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ОСНОВИ НАУКОВО-ТЕХНІЧНОГО ПЕРЕКЛАДУ

КОНСПЕКТ ЛЕКЦІЙ

для студентів спеціальності 035 Філологія

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Автор: Висоцька Т. М., канд. філол. наук , доц.

Конспект призначений для студентів спеціальності 035 Філологія, які здобувають кваліфікаційний рівень бакалавра.

Конспект стане у пригоді для самостійної роботи студентів під час підготовки до лекційних занять з дисципліни «Основи науково-технічного перекладу».

Конспект містить теоретичний матеріал з основних питань, що розглядаються на лекційних заняттях курсу.

Конспект укладено за матеріалами відкритих джерел.

ЗМІСТ

ВСТУП

Навчальна дисципліна «Основи науково-технічного перекладу» є важливою складовою у структурі професійної підготовки майбутніх перекладачів, покликана ознайомити студентів з основами теорії перекладу та специфікою науково-технічного перекладу зокрема. Курс спрямований на надання умінь і знань, необхідних для опанування професійних завдань (компетенцій) бакалавра.

Мета дисципліни «Основи науково-технічного перекладу» - надання умінь і знань, необхідних для опанування професійних завдань (компетенцій) бакалавра, пов'язаних з усвідомлення студентом основ теорії перекладу та специфікою науково-технічного перекладу зокрема.

Завдання курсу:

- ознайомити здобувачів з нормами, стандартами та жанрово-стилістичними особливостями науково-технічних текстів у вихідній мові та мові перекладу;
- надати знання про перекладацькі норми, варіанти перекладацьких стратегій та технічні прийоми перекладу;
- ознайомити здобувачів з основними поняттями, теоріями та концепціями в сфері науково-технічного перекладу.

Результати навчання:

- Використовувати англійську мову в усній та письмовій формі, в офіційному регістрі спілкування, для розв'язання комунікативнихзавдань у навчальній, професійній та науковій сферах життя.
- Знати й розуміти основні поняття, теорії та концепції в сфері науково-технічного перекладу, уміти застосовувати їх у професійній діяльності.
- Збирати, аналізувати, систематизувати й інтерпретувати факти мови й використовувати їх для розв'язання задач і проблем у сферах навчання та/або (навчальної) перекладацької діяльності.

Lecture 1. Problems and theoretical issues of translation.

1. **What is translation?**
2. **Types of translation**
3. **Translation Theory as a Theory of Transformations**
4. **Problem of Non-translation**
5. **Extralinguistic Factor**
6. **The Subject Matter**
7. **Machine Translation**

1. What is translation?

Translation problems can be divided into linguistic problems and cultural problems: the linguistic problems include grammatical differences, lexical ambiguity |ambɪˈgjuːɪti| and meaning ambiguity; the cultural problems refer to different situational features. Culture constitutes another major problem that faces translators. An inadequate |ɪnˈadɪkwət| model of translated pieces of literature may give misconception about the original.

Translation is the interpretation of the meaning of a text in one language and the production, in another language, of an equivalent text that conveys the same message. Translator must take into account a number of constraints, including context, the rules of grammar of the two languages, their writing conventions, their idioms and others factors. Consequently, as has been recognized at least since the time of the translator Martin Luther, one translates best into the language that one knows best. Traditionally translation has been human activity, though attempts have been made to computerize or otherwise automate the translation (machine translation) or to use computers as an aid to translation (computer-assisted translation). Perhaps the most common misconception about translation is that there exists a simple 'word-for-word' relation between any two languages, and that translation is therefore a straightforward and mechanical process. On the contrary, historical differences between languages often dictate differences of expression. Hence, source and target texts may differ significantly in length. Technical texts contain a high amount of terminology, that is, words or expressions that are used (almost) within a specific field, or that describe that field in a great deal of detail. The scientific and technical translation includes the translation of scientific research papers, abstracts, conference proceedings, and other publications from one language into another. The specialized technical vocabulary used by researchers in each discipline demands that the translator of scientific texts should have technical as well as linguistic knowledge.

2. Types of translation

Though the basic characteristics of translation can be observed in all translation events, different types of translation can be singled out depending on the predominant communicative function of the source text or the form of speech involved in the translation process. Thus we can distinguish between literary and informative translation, on the one hand, and between written and oral translation, on the other hand.

Literary translation deals with literary texts, i.e. works of fiction or poetry whose main function is to make an emotional or esthetic |esˈθetɪk| impression upon the reader. Their communicative value depends, first and foremost, on their artistic quality and the translator's primary task is to reproduce this quality in translation.

Informative translation is rendering into the target language non-literary texts, the main purpose of which is to convey a certain amount of ideas, to inform the reader. However, literary text may, in fact, include some parts of purely informative character. Contrariwise, informative translation may comprise some elements aimed at achieving an esthetic effect |ɪˈfɛkt|.

A number of subdivisions can be also suggested for informative translations, though the principles of classification here are somewhat different. Here we may single out translations of scientific and technical texts, of newspaper materials, of official papers and some other types of texts such as public speeches, political and propaganda materials, advertisements, etc., which are, so to speak, intermediate, in that there is a certain balance between the expressive and referential functions, between reasoning and emotional appeal.

Translation of scientific and technical materials has the most important role to play in our age of the revolutionary technical progress. There is hardly a translator or an interpreter today who has not dealt with technical matters. Even a 'purely' literary translator often comes across highly technical stuff in works of fiction or even in poetry. An in-depth theoretical study of the specific features of technical translation is an urgent task of translation linguistics while training of technical translators is a major practical problem.

In technical translation the main goal is to identify the situation described in the original. The predominance of the referential function is a great challenge to the translator who must have a good command of the technical terms and a sufficient understanding of the subject matter to be able to give an adequate |ˈadɪkwət| description of the situation even if this is not fully achieved in the original. The technical translator is also expected to observe the stylistic requirements of scientific and technical materials to make text acceptable to the specialist. When the translator finds in a newspaper text the headline ' Minister bares his teeth on fluoridation' which just means that this minister has taken a resolute stand on the matter, he will think twice before referring to the minister's teeth in the Ukrainian translation. He would rather use a less expressive way of putting it avoid infringement upon the accepted norms of the Ukrainian newspaper style.

Apart from technical and newspaper materials it may be expedient |ɪkˈspiːdɪənt| to single out translation of official diplomatic papers as a separate type of informative translation. These texts make a category of their own because of the specific requirements to the quality of their translations. Such translations are often accepted as authentic |ɔːˈθɛntɪk| official texts on a par with the originals. They are important documents every word of which must be carefully chosen as a matter of principle. That makes the translator very particular about every little meaningful element of the original which he scrupulously |ˈskruːpjʊləsli| reproducesin his translation. This scrupulous imitation of the original results sometimes in the translator more readily erring |ˈɜːrɪŋ| in literality than risking to leave out even an insignificant element of the original content.

The line of demarcation between written and oral translation is drawn not only because of their forms but also because of the sets of conditions in which the process takes place. The first is continuous, the second is momentary |ˈməʊm(ə)nt(ə)ri|.In written translation the original text can be read and re-read as many times as the translator may need or like. The same goes for the target text. The translator can re-read his translation, compare it to the original, make the necessary corrections or start his work all over again. He can return to the preceding part of the original text or get the information he needs from the subsequent |ˈsʌbsɪkw(ə)nt| messages. These are most favorable conditions and here we can expect the best performance and the highest level of equivalence. That is why in theoretical discussion we have usually examples from written translations where the translating process can be observed in all its aspects.

The conditions of oral translation impose a number of important restrictions on the interpreter's performance. Here he receives a fragment of the information only once and for a short period of time. His translation is also a one-time act with no possibility of any return to the original or any subsequent corrections. This type of translation involves a number of psycholinguistic problems, both of theoretical and practical nature.

3. Translation Theory as a Theory of Transformations

The process of translation is an inter-language transformation; it is the transformation of a text written in one language into the text written in another.

Linguistic theory of translation aims at constructing a definite translation process model, some scientific scheme, which more or less exactly reflects the existing issues of the given process.

Translation theory (TT) is not called upon considering every single correlation between the texts of SL and TL, but only the routine, typical correlations, repeated on a regular basis. But apart from these phenomena in comparative analysis of both texts, usually a great many correlations or relations emerge — single and irregular, peculiar for a specific case.

These "irregular" correlations represent the most embarrassing complications in the translation practice. In the ability to find individual variants, single and "not foreseen" by the theory, there is a creative character of interpretation activity. On the other hand, in the development of the TT many phenomena of the kind, that at first are considered as individual and irregular, gradually "blend" into a general picture, obtain explanation and are included into the objective consideration of the TT. In other words, the same way as in any other science, the translation process consists, specifically, of the fact, that behind the multitudes of the imaginary, fictitious exceptions and irregularities some regularity, pattern, rule, some general conformity to natural laws, which controls them and determines their character are gradually revealed. Therefore, the translation process may be regarded as an art and just mechanical arts, mere occupation and handicraft.

In TT we have to define the basic thing: on what grounds do we think that a target text is an equivalent to the original text? For example, what gives us a grounds to say, that the sentence „Мій брат живе в Полтаві." is a translation of the English sentence "My brother lives in Poltava", but at the same time, the sentence "I study at the University" is not a translation of the English sentence mentioned above, — in other words, it is not equivalent to it? Still, by analogy, we dare say that the sentence „Між молотом та ковадлом "is the same as "Between the rock and hard place" or „Великому кораблю велике плавання "is the same as "A big dog is a big dog".

Probably, not every replacement of the text in one language by the text in another one will be a translation. The same idea can be expressed in another way: a translation process or inter language transformation takes place not at will, it is not arbitrary, but according to certain rules, within strictly definite frames, and if we exceed them, we have no right to say about translation. Apart from the word “adequate |ˈadɪkwət| ” other synonyms as “correct, exact, right, equivalent”, etc., are used in scientific literature.

Translation is the process of transformation of any spoken or written text in one language into the text in another preserving invariable, unchanged meaning of the text. Still, we may talk about the invariable or unchanged meaning or content, its safety and maintenance only in a relative, not absolute sense. During language transformation (as well as during any other transformation) inevitable losses take place, i.e. the full translation of meanings, expressed in original text is impossible. Hence, sometimes a translated text can not be totally and absolutely |ˈabsəluːtli| equivalent to the original one. The task of a translator is to try and do the best to make this equivalence more precise and allow minimum losses.

We should keep in mind that in the translation the most essential thing is the equivalence of the meanings, and not of isolated words or even isolated sentences, the equivalence of the entire text translated.

To support the idea let us take two examples. In the story of the well-known English writer Somerset M. “A Casual Affair” there is such a sentence:

> *He’**d** always **been** so spruce and smart; he **was** shabby and unwashed and wild-eyed.*

In Ukrainian translation this passage sounds like that:

Раніше *він був таким чепуруном, таким ошатним. А* ***тепер*** *блукав по вулицях Сінгапура брудний, жалюгідний, з диким поглядом. (пер. М. Литвинової)*

At the first sight the Ukrainian text seems not quite equivalent to the English one: here we encounter such words as *„раніш, тепер, блукав по вулицях Сінгапуру“*, which have no direct equivalents in the original text.

But in fact the **semantic equivalence** is precisely preserved and well-kept here, though the vocabulary equivalence, the word equivalence is absent.

The issue is that the Ukrainian words *„раніш“* and *„а тепер“* convey here the meanings, which in the English text are expressed not by mere words, but through grammatical forms: opposition of verb forms *to be — had been* and *was* expressing antecedence |ˌæntɪˈsiːdns| (*предшествование*) of the first event or action to the second one, which in Ukrainian are expressed by lexical means, with the help of the adverbs of time. So, some grammatical forms in one language are expressed through lexical means in another.

In the story of the American writer Harper Lee "To Kill a Mockingbird" there is such a sentence:

"Mr. Raymond sat ***up*** *against the* ***tree-trunk****".*

In Ukrainian it sounds as follows:

„Містер Реймонд ***сів*** *і притулився до* ***дуба****“.*

In the translation there is a word *„притулився“***,** which is absent in the original text, the English adverb *"up"* in the phrasal verb *sat up* indicates the fact, that the subject of the verb, assumed a sitting position after lying (compare: *sat down*) when in the Ukrainian sentence this information is absent. The English word *"tree-trunk"* does not mean *“an oak“* but *„стовбур дерева“*. From the previous sentence it is clear, that he had been in a lying position under the oak.

Semantic equivalence may not exist between separate elements of these texts, but between the texts as a whole. Besides, in the text itself multiple regroupings, transpositions and redistribution of separate meaningful elements not only admissible, but are frequently inevitable |ɪnˈɛvɪtəb(ə)l|.

4. Problem of Non-translation

The possibility to impart meanings by means of another language for long was questioned and impeached by some theorists in the 60s. There had been a prejudice, that there were languages which are “highly developed and civilized” and languages “undeveloped, primitive, backward”, which due to their primitiveness are incapable of expressing all the meanings. This theory is absolutely wrong. Even the exotic languages of the aborigines |ˌæbəˈrɪdʒəniz| of Africa and Australia are typically characterized by sufficiently developed grammatical system and the rich vocabulary. Under this theory the English language is also primitive, as some grammatical categories are absent here.

Vocabulary fixes the data of human experience, reality, which is reflected in consciousness. Indisputably, in the languages of nations, which are found on different stages of social and cultural development, such layers or vocabulary notions, as political, technical, scientific terms or abstract philosophical notions are absent or extraordinarily poor represented, because the corresponding objects and notions are absent at all in their practical experience. Every vocabulary is an open system, which is capable to continuously replenish and enrich itself. Grammar is a comparatively closed system.

Long ago in the Ukrainian the words *telephone, TV, cosmonaut, computer,* etc., were absent, however nobody will dare assure, that the language of T. G. Shevchenko, was less developed and civilized, than the contemporary Ukrainian. However bad we treat Karl Marx now, but his expression “Reality determines consciousness” is still valid and holds good. Existence, our vital encirclement, influences our consciousness, and, consequently, our vocabulary. Reality, in the first turn, influences our everyday vocabulary — the most developed and homogeneous, similar layer of vocabulary in all nations. Nations of the North have more than forty words to designate states and shadows of snow, for it is their permanent environment, and nations of the South do not use this notion at all, as it is absent in their everyday vocabulary.

Two language systems resemble each other and differ from each other phonographically, in vocabulary and in grammatical constructions. The translation theory is based on the theory of language units, but not all the translational phenomena can be explained by it. The comparative grammar of any two languages will not help us to translate because it limits itself by studying similarities and distinctions of temporal verbal forms, remaining within the framework of morphological level in Ukrainian and English. But the most important thing is that in one of the languages compared, the meaning can be expressed not morphologically and even not grammatically, but through lexical-semantic means. The translation theory is quite a different thing. Here it is impossible to limit oneself within establishing correlation only in the system of morphological forms. It is necessary to exceed, overstep them and to understand, that certain meanings, expressed in one of the languages by grammatical means, in another can be expressed through lexical ones, as in the example mentioned above, where meanings in the source text are expressed by temporal verb forms, and in the target text — by lexical means — by the words *„раніш“ and „тепер“*.

