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A HALF-YEARLY REVIEW OF TRANSLATION STUDIES

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Founder Editor:
Ujjal Singh Bahri

Editors:
Harpreet Kaur Bahri
Deepinder Singh Bahri

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Medical Terminology and Medical Dictionaries

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ABSTRACT

This paper mainly deals with the correlation between medical translation and translation-oriented theories. Accordingly, it aims at illuminating both professionals and trainees in what way translation-oriented theories help to improve the quality of domain specific translations, and what terminological barriers are waiting for them in medical translation. Therefore, it, on the one hand, addresses amateurish translators who can not bridge the gap between theory and practice; on the other hand, it concerns the professional linguists who are equipped with terminological jargon, but deprived of translation competence. Relatedly, it first identifies the position of medical translation in the light of translation-oriented theories; next, a micro-scale corpus based model is developed to question the conventional outlook which limits medical translation with terminological knowledge.

Key words: Text Typology, Medical Terminology, Corpus-based Model, Comparative Analysis, Translation Procedure

MEDICAL TRANSLATION AND TERMINOLOGICAL PROBLEMS - INTRODUCTORY REMARKS

Translation Studies as an interdisciplinary field cannot isolate itself from other disciplines. However, as an independent field it should approach other disciplines in the light of theories posed by the translation studies itself. In other terms, it is only when it achieves to contribute to other fields, can it be claimed that it fulfills its function in scientific arena. Yet, it is not as easy as it looks. There are two reasons for it: theorists as well as practitioners can not set up correlations between theories and practice; next, the researcher may be influenced by the established misconception of translation as a secondary activity and would rather remain silent and accept the hegemony of other fields

even in linguistic issues related with translation. It may arise from the academic identity of translators in the past, when translations have played a great role in importing domain specific knowledge. Therefore, the line between original and translation may have appeared a little fuzzy. However, today in face of huge amount of knowledge accumulating in the field, academicians cannot be expected to act as translators as it used to be before and after the foundation years of Republic.

Under these circumstances, it is not the academicians, but the translators who should assume the task of professional translators. On the other hand, a professional translator cannot be expected to specialize in the field of medicine. What he/she should do is developing such research methods and making use of such translation tools as to serve for professional ends. Although a translator can obtain most of the knowledge from intratextual research, most of the problems arise from discrepancies between terminological dictionaries, which puts the translator in a secondary position in comparison with professionals.

It is with these concerns, a micro-scale corpus-based study on medical dictionaries is launched to shed light on terminological problems of translators. The model is developed in such a way as to bridge the gap between theoretical knowledge acquired from translation theories and the medical dictionaries in translation market. However, it can be extended in such a way as to concern terminological dictionaries in other fields. Therefore, the case study aims at not only evaluating the utility of medical dictionaries from the point of amateur translators, but also at enhancing translation competence of trainees. Accordingly, it sets out from descriptive theory of Gideon Toury, which is based on "comparative analysis". It is composed of three phases: initial phase, operational phase and evaluation phase respectively. The main bibliographical parameters of the research are discussed and identified in initial phase, which may also serve as a bibliographical data for researchers; whereas, operational phase is directly related with the choice of terms considering the "partial" and "comparative" nature of descriptive studies. In the last phase, called evaluation, data obtained from the research are discussed in such a way as to rationalize and disclose the way Turkish scientific tradition adopted in loaning foreign terms, which would also question the conventional outlook which limits medical translation, or in broader terms translations in specific fields, with terminological knowledge.

