there seems to be three problems. Thus it seems reasonable to ask: How accurately can the symbol of communication be transmitted? (The technical problem.) How precisely do the transmitted symbols convey the desired meaning? (The semantic problem.) How effectively does the received meaning affect conduct in the desired way? (The effectiveness problem.)

The technical problems are concerned with the accuracy of transference from the sender to the receiver of sets of symbols (written speech), or of continuously varying signals (telephonic or radio trans-

mission of voice or music), or of continuously varying two dimensional patterns (television), etc.

The selected message may consist of written or spoken words, or of pictures, music, etc. The transmitter changes this message into the signal which is sent over the communication channel from the transmitter to the receiver.

In the case of telephony, the channel is a wire, the signal is a varying electrical current on this wire; the transmitter is the set of devices which change the sound pressure of the voice into varying electrical current.

In telegraphy, the transmitter codes written words into sequences of interrupted current of varying lengths (dots, dashes, spaces). In oral speech, the information is the brain, the transmitter is the voice mechanism producing the varying sound pressure (the signal) which is transmitted through the air (the channel).

In the case of radio, the channel is simply space and the signal is the electromagnetic wave which is transmitted.

The receiver is a sort of the inverse transmitter, changing the transmitter signal back into a message, and handing this message on to the destination. In the process of the transmission it is unfortunately characteristic that certain things are added to the signal which were not intended by the information source. These unwanted additions may be distortions of sound (in telephony, for example) or static (in radio), or distortions in shape or shading of picture (television), or errors in transmission (telegraphy or facsimile). All of these changes in the transmitted signal are called noise.

The word "information" in the mathematical theory of communication is used in a special sense that must not be confused with its ordinary usage. In particular, information must not be confused with meaning.

The word "information" in communication theory relates not so much to what you do say, as to what you could say. That is, information

is a measure of one's freedom of choice when one selects a message. If one is confronted with a very elementary situation where he has to choose one of two alternative messages, then the information associated with this situation is unity. Note that it is misleading to say that one or the other message conveys unit information. The concept of information applies not to the individual message (as the concept of meaning would), but rather to the situation as a whole, the unit information indicates that in this situation one has as amount of freedom of choice, in selecting a message, which it is convenient to regard as a standard unit amount.

Nanotechnology

The 21st century has ushered in an era of nanotechnology the new mysterious and fascinating world with amazing prospects, promising to change our life drastically.

Try to predict nanotechnology impact on our future and discuss with your partner benefits it is most likely to offer to mankind. Do you think nanotechnology will have a positive or negative effect on life? Supply your point of view with arguments for or against nanotechnology development.

Read the article to check your predictions and ideas. Highlight the nanotechnology benefits and most promising applications. Entitle the article and summarize the essential information.

Nanotechnology promises to produce big benefits from thinking small.

Nanotechnology involves the manipulation of particles smaller than the wavelength of light, yet this challenging field offers major benefits for a diverse range of applications. Jon Severn reports on the state of the art and what might be forthcoming in the future.

Nanotechnology is unfortunately one of those words that has been adopted by non-technical people to describe objects and phenomena that are particularly small. Nevertheless, the strict definition of nano-

technology refers to measurements in the nanometer range - in other words, billionths of meters. To give some idea of the scale, one nanometer is about 1/100000 of the diameter of a human hair, 1/500 of the wavelength of visible light, ten times the diameter of a hydrogen atom or approximately the same size as a water molecule.

Although nanotechnology and the ability to manipulate individual molecules was predicted decades ago, it is only more recently that the technologies to achieve this have become available - as have the electron microscopes and scanning tunneling microscopes required to visualise the processes. At the nano scale, traditional assumptions about material properties have to be left to one side as some astonishing results can be obtained. At this scale, quantum physics starts to take effect so that, for example, magnetic properties can be manipulated at will.

Many of the initial applications for nanotechnology have been concerned with modifying surface properties. For instance, a surface that is 'optically flat' is seen to have a myriad of surface imperfections when viewed at the atomic scale. Using nanoscale particles, these imperfections can be filled so as to modify the frictional properties. Such a change can result in easy-clean surfaces for kitchens and bathrooms, or a nti-graffiti coatings for buildings or vehicle bodies. Modified surface coatings have already been put to good use to provide a competitive advantage in world-class sport; in the 2002 winter Olympics, a nanotechnology ski wax was used.