In other words, the theory of translation, in general, is indifferent to the status of language units, which are compared, it is indifferent to whether they belong to grammatical, lexical or other means; their semantic identity is of the utmost importance for it.

5. Extralinguistic Factor

Sometimes we have to resort to so called extra-linguistic factor (auxiliary information or background knowledge) to make a correct translation. In other words, in order to translate, we should know not only SL and TL and the translation rules, but also the subject, situation, circumstances, in which the given text functions:

> *...that Rob had anything to do with his feeling as lonely as **Robinson Crusoe** (Dombey & Son).*
>
> *"Rome wasn't built in and day, ma'am... In and similar manner, ma'am" said Bounderby, "And can wait, you know. If **Romulus** and **Remus** could wait, Josiah Bounderby can wait" (Hard Times).*

*"And do not wonder that you... are incredulous of the existence of such and man. But he who sold his birthright for and mess of pottage existed, and **Judas Iscariot** existed and **Castlereagh** existed, and this man exists" (Hard Times). (*Каслрі Міністр іноземних справ Великобританії 1812-1822*)*

Neither of these sentences can be fully understood, if "a recipient", reader, has no specific information about subjects, persons and phenomena mentioned here. To comprehend the first sentence, one should know why the name Robinson Crusoe is identified with the idea of solitude in D. Defoe's well-known book. To understand the second example one should know, who were Romulus and Remus, one should know the history and ancient mythology of Rome. In the third sentence we should know the biblical myths about Isahav, who sold his birth right for the mess of pottage, as well as about Judas Iscariot, who betrayed Jesus Christ for thirty silver coins; to understand this sentence, one should also know, who Castlereagh was and what mean things and actions his name is associated with, as it is associated with the ideas of venality and betrayal, so we need to know curtain facts of the English history.

"Open the door", replied a man outside; "it's the officer from ***Bow Street****, as was sent to, today!"*

A translator should take into account the fact that a reader is unaware of specific realities of another country he lacks knowledge to understand this passage. He does not know, that in Bow Street there is a central police board of London. The volume of knowledge of native speakers and readers of the translated material is different and it is a normal situation. The passage sounds strange and is not understandable. The task of a translator to remove this misunderstanding in some way:

„Відчиніть двері! — відповів чоловік за дверима. — Це ***представник головного поліцейського управління Лондона****, за котрим ви сьогодні посилали!"*

My nose's running. Have you got ***Kleenex*** *or something?*

Without any difficulty an American will understand that *Kleenex* is a well-known firm, producing napkins, tissue paper, disposable diapers, absorbent paper, table paper cloths, articles of hygiene, etc. The best variant of the translation is as follows:

У мене страшний нежить, не знайдеться в тебе чогось на зразок ***носовичка****?*

And here it is an opposite translation:

Він пішов в армію ***22 червня 1941 року****.*

The best translated option is as follows:

On the day when Germany attacked Russia *he joined the army.*

The date unforgettable for every citizen here, on the territory of the former Soviet Union, might mean nothing for the English speaking reader and needs deciphering in translation, because here it is important to emphasize, that the person left for the war on the very first day it started.

> *The British people are still profoundly divided on the issue of **joining Europe**.*

For the Ukrainian reader it is unclear in what meaning the word *Europe* is used here. Citizens of the UK are aware of the political atmosphere in the country in 1973, the meaning of expression *joining Europe* is clear without any explanations:

> *Серед англійців ще досі існує глибоке непорозуміння щодо **вступу Англії в європейський спільний ринок**.*

In the translation we should resort to some kind of explanation of the word combination *"to join Europe"* by means of the so called broadening of the meaning adding the words which will make this expression clearer.

6. The Subject Matter

Translator-practitioner must not only know languages, but the things discussed, i.e. the subject matter. Translator of fiction should know author's outlook, his aesthetic view and tastes, literary trends, creative methods, epochs, circumstances, social life, material, spiritual culture, etc.

When translating social and political materials, it is necessary to know politics, political atmosphere and other factors, characteristic to the country, where the material to be translated is created, the epoch, it was written.

Translator of scientific and technical texts should have certain knowledge about this subject: biology, physics, astronomy and engineering.

Once again we would love to underline, that sometimes neither vocabulary, nor grammatical constructions will help us to understand the text, but our background knowledge alone. Only one example: in a scientific text the translator came across the following expression:

> *... investigation of microdocument storage system using fractional wavelength optical reading methods.*

This expression is a bright example of the so-called syntactical or structural ambiguity. The adverbial participle *using* can either be attributed here to the word *investigation*, or the word *system*. Only in case we know well the subject we'll translate correctly, because none of the formal grammatical indicators are helpful here. The expert can figure out, which of two possible interpretations is admissible. The translation given below removes the necessity to choose between two options, but the uncertainty remains and may emerge again in some other texts:

> *Дослідження системи зберігання мікродокументів з використанням оптичних методів зчитування фракційної довжини хвилі.*

The following model is also ambiguous:

> *...the man in armchair reading a newspaper...*

We know, that *reading* refers to *the man*, and not to *armchair* and not due to some grammatical indicators, but because we know that only a human being can read.

7. Machine Translation

Automatic (machine, computer) translation is complicated through the ignorance of extra-linguistic factors by computer programs. This is a very serious impediment on the way to a high quality translation. Computer translates *Clinton's rule* as *„правило Клінтона"* in analogy with *„правило де Соссюра"*, and not *правління,* though *"rule"* means both *правило* and *правління*. Computer does not know, that Clinton is a statesman of the U.S., its president. If it had known, then the translation could have been correct.

Similarly: *“hands of child”* and *“hands of clock”* in both cases will be translated as *„руки“*, when in the second case it should be translated as *„стрілки“*. Homonymy is currently being unsettled issue for the automatic translators.

Meanings, which are lexical in one language (expressed in it through the vocabulary units), in another language can be grammatical (expressed “by non-vocabulary means”) and vice versa. (Even within the framework of one and the same language identical meanings in some cases can be expressed both by grammatical and lexical means):

Having entered the room she found out a stranger.

and:

After entering the room she found out a stranger.

Absence of these or those grammatical (as well as lexical) means in one of languages does not create any insuperable hindrances in the process of translation.

The role of the interpreter is very significant, and much is required of him in every way. He should be a highly educated person, have extensive and versatile knowledge. The interpreter of scientific and technical literature, naturally, should know well a given specialty; the interpreter, engaged in translation of newspaper and publicistic materials, should keep abreast of modern international events, to know political system, economy, geography of different countries, etc. Every interpreter should study literature, history, culture of other nations and especially the country, which language he translates from. He should know life, customs of this nation, i.e. he should be familiar with the so-called realities. Realities are understood as features of life, domestic economy, state system of every country, its customs, traditions, believes even prejudices — everything which creates its original, national image. This ignorance results in translation mistakes, discolours it, deprives it of national colouring. It might also result in gross blunders creating false and sometimes repulsive impression of the country and its people.

It's clear that Leo Winner — the American translator of the novel by L. Tolstoy "War and Peace", absolutely unfamiliar with Russian customs and traditions of the epoch, described by L. Tolstoy, makes a gross blunder when translating the following passage from the novel:

> *Графиня, повертаючись у вітальню, подивилась на нігті та й* ***поплювала*** *з веселим обличчям. (Після того, як лікар сказав, що Наташа почувається краще і починає одужувати.)*
>
> *The countess looked at her nails and* ***spat out****, and returned to the drawing-room with a happy face. (knock on wood)*

L. Tolstoy implies a very peculiar "sign" (as if saving from putting the evil eye — *„наврочити"*), the interpreter transfers the word *„поплювала"* as *spat out* — *„сплюнула"*. This mistake creates a wrong picture of culture, life and customs of Russian aristocracy of that epoch.

An interpreter should have general philological knowledge, as many problems of translation can be resolved only on a wide philological basis. Such training can protect the interpreter from mistakes. Interpreter should deeply know both languages. This statement is not a banality. In translation practice, unfortunately, the word-for-word or literal translation frequently occurs, and it still remains very undesirable phenomenon. In the deep knowledge of language the knowledge of its every aspect is implied: phonetics, grammar, lexicology, stylistics. Without them practically none of grammatical, lexical or stylistic problems can be resolved.

Lecture 2. Technical text.

1. **Technical texts: general characteristics.**
2. **The term as the main element of the technical text.**
3. **Types of terms: methods of term-formation.**
   - **3.1. Creating new forms**
     - **3.1.1. Derivation.**
     - **3.1.2. Compounding.**
     - **3.1.3. Blending.**
     - **3.1.4. Abbreviation: short forms, abbreviations, clipped forms, initialisms, acronyms.**
   - **3.2. Using existing forms.**
   - **3.2.1. Conversion.**
   - **3.2.2. Terminologization.**
   - **3.2.3. Transdisciplinary borrowing.**
   - **3.2.4. Semantic transfer within a special language.**
   - **3.3. Interlingua borrowing.**
4. **Translation of terms.**
5. **Stylistic and grammatical special properties of Ukrainian and English technical texts.**

1. Technical texts: general characteristics.

Technical texts are texts intended to educate/inform the reader in a particular technical field or skill through in-depth study and practice. Due to their attention to detail, **technical texts** are usually very well-organized, frequently featuring numerous subdivisions to aid in flow and retention of information. Technical translation involves translation of texts dealing with electronics, medicine, law, economics, or sport. In a narrower sense, technical translation deals with texts from the world of engineering, including chemistry, computer science, automotive engineering, geology, biology, etc.

The number of technical fields is infinitely large, and terminology is expanding and changing daily. Moreover, even within the same field, competing companies often use different terms for the same object to differentiate their products from those of their competitors.

Ideally, a technical text should therefore be translated by specialist in the specific area in question, who is familiar with the terminology of the company for which the translation is being done. For example, it is highly desirable that a text dealing with IBM computer parts be translated by an IBM computer specialist, because the same part is called a different name by Apple, Dell, or NEC. Obviously, this is not always possible in practice. The translator should be familiar with the technical concepts involved in the text, so that the translation conveys the right idea to the engineer or technician reading it. The client can greatly contribute to the quality of the translation by providing the translator with any related documents written in the target language, as well as with the drawings and source-language documents dealing with the same topic. Then, especially if the translation is for publication, the terminology must be refined via a dialogue between the translator and the client. Dictionaries do not always provide the right answers to technical terminology problems. A technical translator will know the proper term to use.

Translation/conversion of units of measurement is a special challenge to the translator. It is not only finding the correct conversion factor from pound per square inch to kilopascal, but also choosing the right fractional units to avoid expressing the weight of a microchip in tons or its dimensions in miles. Competent technical translators know that converting the temperature from Fahrenheit to Celsius units or vice-versa requires a different formula from converting a temperature difference between the same units. Even if the terminology and all information contained in the document is correct, technical writing has a style that is difficult, if not impossible, for a non-technical person to imitate. A high-quality technical translation combines correct terminology and a style appropriate for the type of the document and the intended audience.

Technical translation is known to be the most difficult kind of written translation because a translator has to cope with a really hard task: to translate the technical text skillfully and correctly, and, in addition, not to lose the meaning or make sad mistakes which may lead not only to damage of the equipment but endanger health or even life of people. For that reason, there are some requirements for scientific translators. In scientific works, subject matter takes priority over the style of the linguistic medium which aims at expressing facts, experiments, hypothesis, etc. The reader of such scientific works does not read it for pleasure which the reader of literary work usually seeks, but he is after the information it contains.

Scientific words differ from ordinary and literary words since they do not accumulate emotional associations and implications. This explains why the translation of a scientific work is supposed to be more direct, freer from alternatives, and much less artistic than other kinds of prose. The language of scientific and technical texts is characterized by impersonal style, simpler syntax, use of acronyms, and clarity.

2. The term as the main element of the technical text.

The main element of the scientific and technical text is the term. In Terminology, the "term" or "terminological unit" is the meaning unit made up of one single word (simple term) or several words (complex term) and represents a concept in an univocal way in a specific semantic field. From this definition, we can understand that a term is a specialized word in relation to its meaning and the field in which it is used. It is considered in that way when used in a certain context in which it takes the function of a "term".

Terms can be more or less complex lexical units that are generated in the result of the following processes:

- The extension of the meaning of a word in the standard language (for instance, “mouse” in computing terminology is a device that allows the user to interact with the computer).
- Generation of a phrase that functions as a whole with one specialized meaning (superconducting magnet).
- Symbolic expressions, as chemical element symbols (Na) or chemical and mathematical formulas (H2SO4).
- Abbreviations (PVC) and acronyms (NATO, from North Atlantic Treaty Organization).
- Nomination of posts (Prime Minister), organizations or administrations (United Nations, Prime Minister).

In order to establish the limit between term and word, it is important to know the characteristics of terms in a specialized language. According to Gutiérrez Rodilla (1998: 88-94) the characteristics of terms are precision, emotional neutrality and stability over time. For instance, *“aplasia”* is a medical term meaning incomplete or faulty development of an organ; it is monosemic which implies precision; it is neutral emotionally; and finally, it is stable over time since it has been used without any variation in use, form and meaning for a long period of time in scientific documents.

There are variations in the use of terms depending on the specialisation grade of the discourse. The terminological density, which means, the amount of terms in a text is conditioned by the kind of discourse:

- Specialised discourse: aimed at experts (there are different specialization levels).
- Didactic discourse: aimed at education.
- Informative discourse: aimed at people without a specialised knowledge of the subject.

The amount of terms used will be very different in these discourses. The level of competence of the text users on the subject presented increases in accordance with the amount of terminologies used (Condamines, 1993). In this way, the specialised communication requires the terminology to be adapted to each type of text. This type is determined on the quantity of information shared between producer and user of the text and the purpose of the text (Marinkovich, 2006). We will not find the same number of terms in the Penal Code as in a generalist newspaper's news item on a trial.