TYPES AND FUNCTION OF MEDICAL TEXTS

Since medicine is a field related with application, translation in this field can not thought to be limited with direct transfer of knowledge, or with terminological knowledge. However, differences between the languages, cultures and text type conventions make the task of translators difficult to provide the same *communicative interaction* in translations as in source texts. In this case most of the translations will result in source-oriented translations which can only fulfill the metatextual function of documentary texts without any regard for target text addressee. This will cause a dilemma between the practical side of the field and translation, since medical translations like that will fall short of the expectations of the readers in terms of putting transferred knowledge into practice; they just act as documents isolated from the field of application. It is for this reason that translators should question the functionality of medical texts in target language and culture. This comes to mean that they serve the same pragmatic ends as non-translated texts do. To achieve this end, translator inescapably use reader-oriented strategies to cover target culture norms and conventions of text-type (Pilegard 1997: 159-184). From this point of view, functional theories help us see the wide range of text-types in medicine, namely; reports, medical research papers, disease reviews, reports, popular medical text, encyclopedic texts, brochures, prospectuses, medical dictionaries, manuals and prescriptions. Within this wide spectrum of text-types, medical translation can not be confined to serve for the ends of documentary translation which fulfills nothing more than metatextual function in target culture. If this classification is to be made in the light of functional theory posed by Christiana Nord, translated texts in the field of medicine are included in *instrumental translations* in terms of their function. In other terms, they should fulfill referential, expressive, appellative and phatic function with regard to the text types mentioned above. In this case, as opposed to the procedures applied in documentary translation as interlinear, word-for word or philologic translation, the translator has to focus on register, the constituents of which are field, mode and tenor of translation. That is to say, the translator should consider the information load and functional side of medical texts in such a way as to retain the referential, expressive, appellative functions of the source texts, which Nord calls "equifunctional translation" (Nord 1997: 43-66)!

However, according to "Skopos Theory" it should be borne in mind that the main determinant of text type is the *skopos* of translation task. In other words, it is up to the terms of agreement between the commissioner

and translator. It is only after such an agreement that translator can decide on constitutive elements of translation. Accordingly, translations assume functionality, only if the translator manages to employ the appropriate register according to the *skopos* of translation. For example, language between the doctor and patient differs from the language between the doctors, or from the formal tone of research paper language (tenor). Similarly, the medium of translation has an effect on the translator to employ different strategies (mode). If a translator translates a domain specific article to be issued in a popular magazine or in a medical text book, he/she has to change his strategy (field/domain)², and may use less professional jargon than in medical Journals. That is to say, translator as an expert decides the social, spatial and temporal relationship between the language users (professionals, translators and readers) and language use. However, the information load in medical texts and the established notion of domain specific translation are binding factors for professional translators to act as experts in this field of specialty. In this case, professional linguists who are specialists in their own field of study, but not in translation studies take the place of professional translators as experts, and determine the standards of translation market. It may be for this reason that Newmark bases text-typology on the use of medical terminology (Vermeer 1996: 11-16). Accordingly, Newmark makes such a taxonomy to classify text types in technical language as well as in medical language as a sub-field technical language into three groups: academic, professional and popular. If the terms in the text are from Latin or Greek origin, the text is called *academic* (e.g. Furunculosis orientalis); if terms are professionally used, the text is called *professional* (e.g. Leishmaniasis, avian flu or rubella); Lastly, if the term is culture specific, the text is called *popular* (e.g. oriental sore, bird's flu or German measles) (Newmark 1988: 152-153). Although this way of classification is consistent with the standards set but translation market, it poses drawbacks from the point of Translation Studies:

1. Newmark has based his classification on lexical knowledge, yet he has set up correlation neither with text-type specific text analysis, nor with translation oriented text analysis. Although terminological jargon is related with tenor of translation, such a classification is limited with terminological knowledge. This may arise from the widespread misconception that professionalism of translators in specific fields is related with terminological knowledge, which would reduce professionalism of translators to terminological knowledge; in other words, it means toning down such a complex process as translation to

just a mechanic operation of transferring as opposed to two procedures he has suggested in the beginning of his book, namely: semantic and communicative translation (Newmark 1988: 20). It is especially in medical translation that he has assumed such a micro-scale translational behavior as opposed to other specific fields. Although he has given both semantic and communicative versions in the fields of economics, literature and political sciences, he has limited medical translation only with semantic translation. In other words, he analyzes the text only from the pole of source text, then he has touched on the 'particular problems' related with medical terminology (Newmark 1988: 234-259).

2. Identifying the *skopos* and translational problems on source-text will result in an incline in the number of source-oriented translations. Of course, source-orientedness may be a *goal* in itself, but we can not limit medical texts with only referential function considering the wide range of text types and the pragmatic function of translations in the target culture.

