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This international yearbook, as a periodical, includes scientific articles of Ukrainian and Chinese scholars on the problems of Sinology, Cross-cultural Communication, Pedagogics and Psychology: contemporary review. Odessa, Ukraine.
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The third issue of the materials represented by the Ukrainian and Chinese scholars are dedicated to acute issues of General and Contrastive Linguistics within the Chinese, English, Ukrainian and Russian languages; linguodidactic problems of teaching native and foreign languages within polycultural educational space; peculiarities of cross-cultural communication in geopolitical space alongside with educational aspects of professional training of future specialists under conditions of multicultural environment.

The given articles may be of use to researchers, graduate students, postgraduates and practising teachers who are interested in various aspects of Sinology, Cross-cultural Communication, Pedagogics and Psychology.

SECTION I

TOPICAL ISSUES OF DOMESTIC AND FOREIGN TRANSLATION STUDIES

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PERSPECTIVES OF MACHINE TRANSLATION

The research is devoted to the problem of machine translation (MT) characteristic in nowadays world. The requirements to correct translation are named, the disadvantages in MT systems are described, the attractivity for consumers and conditions to perfect the MT techniques are enumerated.

Key words: *machine translation systems, verbal text, output variant, semantic analysis.*

Translation from one language into another was promoted by the needs of human communication: it serves both cultural (for example, mutual acquaintance with literature of peoples) and utilitarian aims (communication). Translation of professional texts (economic, legal, technical) is in great demand in the last decades. The main function of translation carried out is informative. Today definite success in solving some linguistic problems and some progress in the area of high-tech

introduce new approaches in translation, one of which is the use of machine translation technologies [1, 2, 3, 4].

In modern theory of translation the term "a machine translation" (MT) is understood at least in two senses. A machine translation in a narrow sense is a process of translation some text from one human language to other, processed by a computer alone. During this process a verbal text is introduced at the entrance of a machine and a translated variant in another language turns out to be at the output. A machine translation in wide sense is an area of scientific research which is the adjacent field of linguistics, mathematics, cybernetics and aims at constructing the systems capable to cope with a machine translation in a narrow sense.

One of the widespread methods used in machine translation is the principle of adequate regulations. This approach must be based on the principle of correspondences typology on the one hand and the problem of language levels interaction in the translation process, on the other hand, is to be solved.

If correspondence in a translation is interpreted as some generalized translated sense, treated, for example, as a unit of translation in some standard language, the translated correspondence is some unity within the framework of two human languages. It can be multileveled quite like a unit of translation, i.e. to involve different linguistic levels (lexical, grammatical, stylistic). Thus the translated correspondences must provide the transition of a text in one language into the text in other language, in this case a semantic invariant is to be preserved.

The machine translation system usually contains linguistic descriptions of input and output languages, i.e. the text in the original language and its translation in the result, and an algorithm with the help of which this translation is executed.

Due to its perspectives machine translation attracts much attention of modern researchers (linguists, programmers, cybernetic engineers). It is necessary to name the basic advantages of MT:

high-rate of translation. The use of machine translation system allows shortening the time, required to translate a text;

low cost of translation. In contrast to professional translators, whom we are to pay money for every translated page, MT system, without doubt, is a reliable and effective help;

confidentiality. Many users regularly utilize the systems of MT for their personal letters, in fact not everybody is ready to trust his personal correspondence or financial documents to a translator.

The fact that MT cannot cope with definite semantic and structural problems does not make MT hopeless. There are two basic stimuli to develop research and perfect the process of machine translation systems in the modern world. First – a scientific one: formalization of linguistic information and development and verification of the offered algorithms efficiency, as a result new theoretical approaches are to appear. Second – a social one, it is conditioned by the increasing role of machine translation in modern world; it is a necessary condition to provide interlingual communication. Universality of MT is to be mentioned. As a rule a professional translator specializes in translating the texts devoted to a certain subject. A program - translator is to manage translation of the texts from different areas: to choose the correct translation of special terms it is enough to introduce the program needed.

It should be noted that under the circumstance of machine translation competing a man-translator, the demand on translators has not decreased. In spite of the fact that MT is not perfect machine translation has occupied a significant place of the consumers market, users exploit positive qualities of MT above all things - speed. A skilled man-translator gives out in average 2-3 typewritten pages a days, and computer possibilities are almost unlimited. In a number of cases even professional translators utilize MT, mainly, as a simultaneous dictionary.