3. Types of terms.

3.1. Creating new forms.

3.1.1. Derivation.

The process of derivation is the formation of a new term by adding one or more *affixes* to a *root* or to a *word,*

e.g. *phosphor + ous = phosphorous,*

co- + education- + al = co-educational,

de- + toxi(n) + fi + -cation = detoxification

3.1.2. Compounding.

Compound terms are divided into complex terms and blends. In English, the roots or words making up a *complex term* or *phrase* are joined by a hyphen, or by *fusing,* or they are cited without any indication of joining between them:

e.g. complex terms

(hyphen): composer-conductor, high-definition television

(fusion): downsizing, outflow

(no join): member country, information highway

3.1.3. Blending.

paraplegic + Olympics = Paralympics

biological + electronic = bionic

education + entertainment = edutainment

cybernetics + space = cyberspace

3.1.4. Abbreviation: short forms, abbreviations, clipped forms, initialisms, acronyms.

On the one hand, shortening serves the purpose of creating *more concise forms*, especially for frequently used terms, while on the other hand creating names that are easy to remember for lengthy terms which are not clearly recognizable as terminological units. The following types of abbreviated forms can be distinguished:

Abbreviated Forms	**Short form** ***Court - Court of Justice***
	Abbreviation ***etc. - et cetera***
	Clipped form ***Flu*** - *in**flu**enza*
	Initialism ***UN - United Nations***
	Acronym *Laser* - ***l**ight **a**mplification by **s**timulated **e**mission of **r**adiation*

The short form is an abbreviated form of a complex term or name of considerable length in words. It uses fewer words in order to designate the same concept,

e.g.

full form: *Court of Justice of the European Communities*

short form: *Court*

Abbreviations are created by omitting words or parts of the words of which a term consists,

e.g.

full form: ***p**age, **et c**etera* abbreviation: *p., etc.*

A clipped term is formed by truncating the front, middle or back portion of a single-word term,

e.g.

full form: *para**chute,** in**flu**enza, **prefab**ricated house*

clipped form: *chute, flu, prefab*

Initialisms are formed from the first letters of each of the elements of a complex term or name. They are always pronounced letter by letter,

e.g.

full form: ***U**nited **N**ations, **p**ersonal **c**omputer* initialism: *U.N., PC*

Acronyms are formed by combining the initial letters or syllables of all or several of the elements of a complex term or name. Acronyms are always pronounced syllabically just like regular words,

e.g.

full form: ***l**ight **a**mplification by **s**timulated **e**mission of **r**adiation*

acronym: *laser*

3.3. Using existing forms.

3.3.1. Conversion.

Conversion is the morpho-syntactically differentiated usage of a single form, e.g. when an adjective is used as a noun or a noun as a verb (which is quite frequent in English),

e.g.

output (NOUN) -- output(VERB),

Google (Proper Name) -- google (VERB)

3.3.2. Terminologization.

Terminologization is a general procedure through which a word or phrase from general language is transformed into a term designating a concept in a special language, e.g.

circuit

⟨general language⟩: a line enclosing a surface

⟨electrotechnology⟩: an arrangement of devices or media through which electric current can flow

3.3.3. Transdisciplinary borrowing.

Transdisciplinary borrowing, also known as *internal borrowing*, refers to situations where a designation from one specific subject field is used in another one in order to represent a different concept. The characteristics making up the *intension* of both concepts in both subject fields are often comparable and analogous, e.g.

reaction

chemistry: Interaction among two or more chemical elements or compounds, resulting in the creation of another chemical compound

physics: Force of equal magnitude and opposite direction, developed due to action of any given force

physiology: Response of the body to a functional disorder or to an external stimulus

3.3.4. Semantic transfer within a special language.

Semantic transfer within a special language is the process by which an existing term in a special language is used in order to designate a different concept, by an analogous extension.

• **Simile**, e.g. designation of a concept by analogy with a different more well-known or familiar concept, e.g. *L-shaped room*, a *rock-like substance*.

In English, simile is usually expressed by means of suffixes such as *-like*, *-style*, *-type* etc., *⟨electron.⟩: bus-type interface, Π network*

⟨telecom.⟩: noise-like error, Ethernet-like interface

• **Synecdoche**: This is the most productive technique of utilizing existing forms, which is referred to as systematic polysemy in the contemporary linguistic theory of semantics: the whole is used for the part , and vice versa, the material for the object and vice versa, the building for the people who are in it, etc. Synecdoche can be regarded as a horizontal mechanism, influencing *terminologization* and *interdisciplinary borrowing*,

e.g.

screen :

concrete: the part of a computer on which information is displayed

abstract: the information displayed on this computer part

3. 4. Interlingual borrowing

Direct borrowing: This refers to the full adoption of terms from contemporary languages during the process of secondary term formation. Some loans of this type of borrowing prove successful and are fully incorporated into a foreign language. In other cases, the initial loan is replaced at a later stage by a form more compliant with the linguistic structures of the target language.

e.g.

*reservoir (*from French*), diameter, spiral (from Ancient Greek)*

Loan translation: The morphological elements of a term or whole words from the source language are translated literally ("word for word") in order to form a new term in the target language,

e.g. *worm shaft – червячный вал*.

4. Translation of terms.

In the process of translation, we can face with such peculiarities of the English terms:

a) Some international terms can be conveyed through transcoding:

antenna – антена

feeder – фідер

blooming – блюмінг

b) Some terms have their direct equivalents in Ukrainian language:

hydrogen – водень

voltage – напруга

c) Sometimes we use loan translation:

single-needle instrument – однострілковий інструмент

superpower system – супернотужна система

d) Very often there are no direct equivalents for the terms. In this case we use descriptive translation:

video-gain – регулювання яскравості позначок від відбитих сигналів

combustion furnace – піч для органічного аналізу

wall beam – балкаб покладена вздовж поперечної стіни

Translating terms, it is better to avoid the words of foreign origin:

промисловість instead of індустрія

сільське господарство instead of агрокультура

повний опір instead of імпеданс

For correct translation, translator must know not only English, but also correspondent Ukrainian terminology. It is difficult to choose one Ukrainian equivalent in such cases, as, for example, with the word “to switch”:

switch – вимикач; перемикач; комутатор

In this case, in order to choose the best variant, the translator should have background knowledge. Let’s translate the sentence into Ukrainian:

Most of the modern radio-transmitters can communicate both telegraph and telephone signals.

The translator, who doesn’t know special terminology, will translate:

Більшість сучасних радіопередачів може посилати як телеграфні, так і телефоні сигнали.

But correct technical translation will be the following:

Більшість сучасних радіопередачів може працювати як в телеграфному, так і у телефоному режимі.

5. Stylistic and grammatical special properties of Ukrainian and English technical texts.

To illustration all the peculiarities of technical translation, it is necessary to focus on the stylistic and grammatical special features of Ukrainian and English technical texts.

a) In English personal forms of verbs are used more often than impersonal, whereas in Ukrainian we have more impersonal and indefinite-impersonal forms of the verb. For example:

You might ask why engineers have to supply us with a.c. rather than d.c. for our household needs. – Можна спитати, чому для домашніх господарств зазвичай використовується змінний, а не постійний струм.

We know the primary coil in the ordinary transformer to have more turns than the secondary one. – Відомо, що первина обмотка звичайного трансформатора має більше витків, ніж вторинна.

b) In English scientific texts Future Tense is often used instead of Present:

The zinc in the dry cell accumulates a great many excess electrons, which will move to the carbon electrode. – Цинк в сухому елементі акумулює велику кількість зайвіх електронів, що рухаються до вугільного електрода.

Fig. 10 gives a drawing of a bulb; the filament will be seen in the centre. – На мал. 10 представлено креслення електричної лампи; нитку накалювання можна побачити в цетрі.

c) In English texts passive constructions are frequently used, whereas in Ukrainian active constructions are more common:

This question was discussed at the conference.

This sentence can be translated in such ways:

Це питання було обговорено на конференції.

Це питання обговорювали на конференції.

Це питання обговорювалось на конференції.

Конференція обговорила це питання.

d) The author of English scientific papers use abbreviation, which have no equivalents in Ukrainian:

d.c. (direct current) – постійний струм

a.c. (alternating current) – змінний струм

s.a. (sectional area) – площа поперечного перерізу

b.p. (boiling point) – точка кипіння

e) Some word-combinations in English are characterized by the imagery, which does not correspond the Ukrainian language. During the translation, such images should be replaced by their adequate analogues in the target language:

We have learned to manufacture dozens of construction materials to substitute iron.

Instead of the word *"dozen" дюжина* in Ukrainian we use the word *"десяток"*.

Ми навчилися виготовляти десятки будівельних матеріалів, що можуть замінити залізо.

Lecture 3. Lexical and grammatical peculiarities of scientific and technical texts.

1. Characteristics of the scientific and technical language.
2. The vocabulary of scientific and technical literature and some problems of translation.

1. The characteristics of the scientific and technical language.

1. The absence of emotional colouring.

This feature basically also causes absolute convertibility of the scientific and technical texts, as the reader should not have stranger associations, he should not read between lines, be admired by the word-play and pun. The writer's purpose is to describe one or another phenomenon or operation, particular subject or process.

It is necessary to note that the English language characterized by certain degree of figurativeness, which cannot be transferred in Russian translation.

E. g. "The mother company bore a daughter in the Far East, granted her a dowry of 2.000.000 pounds and christened her…"

If we translate the sentence literally, it will sound like that:

" Мати компанія народила на Далекому Сході доньку, дала їй посаг у 2 млн. фунтів стерлінгів та охрестила її …"

After processing we obtain:

" Головна фірма організувала Далекому Сході дочірню компанію і виділила їй капітал 2 млн. фунтів стерлінгів; нова компанія стала іменуватися …"

2. Clarity and brevity.

Commitment to clarity is expressed in the application of legible grammar constructions and lexical units, and also in the wide use of nomenclature |nə(ʊ)ˈmɛŋklətʃə|. As a rule, the terms will be use conventionally, though terminoids (terms having circulation in a narrow orb) will also occur, considerably hampering translation. Brevity is archived through a wide application of infinitive, gerundial and subordinate clauses, multiple abbreviations and conventional signs.

3. Special semantic load of some colloquial words.

The rethinking of words of ordinary speech is one of the productive methods of the new terms construction.

E. g.

to put out - in ordinary speech *"гасити вогонь"*, but for sailors - *"виходити в море*, *"stroke* - in ordinary speech *"удар",* but for mechanics - *"ход поршня"*

hoe - in ordinary speech *"мотига"*, but for builders - *"зворотня лопата"*

This property of words is an especially dangerous source of difficulties and errors for the translator.

4. The rate of basic dictionary fund words usage.

The lexicon of the scientific and technical literature is much poorer than the lexicon of art pieces. Therefore, compared to art pieces, the rate of separate elements of common lexicon in scientific and technical literature is higher. Thus ST style is characterized with a high number of book words and expressions, interlingual borrowings, low number of figurative and contextual meanings.

5. Focus on certain forms and constructions.

In the engineering literature Passive Voice is used in 16 times more often, than in art. The definition in the engineering literature is used in 3 times more often, than in art.

6. Scarcity |ˈskɛːsɪti| of the idioms use.

Idioms always have some emotional colouring and consequently are not entered in scientific and technical texts.

7. Application of abbreviations and conventional signs.

2. The vocabulary of scientific and technical literature and some problems of translation.

The concept “scientific and technical literature” combines, as it is known, different kinds of written products: monographs, textbooks, journal papers, descriptions, quick references, manuals, etc. The material is stated briefly, precisely, logically. The vocabulary of the scientific and technical literature consists of common words and great many of the special terms.

Common words can conditionally be subdivided into some groups:

1. Words used in scientific and technical literature in the meanings, different from their first ones.

For example:

- the verb *to offer* in the scientific text is more often used in the meaning of *"відмовляти"*, instead of *"пропонувати*";
- the word *for* can be a preposition and a conjunction, and is translated as *"для*", *" протягом* ", and as a conjunction *"так як*".

2. Words and word-combinations providing logical connection between separate parts of the text.

For example:

To begin with – перш за все

Furthermore – крім того

Summing up – коротко

кажучи

3. Word and word combinations serving to express the writer’s attitude to the stated facts or for the clarification of these facts.

For example:

needless to say – не викликає сумнівів

strictly speaking - *суворо кажучи*

4. Phraseological word combinations.

Phraseological word combinations used in scientific and technical literature are more or less of neutral emotional colouring.

For example:

to be in a position – бути в змозі

to be under way - *здійснюватися*

to bring into action - *починати діяти*

As for the terms, if we know Russian nomenclature and meet an unfamiliar term in the text, we can avoid looking in up and use a necessary Russian equivalent.

The greatest difficulty for understanding and translation is represented by multicomponent terms (consisting of a group of words). Disclosing their meanings requires particular sequence of operations.

It is possible to recommend to start the translation from the last word and to translate the components from right to left, taking into account the semantic relations between them.

For example:

If we translate the term *"liquid-propellant power plant"* - first of all we should translate the last component *"power plant"* - *силова установка*, and then *“propellant*" - *паливо*, and only then the component *“liquid"* - *рідкий*.

And we can easily translate the whole word combination: *" силова установка на рідкому паливі "*.

Another problem with terms is the fact that they can be polysemic in adjacent fields.

E. g.

stage - in radiotechnics: 1) каскад; 2) фаза, стадія.

- in the rocket engineering: щабель ракети.

Lecture 4. Analysis of Terminology in Scientific and Technical Style.

1. **The style of the scientific prose.**
2. **The vocabulary of the scientific text.**
3. **The language of Science and the translation.**

1. The style of the scientific prose. The purpose of science as a branch of human activity is to disclose the inner substance of things and phenomena of objective reality and find out the laws regulating them, thus enabling men to predict, control and direct their future development in order to improve the material and social life of the mankind. The style of scientific prose is therefore mainly characterized by an arrangement of linguistic means which will bring proofs to confirm a theory. The main function of scientific prose is the proof.

The genre of scientific prose is mostly characteristic of the written form of the language (scientific articles, monographs or textbooks), but it may also be found in its oral form (in scientific reports, lectures, discussions at conferences, etc.); in the latter case this style has some features of colloquial speech.

The language of science is governed by the aim of the functional style of scientific prose, which is to prove a hypothesis, to create new concepts, to reveal the internal laws of existence, development, relations between different phenomena, etc.

The linguistic means used, therefore, tend to be objective, precise, unemotional, and devoid of any individuality; there is a striving for the most generalized form of expression.

2. The vocabulary of the scientific text. The first and the most noticeable feature of this style is the logical sequence of utterances with clear indication of their interrelations and interdependence, that is why in no other functional style there is such a developed and varied system of linkers as in scientific prose. The most frequently used words in scientific texts are functional words, conjunctions and prepositions.

The most frequent words of this style are the following units:

a) prepositions*: of, to, in, for, with, on, at, by, from, out, about, down*;

b) prepositional phrases: *in terms of; in view of, in spite of, in common with, on behalf of, as a result of; by means of, on the ground of, in case of*;

c) conjunctional phrases: *in order that, in case that, in spite of the fact that, on the ground that, for fear that*;

d) pronouns: *one, it, we, they*;

e) notional words: *people, time, two, like, man,made, years*.