3. Lastly, classifying text-type in terms of terminology in the same way as the professionals do may also lead to the questioning of the mission of translation studies. According to the recent target-oriented theories, one of the basic missions of translation is to disclose the richness of different languages and cultures. However, globalization trends in the world has led different cultures to agree on universally accepted standards. For example, most of the terms used in academic translation are directly transferred to target language in face of rapid pace of accumulated knowledge in the field (e.g. Cancer, AIDS). In other words, while information age and globalization facilitate the influx of foreign terms by the help of modern technology, they have caused a chaos in medical terminology. On the one hand, globalization has contributed to the dissemination of knowledge throughout the world, and thereby, it has helped to bridge the gap between professional, academic and daily language; however, it starts to eliminate textual conventions which reflect the cultural, literary and linguistic identity of countries. Undoubtedly, it results in disregarding the cultural and linguistic factors for the sake of retrieval of knowledge. As a result, Anglo-American convention is taken as a model for textual features. Consequently, lexical gaps (barriers) caused by different users of language (tenor) have narrowed down to such an extent that translators begin to overlook the textual features of medical translations. This inescapably direct the focus of translators on terminology in place of textual features.

It is for this reason that a micro-scale corpus based model on medical dictionaries is developed to illuminate the chaos experienced in medical language, and shed a light on the inescapability of cooperation between the professional linguists and translators.

A CORPUS-BASED MODEL ON MEDICAL DICTIONARIES

Method

The micro-scale corpus study is based on "comparative analysis" as posed by Gideon Toury in his "target-oriented translation theory". Therefore, a randomized method has been used in the election of dictionaries in consideration for the indirect and partial aspect of empirical research. The model is composed of two parts. The first part is related with bibliographical entries to set the correlation between the bulkiness of dictionaries and information load; whereas the second part is related with translation-oriented outlook on medical terminology so as to raise both the awareness of amateurish translators and professional linguists. Therefore, the terms are selected in such a way as to set up correlation not only between functional theories of translation and domain specific knowledge, but also to disclose the relationship between textual features and terminology. The data obtained from case study are subjected to "comparative analysis" to reach a consensus on cooperation between the professionals and translators (Toury 1995: 34-35). This study on the model is "retrospective", since it studies three popular medical dictionaries in the market as objects of study: in other words, it studies dictionaries which are issued in the same period. It has two advantages: first, these dictionaries are easy for access; next, such a study provides students with the opportunity of assessing the reliability of their dictionaries in the act of translation. From this point of view it can be claimed to be a simultaneous research. However, the model can also serve for the ends of translation-oriented text analysis by adding two variables; namely, genre and goal of translation³. However, within the limits of this paper, the field of the corpus-based model is narrowed down to obtain sound data from algorithmic tables below. Within the light of this way of reasoning, the corpus-based model starts with "the preliminary norm" below:

"The medical dictionaries are exhaustive and reliable enough to overcome lexical barriers of professional translators"

In other words, in this corpus study, the correlation between the size and coverage is tested to assess the reliability of dictionaries from the point of

trainees who have a recourse to medical dictionaries without questioning them from the point of textual conventions of target language. In fact, the role of terminological knowledge can not be denied in terms of its determinant role on the register from the point of domain specific text conventions. It may be lack of this piece knowledge on the part of the amateurish translators that cause them to fail in domain specific translation. As a result, the following model is developed to help trainees gain consciousness in medical translation.

Phase 1: Basic Bibliographical Entries⁴

The model is divided into two parts. The first part covers data related with bibliographical entries. The second part is related with the presupposed knowledge on translation studies to test the correlation between the size and reliability of dictionaries. Therefore, first variables are identified and defined as something that change within a given range of options, or values (Williams & Chesterman 2002: 83-101). Accordingly, they are arranged in such an *algorithmic flow* to provide correct entries to be testified by numerical data. In some cases, ambiguous options are omitted deliberately to obtain true and systematic information from the records considering the qualifications and the information level of the recorders. The following variables and values are considered universals of translation, but it sometimes takes a long time to reach a consensus on the accurate names of variables and values because of the terminological chaos experienced in the field of translation studies in itself. For example, most of the related terminology on translational procedures is beyond word level, namely at textual level. It is for this purpose that all the variables and the related values are discussed in the light of linguistic theories of translation. As a result, the following table has come into being:

Author	The author of the dictionary
Source	The name of the source
Year	Year of publication
Place/Name of Publishing House	Place and name of publishing house
Language	Gives information whether it is a monolingual or bilingual dictionary
Number of Pages	Numerical data
Appendices	It covers introduction, appendices on prefixes or suffixes, notes on medical acronyms etc.