Elsewhere, BASF has recently announced Lotus Spray, so named because of the way in which it mimics the low-friction surface of the leaves on the lotus plant. Each leaf has a coating of wax particles approximately 1 nanometer across and with a structure that makes the leaf highly water-repellent and self-cleaning. If a water droplet falls on the leaf, the surface tension forms a small droplet that will roll off the leaf, keeping it dry. Furthermore, because the water droplets roll, rather than

slide, they tend to collect any dirt particles on the leaf, thereby providing a cleaning action. BASF's Lotus Spray combines nanoparticles with water-repelling polymers such as polypropylene, polyethylene and waxes - as well as a propellant gas. As the spray dries on the surface, a nanostructure forms through a process of self-assembly. It is expected that the spray will be used on relatively rough surfaces such as paper, leather, textiles, masonry and wood. Other applications that use surface modification include thermal protection for glass and scratch-resistant coatings for plastics that could allow, for example, polycarbonate to be used for lightweight automotive glazing and body panels. In the aerospace sector, nano-coatings could be used to provide anti-fogging and anti-icing surfaces that eliminate the need for expensive integrated heaters and deicer systems that can have an adverse effect on wing aerodynamics. For both the aerospace and automotive sectors, ultra-thin electrochromium coatings could be used to create sun shields that can be switched on and off electrically.

Surface-modifying nanotechnologies also have the potential to revolutionise the comparatively mundane world of pneumatics. Currently the dominant material for virtually all pneumatic actuators and valves is aluminium alloy with nitrile rubber or other elastomers for seals. If the components were to be treated with a low-friction coating, a significant performance improvement could be achieved. Alternatively, if abrasion-resistant, low-friction coatings were employed, aluminium could be replaced by plastics, thereby giving a major weight saving and a step change in performance.

Beneath the surface

Nanotechnology is not restricted to the surface of components, there are also applications within the structure of many products. Babolat's VS NCT tennis rackets use carbon nanotubes to stiffen the stabilisers and give a 50 per cent increase in torsional stiffness as well as reduced flex and twist in the handle.

Nanotubes, nanopowders and surface coatings are certainly areas with significant growth potential for nanotechnology, but there is also scope for developing mechanisms and assemblies on a nano scale. In an exercise carried out more for personal satisfaction than for scientific advancement, researchers at Cornell University, USA, produced a guitar no bigger than a blood cell. The guitar, 10 micrometers long, has six strummable strings, each of which is around 50nanometres wide. Meanwhile, several organisations – including NASA in the USA and various universities around the world – have been carrying out formal research into gears that are built on an atomic scale, and there is a vast amount of work continuing in the field of MEMS (microeiectromechanical systems). It is believed by many that MEMS will be widely applied in the field of consumer electronics, such as for accelerometers and gyros for use in tilting and scrolling controls for PDAs (personal digital assistants), handheld games and joysticks.

Another area where MEMS are already being used is in the construction of video projectors. For example, the Mitsubishi VS-50FD10U utilizes the DMD (digital mirror device) system from DLP, resulting in high resolution, excellent clarity, low maintenance requirements and a long service life with high reliability. The digital mirror device uses minute 14-micron metal squares arranged on a silicon base. Electronically switching the mirrors has the effect of directing them so that light from the source is reflected through the projection lens to the screen, in the unswitched state the mirrors reflect light and direct it at a light absorber, so a blank pixel appears on the screen. Switching takes only 10 microseconds and the high-speed response is fast enough for use with moving images and, consequently, true multimedia displays.

MEMS are also used at the heart of automotive tyre pressure monitors that are now coming on the market, and other automotive applications include trigger mechanisms for airbags, and vehicle rollover detection sensors.

A big future

Clearly there is already a multitude of applications for nanotechnology, but what does the future hold? Many commentators believe that the medical world stands to benefit enormously from nano-scale robots that could be introduced into the bloodstream. For instance, robotic red blood cells could be used to store oxygen and carbon dioxide, then pump it out at the appropriate destination. Another possible application could be miniature devices that seek out cancer cells or tumours, get inside and then destroy the problematic cells from within. It could also be possible to develop devices that clean and repair the circulatory system itself.

This may all sound like science fiction, and the author Michael Crichton has recently completed a novel that draws heavily on nanotechnology. Prey describes how a laboratory is developing molecular-sized robots that are designed to flock together inside small blood vessels and act as a camera to detect clogged vessels. However, the storyline reveals that there is something far more sinister being planned.

Returning to reality, the range of potential applications for nanotechnologies is almost unlimited. Already teams are investigating the feasibility of power sources that use nanocubes to store and release hydrogen for fuel cells. The superior specific surface area and high porosity of these nanocubes allow relatively large amounts of hydrogen to be stored. Such miniature fuel cells could soon replace conventional batteries in equipment such as mobile telephones and laptop computers. Staying with computing, it is widely thought that data storage densities could be improved by a factor of 1000.

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