As the scientific text is restricted to formal situations and, consequently, to formal style, it employs special vocabulary which consists of two main groups: words associated with professional communication, terms, and a less exclusive group of so-called learned words. Here one can find numerous words that are used in the scientific text and can be identified by their dry, matter-of-fact connotation, for example, *comprise*, *compile, experimental, heterogeneous, homogeneous, conclusive, divergent, etc.* Another group of learned word comprises mostly polysyllabic words drawn from the Roman languages and, though fully adapted to the English phonetic system, some of them continue to sound foreign. Their very sound seems to create complex associations: *deleterious, emollient, incommodious, meditation, illusionary.*

A particularly important aspect of scientific and technological language is the subject-neutral vocabulary which can be found in different specialized domains. In particular, a great deal of scientific work involves giving instructions to act in a certain way, or reporting on the consequences of having acted so. Several lexical categories can be identified within the language of scientific instruction and narrative:

Verbs of exposition: *ascertain, assume, compare, construct, describe, determine, estimate, examine, explain, label, plot, record, test, verify*.

Verbs of warning and advising: *avoid, check, ensure, notice, prevent, remember, take care*; also several negative items: *not drop, not spill*.

Verbs of manipulation: *adjust, align, assemble, begin, boil, clamp, connect, cover, decrease, dilute, extract, fill, immerse, mix, prepare, release, rotate, switch on, take, weigh*.

Adjectival modifiers and their related adverbs: *careful (ly), clockwise, continuous (ly), final (ly), gradual (ly), moderate (ly), periodic (ally), secure (ly), subsequent (ly), vertical (ly)*.

The general vocabulary employed in scientific text bears its direct referential meaning, i.e. words used in the scientific text will always tend to be used in their primary logical meaning. Hardly a single word used in more than one meaning will be found here. Nor will there be any words with contextual meaning. Even the possibility of ambiguity |ambɪˈgjuːɪti| is avoided.

Likewise, neutral and common literary words used in scientific text will be explained, even if their meaning is slightly modified, either in the context or in a footnote by a parenthesis |pəˈrɛnθɪsɪs|, or an attributive phrase. A second and no less important peculiarity and, probably, the most conspicuous one, is the use of terms specific to each given branch of science. Due to the rapid dissemination of scientific and technical ideas, particularly in exact sciences, some scientific and technical terms begin to circulate outside the narrow field they belong to and eventually begin to develop new meanings. But the overwhelming majority of terms does not undergo this process of de-terminologization and remain the property of scientific text. There they are born, develop new terminological meanings and there they die. No other field of human activity is so prolific in coining new words as the science is. The necessity to penetrate deeper into the essence of things and phenomena gives rise to new concepts, which require new words to name them. A term will make more direct reference to something than a descriptive explanation, i.e. a non-term. Furthermore, terms are coined so as to be self-explanatory to the greatest possible degree.

3.The language of Science and the translation. The translation is a multifaceted |mʌltɪˈfasɪtɪd| phenomenon and some aspects of it can be the subjects of the research of different sciences. The main place in modern translation belongs to linguistic translation, which studies the translation as a linguistic phenomenon. Different types of translation complement each other and strive for the detailed description of the activity of the translation.

The theory of translation puts forward the following tasks:

1. To reveal and to describe the common linguistic basis of the translation, that is to show which peculiarities of the linguistic systems and regularities of the language operation are the basis of the translation process, which peculiarities make the process of translation possible and determine its character and borders.
2. To determine the translation as the subject of the linguistic research, to show its difference from the other kinds of linguistic mediation.
3. To work out the basis of the translation activity types classification.
4. To reveal the essence of the translation equivalence as the basis of the communicative identity of the original text and the translation.
5. To work out the general principles and the peculiarities of the construction of special translation theories for the different combinations of languages.
6. To work out the general principles of the scientific description of the translation process as the activity of transforming the original text into the target language text.

7. To reveal the influence on the translation process on the pragmatic and social linguistic factors.

8. To determine the concept “the translation norm” and to work out its principles.

In the result of this research it can be concluded that the main stylistic feature of the scientific and technical text is the exact and clear interpretation of the material without any expressive elements that make the speech more emotionally saturated. There are almost no metaphors, metonymies, transpositions and other stylistic features in scientific-technical literature while they are widely used in literary works. Although the scientific text is far from the living colloquia language, it contains a number of neutral phraseological units.

The main requirements for the scientific and technical translation is to comply with the precision (all items in ST shall be reflected in translation), the conciseness (all items of ST shall be translated laconically), the clearness, the literacy (the text of the translation shall comply with norms of the literary language without the use of syntactical structures of the source language).

All terms are united into terminological systems that express the notions of science and technologies. The difficulties that arise during the translation of the terms are connected with the imperfection of the existing terminological systems. The most important among them are the phenomena of terminological synonyms, homonyms and polysemantic units. All of these leads to the approach of the contextual translation, that is:

1) identifying the word meaning due to its context;
2) selecting the proper context equivalent term;
3) creating adequate text by means of the selected context equivalent terms.

The translation of scientific-technical texts shall convey the exact content of the source text. Some deviations can be made due to the peculiarities of the target language or stylistic issues. It is very important to prevent the loss of meaningful information contained in the source text.

Lecture 5.

Translation and scientific-technical information exchange.

1. **The process of translation.**
2. **The stages of the process of translation.**

1. The process of translation. Usually when people speak about translation or even write about it in special literature they are seldom specific about the meaning. The presumption is quite natural – everybody understands the meanings of the word. However, to describe translation intuitive understanding is not sufficient – what one needs is a definition.

Translation means both a process and a result, and when defining translation we are interested in both of its aspects. First of all, we are interested in the process because it is the process we are going to define.

The formation of the source and target texts is governed by the rules characteristic of the source and target languages. Hence the systems of the two languages are also included in our sphere of interest. These systems consists of grammar units and rules, morphological and word-building elements and rules, stylistical variations and lexical distribution patterns (lexico-semantic paradigms). Moreover, when describing a language one should never forget that the language itself is a formal model of thinking, i.e. of mental concepts we use when thinking.

In translation we deal with two languages (two codes) and to verify the information they give us about the extralinguistic objects (and concepts) we should consider the extralinguistic situation and the background formation. Having considered all these, we shall come to understand that as an object of linguistic study the translation is a complex entity consisting of the following interrelated components:

1) elements and structures of the source text;
2) elements and structures of the target language;

3) transformation rules to transform the elements and structures of the source text into those of the target text;
4) systems of the languages involved in translation;
5) conceptual content and organization of the source text;
6) conceptual content and organization of the target text;
7) interrelation of the conceptual contents of the source and target texts.

In short, the translation is a functional interaction of languages. To study this process we should study both the interacting elements and the rules of the interaction. Among the interacting elements we must distinguish between the observable and those deducible ones (the deducible ones are deduced from the observable ones). The observable elements in the translation are parts of words, words, and word combinations of the source text.

The process of translation involves parts of words, words and word combinations of the target **language** (not of the target **text**, because when we start translating or, to be more exact, when we begin to build a model of our future translation, the target text is yet to be generated). These translation components are deducible from the observable elements of the source text.

In other words, we can draw the following conclusion:

During the process of translation one intuitively fulfills the following operations:

a) deduces the target language elements and rules of equivalent selection and substitution on the basis of the observed source text elements;

b) builds a model consisting of the target language elements selected for the substitution;

c) verifies the model of the target text against the context, the situation and the background information;

d) generates the target text on the basis of the verified model.

2. The stages of the process of translation. Thus, the process of translation may be represented as consisting of three stages:

1. Analysis of the source text, the situation and the background information.

2. Synthesis of the translation model.

3. Verification of the model against the source and the target context (semantic, grammatical, stylistic), the situation, and the background information resulting in the generation of the final target text.

Let us illustrate this process using a simple assumption: you receive one sentence for translation at a time (by the way this assumption is a reality of consecutive interpreters). For example, if you receive: «At the first stage the chips are put on the conveyor» as a source sentence. Unless you observe or know the situation your model of the target text will be: "На першому етапі *стружку / щебінку / смажену картоплю / нарізану сиру картоплю* кладуть на конвеєр". Having verified this model against the context provided in the next sentence (verification against semantic context): "Then they are transferred to the frying oven", you will obtain: "На першому етапі нарізану сиру картоплю кладуть на конвеєр". It looks easy and self-evident, but it is important, indeed, for understanding the way the translation is done.

Verification against semantic and grammatical context is performed either simultaneously (if the grammatical and semantic references are available within a syntagma) or delayed (if relevant semantic references which may be available in one of the following rather than in one and the same sentence). Cases when the grammatical semantic or situational references are delayed or missing present serious problems for the translation. We intuitively formulate hypotheses about the translation of certain words and phrases and then verify them.

So, speaking very generally, when we translate, the first thing we do is the analysis of the source text for the extraction of all available information necessary for generating the target text (build the intermediate model of the target text), the second thing we do is the verification of this information against the situation and the background knowledge, the third thing is the generation of the target text.

Lecture 6. Equivalence and Adequacy |ˈadɪkwəsi| in Translation.

1. The theories of the concept of equivalence.

1.1 Jakobson and the concept of equivalence.

1.2 Nida and Taber: Formal correspondence and dynamic equivalence.

1.3 Catford and the introduction of translation shifts.

1.4 Baker's approach to translation equivalence.

1.5 Komissarov’s levels of equivalence.

2. Types of translation equivalents.

3. Adequacy of translation.

1. The theories of the concept of equivalence. The comparison of texts in different languages inevitably involves a theory of equivalence. Equivalence can be said to be the central issue in translation although its definition, relevance, and applicability within the field of translation theory have caused heated controversy, and many different theories of the concept of equivalence have been elaborated within this field in the past fifty years.

1.1 Jakobson and the concept of equivalence in difference. Roman Jakobson's study of equivalence gave new impetus |ˈɪmpɪtəs| to the theoretical analysis of translation since he introduced the notion of 'equivalence in difference'. On the basis of his semiotic approach to language and his aphorism 'there is no signatum without signum' (1959:232), he suggests three kinds of translation:

- Intralingual (within one language, i.e. rewording or paraphrase)
- Interlingual (between two languages)
- Intersemiotic (between sign systems)

Jakobson's theory is essentially based on his semiotic approach to translation according to which the translator has to recode the ST message first and then s/he has to transmit it into an equivalent message for the TC.

1.2 Nida and Taber: Formal correspondence and dynamic equivalence. Nida argued that there are two different types of equivalence, namely *formal equivalence* (*formal correspondence)* and *dynamic equivalence.* Formal correspondence 'focuses attention on the message itself, in both form and content', unlike dynamic equivalence which is based upon 'the principle of equivalent effect'.

Formal correspondence consists of a TL item which represents the closest equivalent of a SL word or phrase.

Dynamic equivalence is defined as a translation principle according to which a translator seeks to translate the meaning of the original in such a way that the TL wording will trigger the same impact on the TT audience as the original wording did upon the ST audience. One can easily see that Nida is in favour of the application of dynamic equivalence, as a more effective translation procedure.

1.3 Catford and the introduction of translation shifts. Catford's main contribution in the field of translation theory is the introduction of the concepts of types and shifts of translation. Catford proposed very broad types of translation in terms of three criteria:

1. The extent of translation (*full translation* vs *partial translation*);
2. The grammatical rank at which the translation equivalence is established (*rank-bound translation* vs. *unbounded translation*);
3. The levels of language involved in translation (*total translation* vs. *restricted translation*).

As far as translation shifts are concerned, Catford defines *level shifts,* where the SL item at one linguistic level (e.g. grammar) has a TL equivalent at a different level (e.g. lexis), and *category shifts* which are divided into four types:

1. *Structure-shifts,* which involve a grammatical change between the structure of the ST and that of the TT;
2. *Class-shifts,* when a SL item is translated with a TL item which belongs to a different grammatical class, i.e. a verb may be translated with a noun;
3. *Unit-shifts*, which involve changes in rank;
4. *Intra-system shifts,* which occur when 'SL and TL possess systems which approximately correspond formally as to their constitution, but when translation involves selection of a non-corresponding term in the TL system' (ibid.:80). For instance, when the SL singular becomes a TL plural.

1.4 Baker's approach to translation equivalence. New adjectives have been assigned to the notion of equivalence (grammatical, textual, pragmatic equivalence, and several others) and made their appearance in the plethora of recent works in this field. An extremely interesting discussion of the notion of equivalence can be found in Baker (1992) who seems to offer a more detailed list of conditions upon which the concept of equivalence can be defined. She explores the notion of equivalence at different levels, in relation to the translation process, including all different aspects of translation and hence putting together the linguistic and the communicative approach. She distinguishes between:

- Equivalence that can appear at word level and above word level, when translating from one language into another.
- Grammatical equivalence, when referring to the diversity of grammatical categories across languages.
- Textual equivalence, when referring to the equivalence between a SL text and a

TL text in terms of information and cohesion.

- Pragmatic equivalence, when referring to implicatures and strategies of avoidance during the translation process.

1.5 Komissarov's levels of equivalence. Prof. V.N. Komissarov has advanced the theory of the levels of equivalence which is based on the understanding of equivalence as a measure of semantic community of a SLT and its translation on various levels. In keeping with this principle the author establishes 5 levels of equivalence:

· the level of the aim of communication

· the level of the situation described

· the level of the way of describing the situation

· the level of the meaning of syntactic structures

· the level of the meanings of lexical units.

Compare translations of the following sentences that are made on different levels of equivalence:

«*На дне»* (М. Горький) - *"Down and Out"* (G.Rapall Noyes and A. Kaun), *«Одноэтажная Америка»* (И.Ильф и Е. Петров) – *"Provincial America"* (J.H.C. Richardson)*, «Крутой маршрут»* (Е. Гинзбург) - *"Within the Whirlwind"* (Ian Boland) (equivalence on the level of the aim of communication);

Watch the head! – Обережно, низька стеля! Прошу сюди! – This way, please! (equivalence on the levels of the aim of communication and the situation described);

This summer saw a number of terrible air-crashes. – Цього літа сталося кілька жахливих авіакатастроф (equivalence on the levels of the aim of communication, the situation described and the way of describing the situation).

She was driven away, never to re-visit this neighbourhood. – Вона була змушена поїхати і більше не повернулася до цих місць (equivalence on the levels of the aim of communication, the situation described, the way of describing the situation, the meaning of syntactic structures).

The fog stopped the traffic – Через туман зупинився рух транспорту (equivalence on the levels of the aim of communication, the situation described, the way of describing the situation, the meaning of syntactic structures and the meaning of lexical units).

The notion of equivalence is undoubtedly one of the most problematic and controversial areas in the field of translation theory. The term has caused, and it seems quite probable that it will continue to cause, heated debates within the field of translation studies. Thus put with certain degree of simplification, equivalence is a similarity of meaning observed in the units of different languages and used for translation. The units of target language are called translation equivalents.