Identity of the author	It is related with the identity of the author to observe its consistency with the above-mentioned variables. Values: Layman, academician, professional
Editorial Board	Values: Existent/non-existent
Identity of the Editorial Board	Values: linguists, academicians, professionals, or mixed
Addressee	Values: Students, professionals, academicians
Field of effect	Values: Academic, professional, General
Number of Edition	The number of editions

Table 1. *Bibliographical Entries and Variables*

According to this table, the exhaustiveness of dictionaries are determined by such factors as: the size (the number of pages), the existence of appendices, the number of editions, both the identity of the author and the editorial board and lastly the credibility of the publishing houses. The term "exhaustiveness" in the first phase covers two concepts, namely; bulkiness and popularity. Therefore, while the first three sub-meters are related with the size, the next three sub-meters reflect the criteria for reliability. The data obtained from this table can be called the discovery procedures, since the second part of the model is arranged in such a way as to justify or falsify the findings in the first part.

Phase 2: *Operational Phase*

In consideration for "the partial" and "indirect" nature of empirical study, standards are set to direct the course and coverage of research. Besides, there are some constraints arising from situational conditions related with the qualifications of the researchers and coverage of corpus study. Accordingly, we can list main constraints as *coverage, duration, languages* and *external access* to the dictionaries. Since measure of reliability is the most important factor in the study, we limit it with "English-Turkish" or "Turkish-English" dictionaries. Next, comes the issue of "coverage". Since all of the terms can not be studied in a give time, it is decided to base the study on the textual classification Newmark has made for technical texts. In other words, the presupposed knowledge on translation studies helps us to demarcate the borders of corpus study. From this piece of knowledge, two variables, which are the main constituents to direct the course of the study, are inserted, namely: "type of the term" and "translation procedure".

In other words, both variables are the "functors" to set up the relation between the bulkiness and reliability of dictionaries. Accordingly, the researchers presupposed theoretical knowledge help to deduce the type and translation procedure from Turkish equivalents in the dictionary, which is also consistent with the main principle of "target-oriented" theories in terms of concentrating the study on the translated version of terms. This comes to mean that the data obtained from the terms will not only disclose the correlation between type and procedure, but also submit data on features of medical dictionaries in Turkey. Accordingly, the values of the type of the term are listed as: *eponyms, register mismatched terms, loan terms, collocations, culture specific terms, neologisms, acronyms, established terms*; whereas on the scale of procedures there are such values as *explanation, derivation, naturalization, direct transfer, modulation* (Newmark 1988: 151-161).

TYPE OF TERMS AS PARAMETERS

It is only after the standards of variables are determined can this model be put into practice. At this stage, revising concepts of translation studies will help to yield accurate data from the model study. Accordingly, *collocations* in the form of compound terms as in lockjaw, bird's flu; *acronyms* as BCG, CA, SARS, *neologisms* as "arrest" in Cardiology, "bird flu" etc.; *eponyms* as Oppenheim disease, Parkinson disease, or *register mismatched terms* as meadow dermatitis (colloquial) + (academic), avian (fowl) disease (academic + colloquial) which consist of both colloquial and academic terms. *Explanation* is the definition of the term, therefore it can not be used as a translation procedure although it is a widespread translation procedure in dictionaries inspite of its drawbacks in terms of translation. As for *established* and *culture specific terms*, there is no need for a special translation procedure since one can find up its equivalent in a standard bilingual dictionary. For example, the term "verem" (tuberculosis) is a commonly acknowledged term shared not only by professionals, but also by ordinary people. Whereas neologism can be defined as a new term, or an established term which gains new sense. The number of *neologisms* are high in medical terminology as a result of recent outbreaks of pandemics or new diseases such as mad cow disease, bird's flu. *Loanings*, or *calque*¹ is a common translation procedure in the translation of neologisms. However, the procedure applied in the translation of the "loan words" that go through an orthographic shift is called "naturalization". In other words, the term is adapted to the phonetics of target language as

