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TECHNICAL WORDS, CORPORA AND TRANSLATION STUDIES

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The present study aims at offering a short insight into the applications of corpora in specialised translation together with predicting future advances in text analysis and translation. Nowadays, given the scientific and technological progress, as well as the higher and higher complexity of the cultural, social and political context we live in, the translator's task of translating specialised texts becomes more and more difficult. So are the obstacles (s)he has to face and overcome in crossing the linguistic and cultural borders. Thus, one of the aspects which are worthwhile mentioning is that most of the new terms and collocations which are very frequent in the contemporary literature specific to a field are not included in the bilingual or multilingual dictionaries, the translator's task being so much the more complex and challenging.

As far as the English language is concerned, the term *technical* is not strictly used to refer to 'the language of techniques', but it also includes *specialised words*. Scientific and technical translation taken as a whole is an "error", as Byrne (2006: 7) states, because scientific translation does not imply the same strategies and the same difficulties to be overcome by the translator. Thus, not being the same, they cannot be compared on an equal footing. "Scientific translation relates to pure science in all of its theoretical aspects, while technical translation relates to how scientific knowledge is put to practical use" (Byrne 2006: 7-8).

Both written and spoken materials specific to a certain scientific or technical domain represent a corpus. A large body of text is considered a corpus. During the last decades, studies in corpus linguistics have advanced, the term 'corpora' being also associated with machine translation.

As a corpus-based research method, componential analysis has been widely used by researchers and translators in studying texts, providing useful lexical data necessary for assigning adequate meaning to lexical items. However, presently, "we are at the threshold of a new era of English language studies" (Crystal 2003: 436), this being due to the latest technological progress in the field. Therefore, we can state that a new type of interaction has been created: text-human-computer interaction. Corpora data bases bring further information in language and text linguistics, facilitating rapid access to whole texts or to whole sections of texts for linguists, translators and learners of language. Translators should, therefore, proceed to a careful analysis of the text having as a helpful tool the corpora word banks which may be a starting point in the attempt of providing equivalence on the linguistic level as well as transferring meaning in the target language (TL).

Corpus linguistics research developed with *Survey of the English Language*, directed by Randolph Quirk, which was the first corpus of the English language data that was compiled starting with the year 1960 (Crystal 2003: 438) and reinforced in the 1980s, through the development of computer language corpora banks or machine-readable corpora such as Brown corpus in the 1960s by Henry Kucera and Nelson Francois (Kirsten 2004: 85).

Nowadays, linguists are offered tools that were not even dreamed of 20 years ago. Computational technologies facilitate text study and rapid access to a multitude of texts in

different languages. Breaking language barriers and offering access in the era of technology has raised the interest in automatic and semiautomatic translation.

As early as the year 2001, Kilgarriff has raised the issue of corpora comparison and invokes the need for strategies for describing and comparing corpora (Kilgarriff 2001: 232). Kilgarriff (2001) initiates a model for measuring corpora and finding similarities in different varieties of text from selected corpora. Since then, the interest in statistical approach and machine translation has increased rapidly leading to well designed corpora addressing the specific needs.

As Newton (1992) argues, computer assisted translation can be very efficient, but it also has faults, being unable to compensate for human errors. In addition, it can never render the expressiveness and subtleties which only the human translation can. Scientific and technical texts can be handled efficiently and profitably using computers (Newton 1992: 7-8) due to the simple syntax they contain and the lack of deviation from language norm.

The possibility of using Machine Translation in translating technical texts was done through technical devices such as PACE (Perkins Approved Clear English). MT has been proved to be useful in translating texts that contain a simple syntax and no deviances from the norms (Newton 1992: 47-48).

Moreover, the output of MT requires in most cases post-editing and revising by a professional translator in order to render the right interpretations for the coherence of the text and in order to make the right choices in terms of grammar, semantics, pragmatics, register and style. This is because it is a well-known fact that computers have great difficulties in extracting the right equivalent from the dictionary.

Terminology management is vital in translating specialised texts. As a matter of fact, the term itself English for science and technology presupposes a stock of vocabulary items, grammatical forms, and functions which are common to the study of science and technology. However, computer assisted translation can be done only by backing it up with the skilful eye of a linguistically and culturally competent translator, since any stretch of language may offer one type of difficulty or another, if not more.