2. Types of translation equivalents. Modern translation theory suggests two basic grades of translation equivalents:

1. Full Translation Equivalents.

For practical purpose full equivalence is presumed when there is complete coincidence of pragmatic meanings of the source and target language units. The stylistically neutral words with reference meanings (terms, geographical and proper names, words denoting physical objects and processes) are more likely to have full translation equivalence because semantic and pragmatic parts of their meanings are less ambiguous. complete coincidence of pragmatic meanings of the source and target language units. "*Книга", as an equivalent of the English word "book", is full in all equivalence aspects because it has similar syntactic functions(those of a Noun), its lexical meaning is also generally* *similar and the pragmatic aspect of this equivalent (the message intent and target audience reaction) coincides with that of the English word. Thus, книга is conventionally regarded as a full equivalent of the word 'book'.*

2. Partial Translation Equivalents

The partiality of equivalence is the absence of one or more of equivalence aspects, e.g. of semantic, syntactic or pragmatic aspect.

Let us consider the variants of translation of the English saying 'Carry coal to Newcastle'. If one translates it as "Возити вугілля до Ньюкасла" it would lack the pragmatic aspect of equivalence. (The intent of this message Bring something that is readily available locally would be lost, because the Ukrainian audience could be unaware of the fact that Newcastle is the centre of a coal-mining area). If, however, one translates it "Їхати до Тули з власним самоваром" there would be loss of the semantic similarity, but the pragmatic intent of the message will be preserved, which, is the first priority of translation. Anyway both suggested translation equivalents of this saying are considered to be partial.

3. **Adequacy of translation.** *Adequacy of translation* is understood in two senses: (1) it is the reproduction of the unity of content and form of a SLT by means of another language; (2) it is identical information conveyed by similar or identical means of a different language.

The difference between equivalence and adequacy of translation can be established in regard to the character, object and the content of the two categories:

- <u>in terms of the character</u> adequacy of translation is viewed as an evaluative category, thus an adequate translation means a good translation; an equivalent translation is a technical category referring to an established standard which implies the greatest possible identity or similarity of all content levels of a SLT and a TLT. The questions asked in both cases are not the same, namely: if the final text version corresponds to the initial one (equivalence), and if translation corresponds to the communicative situation and conditions (adequacy).

- <u>in terms of the object</u> adequacy of translation refers to the procedure (process) of translation and thus it is related to the conditions of an interlingual and intercultural communicative act and determines the use of speech filters (semantic, combinatorial, word-building, etc), the choice of translator's strategies that meets the communicative situation. Equivalent translation is aimed at a desirable result and establishes to what extent the TLT corresponds to the SLT as both perform similar communicative functions in various cultures.
- <u>in terms of the content</u> adequacy of translation is based on the actual practice of translation and approves of translation solutions of a compromise nature on condition that they better correlate with the communicative situation; equivalent translation presupposes maximum possible transference of the communicative functional invariant of the SLT.

These points of difference between adequate and equivalent translation bring us to an important conclusion that a translation text that is fully equivalent to the original does not always meet the demands of an adequate translation. On the other hand, an adequate translation does not always imply relations of full equivalence between the SLT and the TLT and their textual segments. Compare the two translations of the sentence into English: *Він думав про тяготи, що випали на долю людей –*

1) He learned of the hardships that had befallen the people.

2) He saw the hardships the people were suffering.

The first version makes use of dictionary equivalents, and yet the editor has improved it by replacing some of them by the contextual substitutions which prove to be more adequate for the situation described and in keeping with stylistic register, adequate theme-rheme correlation, typical combinability of words in the TL.

Lecture 7. Main devices of achieving adequacy in translation.

1. Translation transformations: definition, causes, classification.

2. Levels of translation transformations, operations and techniques of translation.

3. Classification of transformations according to techniques of translation.

3.1. Transpositions.

3.2. Substitutions.

3.3. Additions.

3.4. Omissions.

3.5. Integral modifications.

1. Translation transformations: definition, causes, classification. In the process of translation a SLT as a whole or its segments may undergo varied modifications that are known in the theory and practice of translation as translation transformations. The term ‘transformation’ is polysemantic and there are at least 6 meanings that are associated with this word in translation studies including intralinguistic translation [Нелюбин 2003]. The discussion of translation transformations below includes the following: definition, causes (determinants), levels and techniques of translation.

Translation transformations are defined by L.S. Barkhudarov as numerous and varied in their quality inter-lingual changes which are made to achieve adequacy in translation in spite of discrepancies in the formal and semantic systems of a SL and a TL [Бархударов 1975: 190].

A.D.Shveitser stresses that the term ‘transformation’ is used in translation theory metaphorically as in fact we mean special inter-lingual operations of transpresentation («перевыражение») of SL sense by means of TL [Швейцер 1988: 118]. In keeping with this understanding he connects the character of transformations with his model of the levels of equivalence which is based on three aspects of a linguistic sign: syntactic, semantic and pragmatic.

The **syntactic** level favours substitutions which retain the syntactic invariant despite various other replacements, e.g. *The sun disappeared behind a cloud. – Сонце зникло за хмарою.*

The **semantic** level admits of a variety of transformations including passivization, nominalization, replacement of a word by a word group, etc. E.g. *Ваша дружина чудово готує – Your wife is a superb cook*. In such cases the invariant is retained on two sublevels: (a) componential – retains the componential structure of an utterance (as in the example above) and (b) referential – retains the invariant of the referential sense of a SL utterance and a TL utterance (*У мене стоять годинник – Mywatch has stopped*).

The **pragmatic** level regarded as a top level in the hierarchy of levels exists irrespective of the other two levels and allows a wide range of transformations which cannot be described in terms of a single type (e.g. *Many happy returns of the day – З Днем народження*).

An understanding of translation transformations offered by V.S.Vinogradov connects it with two stages in a translator’s work:

· the first phase includes two types of perception of a message: *pre-translational* (a translator perceives a SL text after first (second, if necessary) reading, analyses its sense) and *translational* perception (immediate perception of concrete words, phrases, utterances at the moment of their translation);

· the second phase connected with re-creation by means of TL of what has been perceived in a SL text is also divided into two phases: *transpresentation* and *artistic identification of translation* [Виноградов 2004].

The author discusses various transformations in both phases of the second stage and points out that changes are indispensable in translation as the translator does not look for a ready correspondence in a TL utterance for this or that unit of translation, but he transpresents the sense of the phrase.

One more very important aspect is revealed in translation transformations by L.K. Latyshev who defines them as conscious deviations from objectively possible language parallelism in order to achieve communicative and functional equivalence of a SLT and a TLT [Латышев 2003]. This approach to translation transformations requires satisfying a strict principle of their motivatedness, that is the use of transformations in translation should always be due to some causes. In the author's opinion, causes of translation transformations include two major factors:

(a) a SL text as a determinant of translation modifications and

(b) a lingua-ethnical barrier as another important determinant.

Both these factors are so complex and comprise important facets that they deserve a careful consideration.

A SL text as a determinant of its transformations contains the following features:

1) textual *content* comprising denotative, significative connotations, the interpreter's level of content, intra-lingual content, structural content;

2) *functions* of a text including intellectual informative, emotive, aesthetic, nominative, voluntative, phatic.

A lingua-ethnical barrier includes linguistic (proper) and ethno-cultural factors:

1) *linguistic* factors comprise discrepancies between two language systems on various language levels, language norms, speech norm;

2) *ethno-cultural b*arrier refers to pre-textual information stock of SL and TL speakers.

It is obvious that textual parameters of a SLT should be reproduced in translation as fully as possible which impels the translator to make varied modifications on the levels indicated above. As investigations show there are differences in the lingua-ethnical competence of a SL and a TL reader which may become too serious a barrier to ignore. The importance of the two factors is hard to overestimate especially now that modern views on translation activity regard it as a bi-lingual, bi-ethno-cultural process, as a dialogue of two mental worlds and two world-views.

In further discussion of translation transformations it is useful to keep apart related aspects of transformations: transformations as *modifications*/changes of a SL text made on various levels, transformations as certain *operations* made in particular conditions of activity and transformations as *translator's techniques* caused by certain translation difficulties and problems.

2. Levels of translation transformations, operations and techniques of translation. These aspects of translation refer to the 'nuts and bolts' of the translation craft and business, yet in translation studies scholars often use respective terms indiscriminately, especially often mixing levels of transformations and techniques of translation. Suffice it to mention that even well known classifications of textual modifications confuse *transformations* proper and *techniques* of translation. The term *operations* of translation is reserved by us to those cases when a translator makes use of ready dictionary correspondences to translate a given unit by merely replacing it.

Besides, there is one more aspect of translation transformations which is connected with the understanding of the mechanism of transformations. This problem initially linked with lexical transformations gave rise to a heated discussion that revealed its principal significance in understanding the nature of any transformations. In 1980 Ya.I. Retsker published in the journal "Tetradi perevodchika" his famous article «Что же такое лексические трансформации?» [Рецкер 1980] which brought to light this burning issue of translation practice. The author contrasted two diametrically opposite views on the understanding of lexical transformations expressed, on the one hand, by L.S.Barkhudarov [Бархударов 1975] and, on the other hand, by T.R.Levitskaya and A.M. Fiterman [Левицкая, Фитерман 1976]. L.S.Barkhudarov argues that lexical transformations should be understood as substitutions of some lexical units (words and stable word combinations) in a SLT by lexical units in TL which are not their dictionary equivalents , that is such units which taken outside the given context possess a different referential meaning. E.g. She had *said* that she was in bed and ill (W. Thackeray, *Vanity Fair*) – Она *писала*, что она больна и лежит в постели (пер. М. Дьяконова).

The supporters of the other approach to lexical transformations believe that there are no absolute equivalents in any two languages and since translation itself is regarded as a kind of transformation which presupposes the retention of semantic invariant of a source text or textual elements content rather than its/their surface structure, i.e. the form of expressing this content, it is liable to change, cf. *school leavers* – *выпускники, instant coffee – растворимый кофе.*

In this debate Ya.I. Retsker backs up the first approach for which he gives several reasons:

- firstly, such TL correspondences as given above are qualified as dictionary correspondences that do not result from any contextual modifications;
- secondly, what the authors mean by a surface structure of a lexical unit is its inner form pointing at a particular feature of an object chosen to name it which very

seldom coincides in different languages accounting for the differences in nomination techniques, and

- finally, the use of translation transformations is a creative artistic process which lets a translator exceed the limitations of dictionary equivalents and offer something proper and adequate for a given situation.

In connection with the discussion of the nature and mechanism of lexical transformations it seems reasonable to apply the above given understanding to any other transformations including grammatical and stylistic. For example, when rendering English sentences with an active voice predicate it is not always best to retain it in translation, but use instead a passive voice construction as there may be other factors active in a given speech situation. The same goes for stylistic devices as there may be shifts in the choice of proper devices in place of ready formal correspondences to produce in a TLT a desirable stylistic effect. Such examples are discussed later in connection with respective types of transformations.

The first important problem arises in connection with classification of transformations made on different levels which is due to the difference of opinion on the notion of 'levels'. In many books on translation the authors single out transformations that correlate with language levels. One of the most popular classifications of transformations offered by prof. V.N. Komissarov takes into account the character of modifications and singles out lexical, grammatical and lexico-grammatical transformations [Комиссаров 1999a]. L.K. Latyshev and A.L. Semenov differentiate between two classes of transformations: structure-layer and content [Латышев, Семёнов 2003]. The former include categorial morphological, syntactical, stylistic and lexical changes, while the latter involving a change in the content representation of a situation include redistribution of semantic components, situational semantic transformations (instrument – instrumental use, event – perception of an event, measure – result, etc), explication of implicit content.

In the section devoted to methods of translation J.-P. Vinay and J. Darbelnet consider them on three levels: lexis, structural organization and message [Вине, Дарбельне 1978].

In their approach to this problem T.R.Levitskaya and A.M. Fiterman also use a language-level classification of transformations (lexical, grammatical and stylistic), though, as is obvious from the previous discussion, they treat transformations in a very broad sense embracing both lexical and grammatical equivalents [Левицкая, Фитерман 1976].

In a systematic way translation transformations were considered and classified by prof. Ya.I. Retsker in close connection with the theory of regular correspondences which distinguished between adequate substitutions (later named ‘lexical transformations’) and equivalent, variant and contextual correspondences [Рецкер 2004]. Transformations are classified by the author into lexical (comprising *differentiation, concretizing, generalization of meaning, sense development, antonymic translation, entire phrase modification, compensation for losses*), grammatical (*full* – with complete sentence restructuring and *partial* with partial restructuring) and stylistic (*expressive-emotional concretizing* due to the necessity to follow the principle of expressive-stylistic compatibility (in the terminology of V.G. Gak) and *expressive-pragmatic concretizing)*.

In our classification of translation transformations from the point of view of the level on which they are made we proceed from the understanding of the object of translation which has been defined above as speech units, i.e. texts. Accordingly, a translator resorts to various modifications either of fragments (segments) of a text or a whole text. Transformations involving segments of a text may refer to the elements of the semantic, lexical, morphological, syntactical (with two sublevels – that of a phrase and that of a sentence) levels, whereas textual transformations are active on the level of a text as an entity. All the above mentioned levels of transformations with the exception of the semantic level may involve changes on two planes: content and form. Correspondingly, in real practice of translation various transformations overlap affecting various aspects of a speech unit: semantic, syntactic and pragmatic.

* * *

Below are given examples of *different-level transformations*, but for the sake of illustrations we point out only those which apply to a particular type:

a) ***lexico-semantic***, А я вот сиди и *работай на него как каторжный*!… (Чехов. Юбилей) – So I have to sit here and *slave away for him* (пер. К. Кук).

Instead of using dictionary correspondences of the word *каторжный (convict, prisoner*, *felon*, *culprit*, *criminal)* the translator resorted to a number of transformations including lexico-semantic, replacing the word within the comparative word-group by the phrasal verb on the basis of several common semantic components: cf. (*работать как) каторжный – человек, сосланный на каторгу* [*каторга – содержание заключённых в тюрьмах с особо суровым режимом и с привлечением к тяжёлому физическому труду*] *(БТСРР) – slave away – work continuously like a slave* [*a slave – someone who is legally owned by another person and works for them for no money*].

b) ***Morphological***, …а заглянешь в душу – *обыкновеннейший* крокодил (Чехов. Медведь) - …yet gaze into her soul and what do you find – a *regular* hyena (C. Cook)

Since the English word *regular* is used as an intensifier there is no need to use it in the superlative degree.

c) ***Syntactic I (***phrase level), *Сестра опять всю ночь не спала (*Чехов. Чайка*)* – *My sister had another sleepless night (*C. Cook*).*

Syntactic II (sentence level), *И бедняк может быть счастлив (*Чехов. Чайка*)* – *People can be poor and still be happy (*C.Cook*).*

d) ***Textual level*** (text as an entity), the title of the book by V. Grossman “Все течет…” and its translation transform “Forever Flowing” (Tr.Thomas P. Whitney) make sense only in the context of the entire book.