The largest user of MT is small and middle business. While computers are accessible to all businessmen, a human translation cannot meet their requirements. Today when many countries actively integrate in a world economy MT is used not so much for socializing with foreign partners but for the need of technical documents translation and for getting the information of an electronic kind.

The aims of machine translation put the great number of different problems before a developer. The decision of technical problems wholly depends on professionalism of a developer, and is relied on those who see non-trivial ways of solving the task. There are three areas which cause difficulties to MT systems:

• problems of polysemantics;

• problems of structural and lexical distinctions between languages;

• grammatical constructions, consisting of a few words, such as idioms and combinations of words.

Polysemantics exists in all of human languages. Cases, when a word can have several meanings are rather regularity than an exception. It complicates the work of MT that can come to an ambiguousness result. For example, if a sentence consists of two words and each word can have two meanings, it can be translated in four different ways. Naturally, a man can consider all variants of translation to choose only one. The only suitable decision in this case is to do the process of translation interactive. If such ambiguousness appears, it will be necessary to ask a man, sitting at the computer, what variant of translation of a word or a sentence he considers most suitable.

Very often in the process of translation when dealing with two distant languages there comes a problem of "linguistic blanks". It turns out that in one language it is necessary to use the whole sentence, to express the concept embodied in one word in another language. The words that cannot be adequately translated into other languages refer here too: e.g. English "cottage", Russian «дача» (summer "residence"). A translator has to use a neologism or to bring an explanation over.

Idioms and combinations of words are one more complication for the systems of MT.

However, in spite of being not perfect MT gains popularity among users. A number of machine translation systems are widely exploited. Here are some most known systems: SYSTRAN, developed and supported by the company SYSTRAN Software Inc. This system serves machine translation at the commission of the European Union. The volume of translations makes about 2,5 million pages a year,

the system of SYSTRAN translates from English into the German, French, Spanish, Greek and Italian languages, and also from French to English, Spanish and Italian. There is a row of the practical systems developed in research center of Grenoble (France) in practical exploitation, system of CULT (Hong Kong, now PEOPLES Republic of China) and some other. At the market of commercial machine translation the systems of such firms as Logos Corp., Globalinc Inc., Toshiba Corp., CompuServe and other are offered, the Saint Petersburg Company PROMT is to be mentioned, it produces the improved version of the popular system Stylus under the name PROMT 98.

It should be noticed that actually all the MT systems are carrying out translation only at the level of superficial syntax, which is regarded as an effective model of sense formal presentation by the transmitter; a language-mediator "interlingua" is not yet developed, though for some separate narrow industries such models are already built (for example, METEO and LingoWare). Specialists bind the construction of the adequate MT systems to development of artificial intelligence: a machine will be able to translate from one language to other, when it learns to think like a man. Another way of MT perfection is to make the corps of correspondences in two languages. It is possible to suppose that such works are conducted but activities of different centers are not co-ordinated, and that is why a result is insignificant.

Criticism of the MT modern systems is based on genre narrow-mindedness (to teach a machine at first to understand quite simple, specially selected texts) in practice resulted in the fact that a human language actually gave place to a limited number (and extremely primitive) of sublanguages in separate industries. Thus, the best result attained belongs to the Canadian system of TAUM-METEO, fine executing the task of the Anglo-French translation of weather reports. The simplest type of the systems are such as automatic phrase-books for tourists, offerings to the user various «menus» of standard questions and answers in two or a few languages.

Keeping in mind all limitations and abilities of MT it is possible to formulate the aims of its application (foremost, it corresponds the ideology of the Internet as a

facility to «navigation in an information sea») that allow to talk about organic structure of the systems of MT in the general process of forming the global informing society.

The prospects of machine translation development are related to further development of translation theory and practice, both machine and «human». As to theory development the results of comparable linguistics are important, the general theory of translation, theory of appropriate correspondences, methods of knowledge representation, optimization and perfection of linguistic algorithms. New and more effective dictionaries including wide linguistic information, the strict theories of compiling terminology vocabularies, theory and practice of sublanguages functioning will help to promote the quality of translation. Translation oriented formal grammars will enable to optimize the algorithms of finding the adequacies in a definite communicative situation which can be described within the framework of the properly applied theories presenting some piece of knowledge. Finally, new possibilities of programming and computer engineering will contribute to perfection and further development of machine translation theory and practice.

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