On this line of thinking, it is almost impossible to work out hard and fast rules for translation covering all subtleties and difficulties, but a minute dynamic contextual analysis, a translation – oriented text analysis (Croitoru 1996: 133), followed by a translation evaluation is necessarily made.

In general, translation difficulties involve the difficulties of learning to use a language both receptively and productively, which is rooted in the distinction between productive (encoding) and receptive (decoding) linguistic performance and competence. In particular, the translator may be taken in by some surface similarities between the two languages in contact in cases where there is none, for example where cognates occurring in both languages are not translation equivalents, i. e. the so called false friends.

Besides, it is obvious that the goal of semantics is to explain how the sentences of a language are understood, interpreted and related to states, processes and objects. Of the two necessary orientations towards the description and explanation of meaning, i.e. 1. an understanding of the relationship of form to form within the code, and 2. an understanding of the formal structures of the code in the communicative context of use, the translator particularly needs the latter.

This is all the more important as the language for science and technology is a restricted repertoire of words and expressions selected from the whole language because that restricted repertoire covers every requirement within a well-defined context, task or vocation. On the one hand, this functional language uses specific vocabulary items that do not occur in other fields, but the syntax is not restricted.

On the other hand, there are vocabulary items occurring in other functional languages but with a (completely) different meaning. Mention should be made that a large number of

words belonging to the general language are widely used in English for specific purposes in general, and in English for science and technology, in particular. Such a language is used for the unambiguous transfer of information, being related to a specific field, precise, concise, unambiguous and neutral, since scientists and engineers are very much concerned with phenomena and processes belonging to real life.

It is a well-known fact that translators of the language for science and technology have to deal , besides the specific technical terms, collocations and structures (i.e. patterns that are frequent only in technical writing), with derivational processes, compound nouns, transferred terms, foreign words and abbreviations.

Indeed, the translator has to operate with lexical items and grammatical structures at various stages in the translating process. Thus, phraseology and the collocational and grammatical patterning of the target language text (TLT) must conform to the target language (TL) norms, so that the translation does not sound foreign or clumsy, and the meaning is preserved. Differences in collocational patterning between the two languages are not a question of using a different verb with a certain noun, but they can involve completely different ways of describing something.

Above all, the target text (TT) has to be very precise, concise and fluent in order to be accepted by the target readers (TRs) which are the 'end-users' who need to know everything about the respective equipment, apparatus, phenomenon, etc.

All this may be considered as disadvantages of machine translation, because it cannot observe such norms. As a matter of fact, an agreement to this type of translation anyway implies some sort of awareness of the deviances from language norms. To all this, there is wide agreement to machine translation and computational linguistics.

The research in the field of machine translation and computational linguistics has evolved in Romania in the last two decades. The pioneering steps in this field are owed to the Eurolan Summer Language Schools that organised seven editions in Romania starting with the year 1993. A great contribution in the field was the research done by the Faculty of Informatics at *Al. I. Cuza* University of Iaşi with the support provided by the Artificial Intelligence Institute of the Romanian Academy in Bucharest which has initiated a data base of the Romanian resources in the field since 2002. The necessity of an up to date data base of English-Romanian, Romanian-English terminology is more than obvious in order to facilitate the translator's research work.

Prospects in Translation Studies

There have been many approaches to translation, from Chomsky's cognitive approach to the Hallidayan approach involving three macro functions of language (ideational, interpersonal and **t**extual) (Anderman 2007: 55) which are prevailing in any text analysis, especially in translation – oriented text analysis.

Furthermore, linguists are offered useful tools in studying language by corpus linguistics a fast growing field of linguistics. One of the aspects of utmost importance is to find similarities between languages through specialised software. This is so much the more useful as research in the Romanian corpora is only at the beginning. In this respect, research progress would be of a great use.

Hence, a new perspective on translation has placed the translator in an interesting position as a mediator between source text - machine translation - target text. The latest developments in the field (audio translation software) completely exclude the translator/interpreter from this equation. We can firmly state that in a computerised technological era computer assisted translation will be the realm of translation studies and linguistics but it cannot completely replace the bilingual and bicultural professional translator.

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