* * *

Techniques of translation relate to a translator’s concrete actions and particular ways of translation which bring about a certain modification or transformation of a SLT. L.S. Barkhudarov described his transformations in terms of four basic techniques: (a) restructuring (or transpositions), (b) substitutions, (c) additions and (d) omissions (or deletions) [Бархударов 1975]. In his opinion, all the major classifications of translator’s techniques boil down to those four.

A much broader classification of techniques of translation was advanced by J.-P. Vinay and J. Darbelnet [Вине, Дарбельне 1978] who singled out seven types:

a) borrowing

b) loan translation

c) word-for-word translation

d) transposition

e) modulation

f) equivalence

g) adaptation.

The authors point out that the technical ways and means of translation are limited and can be exhaustively described in terms of those seven given above which are enumerated according to the degree of difficulties of translation. In the classification they refer the first three techniques of translation to direct (or literal) translation thanks to structural or/and metalinguistic (notional) parallelism in the two languages. The remaining four techniques are associated by the authors with non-direct translation and are due to either structural or metalinguistic discrepancies or ‘empty cells’.

It seems that such a broad approach to techniques of translation can hardly be justifiedas, for one thing, the first three types are in fact connected with the choice of the unit of translation rather than techniques, and, for another thing, the four phenomena ‘modulation’, ‘adaptation’, ‘equivalence’ and ‘transposition’ may be qualified as varieties of substitutions which are caused by different factors: modulation is due to the necessity of expressing a certain message in a usual way which is acceptable in TL (cf. *No vacancies – Вільних кімнат немає (оголошення у готелі тощо).*), adaptation is used to render a SL situation which does not exist in a TL community (cf. *greet one another with a holy kiss* (from the New Testament) is not translated into Englishword-for-word, but is adapted into *give one another a hearty handshake all around*, equivalence is used to render the same situation in a way that is typical of a TL, so itis always syntagmatic in its character, involves a message as a whole and refers to stable units and clichés including proverbs, sayings, phraseological units (cf. *Too many cooks spoil the broth – У семи няньок дитя без ока*), while transposition is just another term to use alongside ‘substitution’. Thus, the given classification confuses techniques of translation and their causes, techniques of translation and units / ways of translation, but at the same time it neglects some other important techniqueswhich are active in the process of translation.

Thus, we can take for a basis L.S. Barkhudarov's classification and supplement it with one more type, namely entire message modification=integral modification. This system of techniques of translation comprising five types underlies various translation transformations on all the levels discussed above, used alone or in various combinations.

3. Classification of translation transformations according to techniques of translation.

3.1. Transpositions covers all cases of restructuring, so naturally here refer transformations made on the syntactic level which result in changes in word order. They can be divided into two kinds depending on the nature of a unit undergoing restructuring, its size and syntactic functions:

· re-patterning on the level of a word-group,

· re-patterning on the level of a sentence.

Re-patterning I (on the level of a word-group or a phrase) is caused by differences in the structural patterns of correlated SL and TL word-groups and phrases. Quite often such changes are accompanied by morphological (part-of-speech) or syntactical substitutions, e.g.

Алёшка, *стуча зубами*, стал сказывать про Тыртова (А. Толстой)

His teeth chattering, Alyosha began explaining about Tyrtov (tr. by A. Miller)

The Russian verbal adverbial phrase is replaced by the English absolute construction (syntactical substitution) which makes a respective re-patterning obligatory.

Re-patterning II (on the level of a sentence) can be further subdivided into three sub-types:

a) changes in the word order within a sentence or a clause, e.g.

*It was very tiring to stoop all the time (*E. Blyton*).*

Идти всё время согнувшись было очень утомительно (пер. В. Исакович).

The restructuring of the English sentence is caused by the change in the sentence-type, the difference in their theme-rheme structure and is accompanied by other transformations (addition, morphological substitution).

There is no re-patterning of Russian sentences which are characterized by two features: 1) a verb-predicate is intransitive so there is no direct object in them and 2) a sentence begins with some adverbials (of manner, place), e.g. *Там, в этом краю, очень много озёр. – Up in that lake country were many, many lakes.*

b) changes in the order of clauses within a complex or a compound sentence, e.g.

Disposed as she then was to calculate upon that vague basis which allows the subtraction of one sum from another without any perceptible diminution, she was happy (Th. Dreiser).

*Девушка была счастлива; она находилась в том настроении, которое позволяет вычитать одну сумму из другой без заметного ущерба для последней (*пер. М.Волосова*).*

Re-patterning II is caused by the difference in the theme-rheme organization of the English and Russian sentences and is accompanied by a number of other transformations (syntactical, lexical and morphological substitutions, omission).

c) changes in the order of sentences, e.g.

Photographers came. The tragedy had interested the local press.

– Трагедия заинтересовала местную прессу. Пришли фотографы.

The main cause of the re-patterning here is the grammatical meaning of the Past Perfect form which expresses priority of the action denoted by it to an action in the Past Simple which in Russian has to be signaled by the order of respective sentences.

3.2. Substitutions unlike the previous technique underlie transformations made on various levels: lexical, stylistic, grammatical (morphological and syntactic).

· *Lexical* substitutions include several subtypes depending on the character of changes in the lexical meaning of a SL unit:

1) **concretizing**– a SL word with an abstract, broad and general meaning is replaced by a TL word with a concrete, narrow and specific meaning, e.g.

After dinner I sat and waited for Pyle in my room over the rue Catinat (Gr. Greene).

После ужина я сидел у себя в комнате на улице Катина и дожидался Пайла (Е. Голышева, Б. Изаков). The English word *dinner* has a broad meaning (*dinner – the main meal of the day, taken in the middle of the day or in the evening* – LDCE) which has to be concretized in translation into Russian where there are two words with more specific meanings (*обед – основной приём пищи, еда (обычно в середине дня)* и *ужин – вечерняя еда, последний приём пищи перед ночным сном* – БТСРЯ).

2) **generalization** – a SL word with a concrete, narrow, specific meaning changed for a TL word which has an abstract, broad, general meaning, e.g.

Отец умер ровно год назад, как раз в этот день, пятого мая, в твои именины (А. Чехов*).*

It's exactly a year ago today that Father died, the fifth of May – your birthday (K. Cook).

The Russian word is more specific in meaning since it reflects Christian habits and is different from the word group *день рождения* (*именины – у православных и католиков личный праздник кого-либо, приходящийся на день, в который церковь отмечает память одноимённого святого* – БТСРЯ), while the English word *birthday* is *day that is an exact number of years after the day when you were born* (LDCE).

3) **sense development** – a SL word is replaced by a TL word the meanings of which denote notions connected with each other through cause-result links. Since such links are usually connected with an action there may be basically 6 varieties of such transformations:

result – cause

result – action

action – result

action – cause

cause – result

cause – action

e.g. *When I opened my eyes* *she had lit the lamp* (Gr. Greene) (action).

Когда я открыл глаза, *лампа была зажжена* (K. Cook) (resultant state)

4) **antonymic translation** – a SL word is translated by its TL antonym which as a rule brings about changes in the grammatical structure of a sentence, namely an affirmative sentence often becomes negative and vice versa a negative sentence may turn into an affirmative one,

e.g. *“He will not be long”, she said as though I needed comfort for his absence (Gr.* Greene*)*

Теперь он скоро придёт, -- *сказала она, будто я нуждался в утешении* (K. Cook).

· *Compensation* – the replacement of a SL word which has no ready correspondence by a TL unit with an approximate / close meaning or an acceptable way of referring to an object named. Compensation can be of two types:

1) ***semantic*** compensation which is used as a means to compensate for sense losses especially while translating culture-bound and nationally specific units and thus render the intended meaning in an acceptable form for the target reader, e.g. *five-and-ten-cent store trade (*Warren*) – дешеві магазини; from soup tonuts and a Corona Corona (*Warren) – *повний обід – від супу до десерту та дорогої сигари*.

2) ***stylistic*** compensation which can be local and non-local and is employed to compensate for stylistic losses that may be due to differences in stylistic reference of correlated units. Compare English correspondences used to translate Russian young people’s slang, *буча (драка) – a scrap, a brawl; пятихатник – 500 roubles, толкучка (речовий ринок) – flea market*.

In cases of non-local compensation a translator fails to find a proper correspondence for a certain stylistically marked unit in a SL text, so he tries to restore the intended effect elsewhere. As a result, the overall impression of a text is believed to be balanced.

· *Grammatical substitutions* refer to various changes of grammatical (morphological) forms and syntactic structures that include several kinds of modifications:

1) part-of-speech characteristics, e.g.

*Коли дочка переїхала до батьків, їй спочатку було дуже самотньо. – When she moved to stay with her parents, their daughter felt very lonely at first (*pronominal substitution);

*… у російського міністра освіти мало не потрапило яйце – Russia's Minister of education was nearly hit by an egg (*passivization);

Він не дуже добре сходиться з людьми – He is not a terribly good mixer (the Russian verb-adverb phrase is translated by the English adjective-noun combination;

Він накопичує гроші на покупку будинку – He is saving money to buy a car (the Russian deverbal noun is translated by the English infinitive);

Робітники вимагали підвищення зарплати та скорочення робочого дня – The workers demanded higher pay and shorter working hours (the Russian deverbal noun denoting increase or decrease in size, volume, range is replaced by the English adjective in the comparative degree);

Я йому зрадів – I was glad to see him (the Russian verb denoting emotional behaviour is often replaced by the English stative phrase: to be (turn, get, grow, become) + adjective);

Проект бюджету подано на розгляд уряду– The draft budget was submitted for consideration by the government (the noun+noun pattern is often replaced by the English adjective-noun phrase).

2) parts-of-a-sentence substitutions:

Visitors are requested to leave their coats in the cloakroom – Відвідувачів просять залишати верхній одяг у гардеробі (the subject of the English passive form is replaced by the Ukrainian direct object of the active form);

Last week witnessed an intensification of the diplomatic activity – Минулого тижня спостерігалося пожвавлення дипломатичної діяльності (the English subject denoting the time of the action is replaced by the Ukrainian adverbial modifierof time).

3) syntactic substitutions:

*I never even once saw him brush his teeth – Я не бачив, щоб він чистив зуби (*the English simple sentence is replaced by the complex sentence in Ukrainian);

It was so dark that I couldn't see her – Я її у темряві не міг бачити (the English complex sentence is translated by the simple Ukrainian sentence);

John kept whistling "Song of India" while he shaved – Джон голився і насвистував «Індійську пісню» (subordination in the English sentence is replaced bycoordination in the Ukrainian sentence);

It was hot as hell and the windows were steamy – Спека була пекельна, всі вікна запотіли (English syndetic linking is replaced by asyndetic linking in Ukrainian).

3.3. Additions are complex lexico-grammatical transformations which bring about changes in the lexical elements of a SLT that are accompanied by grammatical changes. As a result of additions one or more words are added when translating an original utterance which are a sort of extension to it. Additions are caused by a number of factors:

a) the difference in the word-building, combinatorial, grammatical and other featuresof

SL and TL, e.g. *I'll have him call you – Я скажу йому, щоб він подзвонив тобі.*

b) the absence of a ready-to-use lexical correspondence in TL for a certain unit of translation which makes it necessary to resort to periphrastic explanations or cultural comment, e.g.

Його зустріли із хлібом-сіллю – He was met with the bread and salt of hospitality.

c) ellipsis of some elements in a SLT where they are considered redundant, but which have to be restored in a TLT since they are compulsory in it, e.g.

The current design will only have a single process train, as the volumes will be small.
– – За існуючим проектом передбачається лише одна технологічна лінія, оскільки обсяги видобутку невеликі..

d) stylistic demands in keepingwith the norms of TL, e.g.

A few minutes later nurse Davis, starched and curious, arrived – Через кілька хвилин увійшла сестра Девіс, вся накрохмалена, ледве стримуючи свою цікавість.

Omissions represent changes in a SLT which are opposite in nature to additions, though they are also qualified as complex lexico-grammatical transformations. Omissions result in dropping some elements from a SLT which may be caused by a number of factors:

a) the difference in combinability of SL and TL, e.g. English favours pair synonyms the origin of which has historical and cultural roots that have to be translated by single word correspondences in Russian. They are known as redundant synonymic cliches and are eliminated in a Russian translation, e.g. *in respect thereof or in relation thereto – пов'язані з цим*, *all matters and things – всі питання*.

b) well-established traditions of expressing some information, e.g. English unlike Russian prefers to use detailed descriptions of size, volume, weight and other measurements [Хайруллин 1997] which are looked upon as redundant in Russian and are usually replaced by their functional analogues, e.g. *Every inch of his face expressed amazement – На його обличчі був подив.*

c) the desire to create compression in an English sentence which is often achieved thanks to frequent uses of participial, infinitival, gerundial phrases, complex object, complex subject and other complexes, e.g. *Як повідомляється, цілий день понад 30 автомашин простояло без руху через снігові замети на дорозі. – Morethan 30 cars are said to have stuck twelve hours in snow drifts.*

Translation practice shows that omissions are more frequently made while translating from Ukrainian into English in contrast to additions that are usual when translating from English into Ukrainian.

3.4. Integral modifications are such changes which involve the whole semantic and formal structure resulting in radical modifications of the speech utterance.

According to S.P. Romanova and A.L. Koralova, integral modifications may take place on two levels: the level of a word-group and the level of a sentence [Романова, Коралова 2004].

On the level of *word groups* they usually occur when translating phraseological units which may correlate in SL and TL in sense, but differ in their form, e.g. *to be born with a silver spoon in one's mouth – народитися в сорочці; to set the fire to – пустити червоного півня.*

But more often than not we resort to integral modifications when rendering the whole utterances, e.g. *The others can go right along the road. – Інші нехай провалюють.*

The comparison of integral modifications with other translation transformations shows that integral changes are of a higher order as they are usually accompanied by some other transformations, such as concretizing or generalization of meaning, antonymic translation and some others that refer specifically to constituent parts of an utterance which are rendered in some modified form, e.g. *Have you ever in all your born days seen the like?— Ти колись за все своє життя бачив щось подібне?* (generalization).

*I had the right of way – Ви повинні були поступитися мені дорогою (*sense development*).*

It stands to reason that a translator may resort to integral modifications in two ways:

(1) when there is a ready correspondence in TL to render a given SL speech unit which presupposes a complete transformation. This is a case when dealing with various well-established notices, warnings, etc that have a fixed form, cf. *Video controlled – Ведеться відеоспостереження; Fragile – Обережно, скло; Mind your head – Обережно, низька стеля*.

(2) when a translator refrains from using a dictionary correspondence and thinks of a different way of translating a certain unit in a given context that he finds more appropriate for a given occasion, cf. *Except for those two things, life is nau-se-at-ing – – Без задоволень та влади життя – ко-ш-шмар*.

Thus in the former case integral modifications are regular and constant, while in the latter case they are individual, optional and contextual.

Lecture 8. Translation of patents

1.What is the patent?

2. The structure of the patent.

3. Linguistic peculiarities of the patents.

4. A list of set phrases (sentences) and their Russian equivalents.

1.What is the patent? In its narrow (legal) meaning the patent is a certificate issued to the inventor or his legal successor granting the exclusive right to dispose the invention. But in the sphere of technical translation patent usually means the description of the invention that serves as a basis of issuing the certificate.

2. The structure of the patent. The usual structure of the patent includes: the title (титульна частина), the name (заголовок), the preliminary specification, complete specification, the claim (патентна формула) and the illustrative section (ілюстративна частина).

The title part is the «head» (шапка) of the document. It contains data necessary for the patent registration: the number of the patent, the name of the country issuing the patent, the application filing date (дата подачі заявки), patent issue date, classification indices (класифікаційні індекси), the points of the claim (пункти патентної формули), the name(s) of the patent owner and his (their) addresse(s).

The preliminary specification is usually filed with the application (заявка) and when the patent is issued it is substituted by the complete specification. That is why the preliminary specification is not usually translated. Sometimes it is not even included into the patent.

The complete specification presents a detailed description of the invention. If there are drawings, drafts, technical drawings attached, it explains the numbers of the parts featured in the drafts. Sometimes the data about the inventor or the owner of the patent are given in the first passage of the complete specification.

The claim is the main part of the patent describing the new features of the invention in comparison to its previous analogues. In the English language patents the claim begins with *"I claim", "We claim", "What I claim is", "What we claim is"*. Every passage of the claim is numbered and consists of just one sentence no matter how long it is. It is the traditional style of the patent.

The illustrative section usually consists of drafts and working drawings. The parts (деталі) on the drawings are marked with numbers (figures) that are explained in the description. The legend (надписи) and dimensions are usually not given.

3. Linguistic peculiarities of the patents. The language peculiarities of the British and American patents the following ones:

1) a wide use of set phrases;

2) a great number of synonyms and polysemantic words;

3) the use of syntactic structures in the first person;

4) a wide use of bureaucratic language and archaisms;

5) the presence of a large number of words with the meanings different from those given in dictionaries.

Let's consider these peculiarities in brief.

The very first set-phrase the translator of patents runs into may have different forms:

An object of the invention is ...

It is an object of the invention ...

The invention has for an object ...

The invention aims at/to ...

The invention seeks to ... that are translated as "*Метою винаходу є ...*".

The same Ukrainian phrase can be translated by the verbs *"to comprehend", "tocomprise", "to provide", "to relate", e.g. The invention comprehends (comprises ....).*

Another set phrase "*пропонується конструкція*" is rendered by:

- *According to the invention there is provided a construction …*

- *In accordance with the invention there is provided a construction…*

- *In the present invention there is provided a construction…*

- *It is proposed to provide a construction...*

The phrase "з*апропонована конструкція*" has the following equivalents:

- *The construction according to the invention…*

- *The construction as disclosed by the invention …*

- *The construction in hand …*

- *The construction which is the subject of this invention…*

- *According to the invention, the construction …*

- *The construction of this system …*

Used in the "Complete specification" section are the phrases *"it will be appreciated", "it will be realized", "it will be recognized"*, that have Ukrainian equivalents *"ясно, що", "зрозуміло, що"*.

4. A list of set phrases (sentences) and their Russian equivalents.

Set phrases (sentences) and their Russian equivalents:

1. Assignor (assignee) to (applicant) – Патентовласник

2. Actual inventor – Винахідник

3. Field serial No ... – Дата подання заявки №…

4. My invention generally relates to the art of electroplating and more particularly to the new and improved method of … – Предмет винаходу, спосіб анодування,більш конкретно – новий удосконалений метод.

5. …which method forms the subject of corresponding Application ser. No … – цей спосіб описано у відповідній заявці за № …

6. The principal object of this invention is to provide an improved apparatus of this character – Мета винаходу – створення вдосконаленого апарату (приладу) цього типу.

7. *… still other objects of this invention reside in the provision of … – іншою особливістю винаходу є використання …*
8. *The object of the present invention is an improvement of the apparatus disclosed in my prior patent – Описуваний прилад є вдосконаленим варіантом раніше запатентованого зразка.*
9. *It will be appreciated by these skilled in the art… – Фахівцям ясно, що …*
10. *Alternatively, the device may be shielded in any convenient manner… – Або ж прилад може бути зациклений звичайним екраном…*
11. *In one prior art embodiment … – Відома конструкція, в якій …*
12. *While the invention has been described in the terms of the preferred embodiment, various modifications can be made as is understood by those skilled in the art without departing from the spirit and scope of the invention as set forth in the appended claims. – Цей опис є лише прикладом, що ілюструє ідею винаходу, виражену в патентній формулі, і допускає різні непрнципіальні зміни конструкції, що захищається.*

References cited in the file of this patent… – Матеріали використані під час експертизи …

The words "*spirit and scope*" in № 12 also present a typical patent formula. The word "*spirit*" may have the following synonyms: *character, contemplation (припущення), genus (вид, рід), heart, intendment (призначення) meaning, principle, purpose, subject, tenor (загальний зміст, сенс)*. The word "*scope*" has the synonyms *ambit, extent, precepts, range, sphere, terms, and realm.*

Synonymic word-combinations are:

- *To relate, to be, to comprise invention (application).*
- *To aid (to better, to improve, to increase, to raise) efficiency.*

Synonymic words:

недостаток	default, defect, deficiency, detriment, disability, disadvantage, drawback, fault, failing, failure, inadequacy, nuisance, objection, weakness …
to meet	to meet a requirement – задовольняти вимогу; to meet a disadvantage – усувати недолік; to meet a problem – вирішувати проблему;
	to meet an object – досягати мети; to meet a standard – відповідати стандарту; to meet a condition – виконувати умову.

Polysemantic words:

Disclosure – опис, винахід.

To provide – стосуватися, мати на меті, пропонувати, створювати, здійснювати, виконувати.

Words with specific meanings (not found in the Muller's dictionary):

the limitation of the claim – обсяг патентної формули

claim (sing.) – пункт патентної формули, патентна формула

claims (pl.) – пункти патентної формули, патентна формула (з кількох пунктів)

За пунктом	according to the claim in accordance with claim claimed in the claim as claimed in the claim as defined in the claim as set forth in the claim as recited in the claim

A very widely used bureaucratic word is "*said*". It should be presented in the Russian translation when it is necessary for the correct understanding – "*згаданий"*

e.g. of the said invention – згаданого винаходу.

нижченаведений; той, щододається	accompanying;
	accompanying description – нижченаведений опис; accompanying drawing – креслення(малюнок), що додається; accompanying claim – патентна формула

The words "*here*", "*there*" and "*where*" may also present a certain difficulty especially when used in combination with prepositions (very formal, archaic, bookish adverbs):

1. hereafter – below – нижче

2. herein – here – при цьому

3. heretofore – formerly – до останнього часу

4. hitherto – up to now – до останнього часу

5. thereafter – below – надалі

6. thereby – thus – через це

7. therefrom – from smth – з…

8. therein – in smth – з…

9. therethrough – through smth – через…

10. thereunder – under smth – відповідно…

11. thereupon – after which – згодом

12. whereafter – after which – після чого

13. wherefore – for which – для чого

14. wherein – in which – у чому, де

15. whereof – of which – чому, якого

16. whereupon – after which – після чого

17. wherewith – with which – чим

Lecture 9.

Conveying the names of companies, corporations, British/American publishing houses.

1. Traditionally, most names of companies (corporations, firms, etc.) are transcribed or transliterated and shortly explicated at the same time. This method is also employed when rendering the names of publishing houses, titles of most newspapers and magazines or journals, and of some public bodies. The translation may be performed either with the employment of a shorter or more extended explication. The former is practised when the name of the company (corporation, firm) is well-known or when translating at the language level; the latter is resorted to when translating at speech/text level:

Associated Biscuit Manufacturers - англійська компанія по випуску хрустких коржиків «Ессошіейтед біскіт менюфекчерерз;

T.Wall & Sons Co. Ltd. - англійська компанія по виробництву м'ясомолочних продуктів і морозива «Т. Волл енд санз компані лімітед»,

but:

General Motors/Standard Oil - корпорація «Дженерал Моторз/Стандард Ойл».

Ukrainian companies, firms and other state and private bodies performing the same or similar functions are translated according to the same rule (they are transliterated or transcribed and explicated at the same time). For example:

Київська фірма «Світанок» - Kyiv Svitanok civil services firm;

виробниче об'єднання «Краснодонвугілля» - «Krasnodonvuhillya Coal Production Amalgamation;

Укргазпром - Ukrainian Ukrhazprom natural gas importing and extracting body;

«Київоблпобутрадіотехніка» - Kyiv region Kyivoblpobutradiotekhnika home radio

engineering services body (firm);

акціонерне товариство «Білицька меблева фабрика» - Bilychi Joint-Stock Furniture Factory Association;

CD «Вента» (парфуми та косметика з Болгари) - Bulgarian Venta Joint Venture (perfumes, makeup);

Львівська взуттєва фірма «Прогрес» - Lviv Prohres footwear firm.

2. Translation of the names of British/American publishing houses is performed according to the same rules:

Associated Book Publishers - лондонська книжково-видавнича фірма «Ассошіейтід бук паблішерз»;

Cambridge University Press - англійське видавництво наукової та довідкової літератури при Кембріджському університеті «Кембрідж юніверсіті прес»;

Edward Arnolds (Publishers) Ltd. - лондонське видавництво навчально-педагогічної та наукової літератури «Едвард Арнольдз (паблішерз) лімітед»;

Harper & Row (USA) - видавництво різної літератури «Гарпер енд Роу» (США).

Not infrequently, however, the names of British (American, etc.) publishing houses are scarcely indicated or not mentioned at all. Nevertheless in Ukrainian translation the identifying noun *видавництво* should necessarily be added:

Penguin Books - лондонське видавництво «Пенґвін букс»;

Raphael Tuck & Sons Ltd. - лондонське видавництво літератури з образотворчого мистецтва «Рафаель Так енд санз лімітед»;

J.M.Dent & Sons Ltd. - видавництво підручникової та довідкової літератури «Дж. М. Дент енд санз лімітед»;

Slavic Gospel Press (USA) - американське видавництво Біблій слав'янськими мовами «Славік Ґоспел Прес»;

Randon House (USA) - видавництво художньої літератури «Рендом Гаус» (США);

Rand McNelly (USA) - видавництво шкільних підручників «Ренд Макнеллі» (США); Beacon Press (USA) - американське видавництво підручників «Бікон Прес».

Names of Ukrainian publishing houses are rendered into English similarly: with the corresponding identifying noun Publishers or Publishing House added to it: *видавництво «Український письменник» /»Дніпро» Kyiv/ - Ukrains'kyi Pysmennyk/Dnipro Publishers (Publishing House);*

видавництво «Музична Україна» - Muzychna Ukraina (musical works and notes) Publishers/Publishing House;

видавництво «Школа» - Shkola/Skola Publishers/Publishing House (primary and secondary school manuals, reference books, dictionaries);

видавництво «Либідь» - Kyiv Shevchenko University Lybid' Publishers (scientific literature and higher school manuals).

Special attention should be paid to the translation of the names of institutions, enterprises, geographical objects, etc., bearing honorary names. In English the honorary name precedes the enterprise/body, which bears it, whereas in Ukrainian/Russian it always follows the name of the enterprise/body:

Humboldt State College - Державний коледж ім. Гумбольдта;

George Washington Library - Бібліотека ім. Джорджа Вашинґтона; Lafayette/Longfellow College - Коледж ім. Лафаєтта/Лонґфеллло;

бібліотека ім. Котляревського - the Kotlyarevskyi library;

Національна бібліотека України ім. академіка Вернадського - Ukrainian Academician Vernadskyi National Library.

Note. Names of literary and scientific/peace prizes are mainly translated in two ways - with the preservation of the name which the prize bears or with the transformation of the noun into a corresponding relative adjective:

Nobel Prize - Нобелівська премія (премія імені Нобеля);

Pulitzer Prize - Пулітцерівска премія (премія ім. Пулітцера);

Taras Shevchenko Prize - Шевченківська премія (премія ім. Т.Г. Шевченка); Rylskyi

Translation Prize - перекладацька премія ім. Максима Рильського.

Care should be taken to avoid the stylistically unjustified expression «named after» which is to be used only in explanatory versions, as in the sentence «After Ukraine's gaining independence many state institutions were *named after our most prominent patriots* Hrushevskyi, Vynnychenko, The Heroes of Kruty, Petlyura, and many others.» Hence, the Lviv V.Stefanyk library, the Symyrenko Horticultural Research Centre and never «the named after» Symyrenko Horticultural Research Centre or «the named after» V.Stefanyk Lviv library. It must be repeatedly emphasized that the placement of the honorary name in English translations is strictly predetermined and can not be changed deliberately unless required by the speech situation (style) and content.

Lecture 10

MACHINE TRANSLATION, TRANSLATION MEMORY AND TERMINOLOGY MANAGEMENT

PLAN

1.Introduction

2. Translation recycling technology

3.Workflow

1.Introduction

Machine Translation (MT) is the use of computer software to translate from one natural language to another. Translation Memory (TM) offers the translator suggestions from previously translated material. Terminology can be integrated with both these technologies and the better the integration, the better the quality of the target translation. Both MT and TM approach terminology management from a similar perspective. They aim to give access to the right target language term promptly and ensure that the translator can do this with a great degree of confidence. While the translator may be generally interested in the same issues as the terminologist, the translator's main goal is usually quick access to the right term without too much extra research work.
We will examine MT and TM technology in relation to terminology management and the current practice in this field.

2. Translation recycling technology

The diagram in Figure 1 represents a simplified view of the currently available translation recycling technologies. By translation recycling we mean a technology which offers Machine translation, translation memory and terminology management re-use of previously translated content.

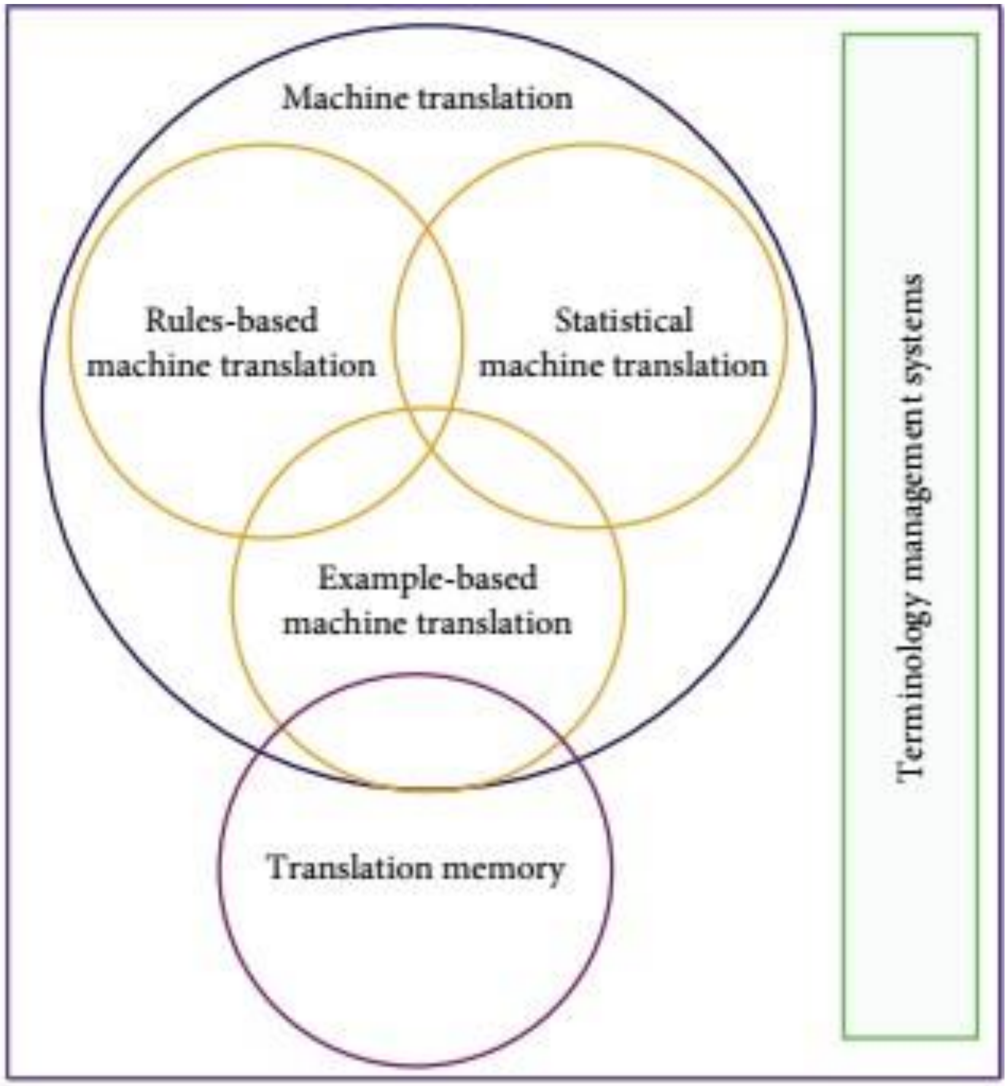

Figure 1. Translation recycling technology

MT was introduced in the early 1950s and there has been a lot of research and work done in this area. There are many different types of MT technology. These are:
1. *Rule-based Machine Translation* – which uses linguistic information about the source and target languages such as grammar and dictionaries for MT;
2. *Statistical Machine Translation* – which is based on information theory and uses statistical models to determine the translation output;
3. *Example-based Machine Translation* – which is based on using matching bilingual corpora where the software recognizes which sentence in one language corresponds to which sentence in another.

TM and MT are often presented as two completely different technologies. However, TM actually derives from the example-based translation methodology. Both these technologies are based on the same core idea of aligned segment or aligned documents if it is corpus based. They also use some of the same methods for aligning and retrieving text. Where they differ is that example-based MT takes a document and automatically translates it, while TM technology supports the translator who decides what goes into the translation. Another difference is that with TM there is more likelihood of the translator creating the TM himself, and therefore being more confident about the quality of the TM because he knows the source.

3.Workflow

The diagram in Figure 2 illustrates a typical workflow where a translator uses terminology with TM. This workflow is not intended as a model but as an example of how to approach using terminology with translation recycling technology. The workflow is divided into three sections:

1. Project setup;
2. Translation;
3. Quality assurance (QA) and delivery.

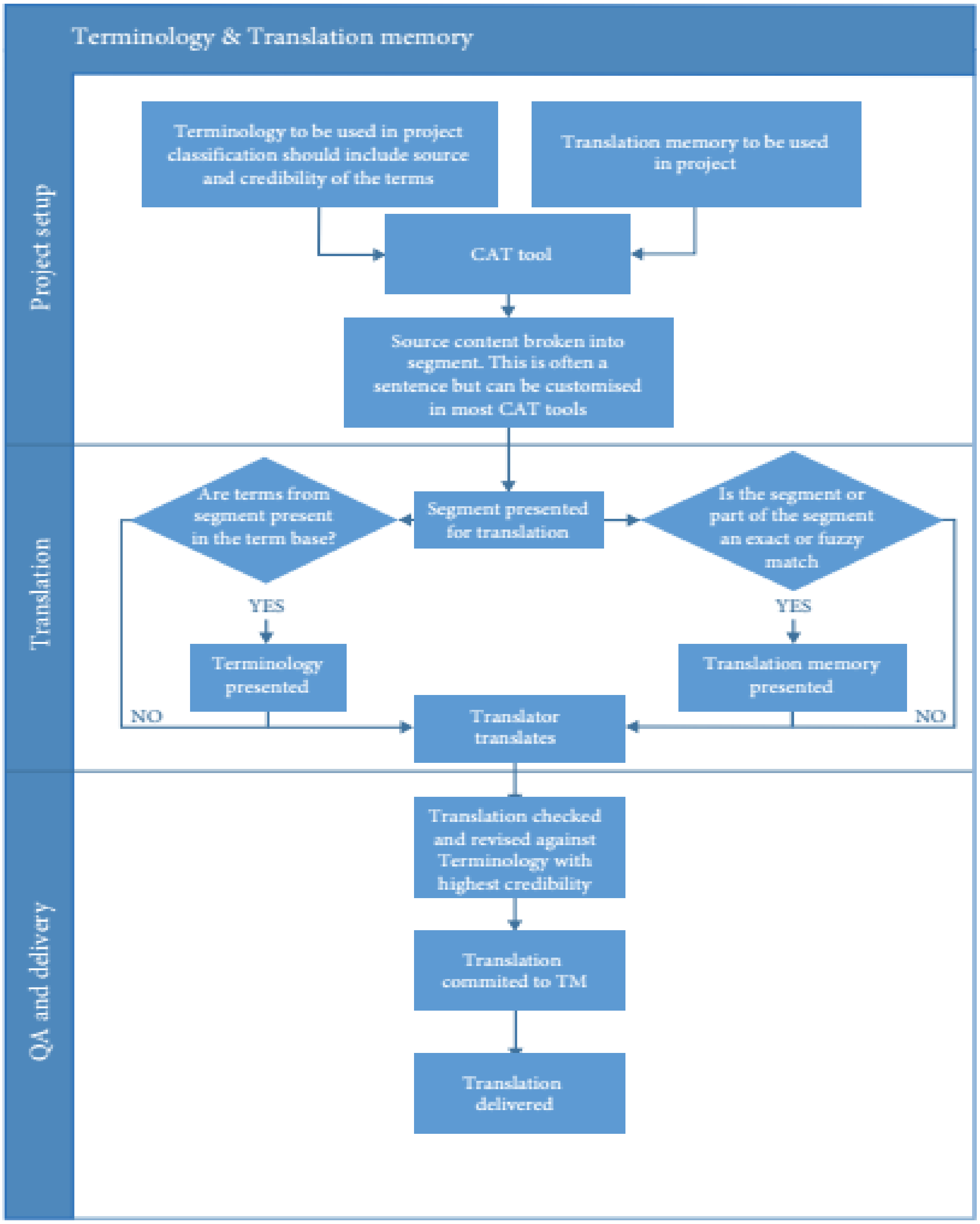

Figure 2. Translation and terminology workflow

3.1. Project setup

At the project setup stage either the translator or the project manager decides which TM or memories should be used and which terminology should be used for a given project. The majority of TM tools have a functionality which allows the translator to see results from TM and terminology which correspond to the source text segments and terms being translated. When the text is loaded in the TM tool it is broken down into smaller chunks called segments which the translator translates.

3.2 Translation

The TM then presents a series of consecutive segments for translation. The tool checks the currently highlighted segment and suggests results from the TM and terminology data base in the translation results window. When there is a conflict between the results from the TM and the terminology, the translator should have enough experience and competence to select the appropriate translation segment or term.

3.3 Quality assurance and delivery

Following completion of translation, the translator should then perform a terminology quality assurance check on their translation. The corrected translation should be the basis for updating the TM at the end of the project.
There are several diffrent possibilities for a translation process which supports the delivery of high quality translation.
One important point is that not all terminology should be treated in the same way. If the terminology comes from the client it should be treated as more reliable than

that which is stored in the TM. However, if the TM is from a very credible source and known to be reliable, the translator should use this instead of terminology from less credible sources. The diagram below shows how terminology could be classified on the basis of credibility status.

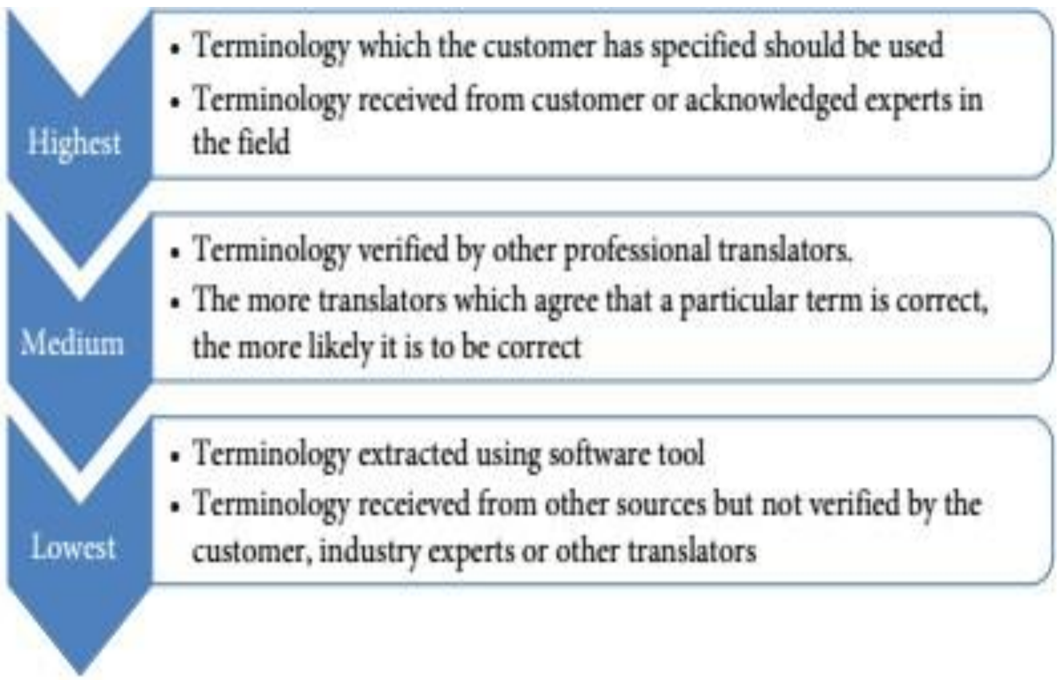

Figure 3. Terminology credibility

There are a number of important elements which should be considered when analyzing any translation process, in particular:
1. The translator should know what the credibility of the terminology on offer is;
2. It should be possible to ascertain if the TM is consistent with the terminology;
3. The translator should have access to both the TM and terminology corresponding to the segment being translated in the translation results window while he works;
4. The translator should be able to check the final translation and the TM against the

terminology data base.

3.4 Process involving machine translation

There are two ways in which MT is being used today. The TM tool can be integrated with an MT engine and the suggested translation for the highlighted segment can appear in the translation results window. The translator would use the MT input in the same way as he uses the TM input and he would decide which to use every time. The other possibility is for the document to be machine translated and then edited and corrected. The second method is usually the result of the need to reduce the cost and increase the turn around. Ensuring that correct terminology is being used is an extra step that adds to the cost and increases the time it takes to complete a translation project. In this MT process the terminology work is done prior to translation. If there are any terminological errors at the input, they will be reproduced throughout the process.

Mike Dillinger sees MT as an aid to the translator. He recommends a process whereby the translator first translates the known terms in the document in an automatic or semi-automatic fashion. The document is then processed using MT and post editing. This process is illustrated in Figure 4.

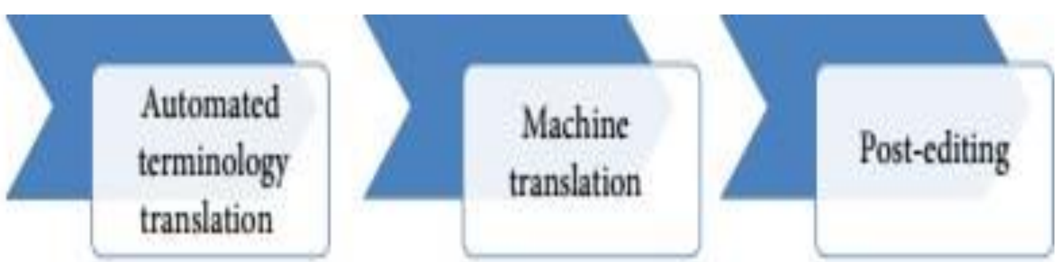

Figure 4. Terminology used with machine translation

The errors which are generated by the MT engine will be consistent and the translator will find that he will encounter the same errors after each MT cycle. Most MT engines offer a functionality that makes it possible to update or re-train the MT engine based on the results of the post-editing. This stage will include making any corrections to the terminology.

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  http://www.gsas.harvard.edu/academic/fellowships/essays.html (поради щодо написання дослідницьких проектів);

  http://www.staffs.ac.uk/services/library_and_info/reference.html (різноманітні віртуальні довідники — словники, енциклопедії, списки скорочень, популярні цитати та ін.);

  http://www.wisc.edu/writing/Handbook/AcademicWriting.htmI (довідник з наукового письма в різних галузях);

  http://www.kamts1.kpi.ua/sites/default/files/files/shchypachova_peculiarities.pdf

  https://benjamins.com/catalog/ata.vi

  http://jctranslations.blogspot.com/2010/04/scientific-vs-technical-translation.html

- навчальні посібники, довідники, методичні вказівки з дисципліни «Основи науково-технічного перекладу»

Методичне забезпечення

Висоцька Тетяна Миколаївна

ОСНОВИ НАУКОВО-ТЕХНІЧНОГО ПЕРЕКЛАДУ

КОНСПЕКТ ЛЕКЦІЙ

для студентів спеціальності 035 Філологія

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