opposed to "direct transfer" where there is neither phonetic nor semantic shifts in the process of transfer. It is a valid procedure generally in the translation of both eponyms and, in most cases, of acronyms, if target language is deprived of its equivalent. In "modulation", the term may go through changes in two ways: semantic or syntactic shift, which would result in shift in the field of effect. For example, in the sample study below, one dictionary gives Turkish equivalent of *lockjaw* both as "tetanus" [Literally, tetanoz], and as "kazykly humma" [Literally, staked fever]. That is to say, the first equivalent of the term has changed its field of effect from standard language to professional language, whereas the second equivalent as a culture specific term is in the same field as the original term. Moreover, the same author gives no Turkish equivalent for the term "tetanus" except for the note inserted as "see entry lockjaw". That is to say, it comes to mean that the author ignores the professional equivalent of the term, which may be correlated to his linguist identity. All these questionings on the choice of terms brings forth one more variable as "field of effect" which can be related to the notion of reliability as well as the functionality of the text when considered the importance domain in setting up the relations between tenor and mode in the text. Moreover, the variable "the number of key words" will also give us information about the coverage of the term which, in a way, related with the size of dictionaries. In the light of these deductions, the following table appears as justification procedures:

Medical Term	Values: Latin, Greek, French, English,
Origin	Values: Latin, Greek, French, English,
Subfield of term	Values: cardiology, dermatology, oncology etc.
Turkish Equivalent	
Definition	Values: Existent/non-existent
Type of the term	Values: Eponym - register mismatched term - culture specific term - acronym - collocation - neologism - loan word
Procedure	Values: explanation - calque - naturalization - direct transfer - modulation
Field of effect (term)	Values: Professional-standard language
Number of Key Words	The number of the related words sheds light on the coverage of the dictionary

Table 2. Content analysis

In the light of this way of reasoning, the borders of mini corpus-based model is narrowed down to seven terms and three professional terms are coupled with their colloquial equivalents, except for the term "arrest":

"lockjaw-tetanus",
 "Oppehheim disease-meadow dermatitis"
 "bird's flu-A-vian disease"
 "tuberculosis-BCG"

Phase 3: Comparative Analysis and Evaluation of the Data

Since knowledge of specialty in such a comprehensive field as medicine can not be acquired in a limited span of time without the supervision of a professional, the model aims at not teaching professional jargon, but raising awareness of trainees when/how to ask and make use of professional support in setting up correlations between the addressee, text type and domain. Within the framework of the paper, the following table may indicate in what way the study proceeds:

	Dictionary A	Dictionary B	Dictionary C
Source Name	Tip Sozlugul[Explanatory Medical Dictionary] A	Açıklamalı Tip Sozlugu [Explanatory Medical Dictionary]	Büyüik Tip Sozlugu [Grand Medical Dictionary]
Year	1997	2000	2003
Place/Name of Publishing House	ABC A.Ş./İstanbul	Kıtabevi Gaye Matbaacılık / Ankara	Nobel Kıtabevi Tip
Number of Pages	923	977	975
Appendices	Medical Abbreviations, Conversion Tables	Medical Abbreviations, Acronyms in prescriptions, suffix/prefixes and sources	non-existent
Number of Edition	8	9	1
Addressee	Students of medicine	Professionals + Students of medicine	Professionals + Students of medicine
Author	Pars Tuğlaci	Prof. Dr. Utkan Kocaturk	Prof. Dr. İsmail Dökmeçi
Identity	Linguist & Writer	Academician	Academician
Editorial Board	—	—	Existant
Identity of Editorial Board	—	—	Academician + professional

1. Term	Tuberculosis	Tuberculosis	Tuberculosis
Origin	no record	Latin	Latin
Subfield	no record	no record	no record
Turkish equivalent	Verem, tuberkuloz	Verem, tuberkuloz, hastalik	ince Tuberkuloz
Definition	no record	Existant	existant
Type of Term	Established term + loan word	Established term + loan word + culture specific term	Loan term
Procedure	+ naturalization	+ naturalization modulation	+ naturalization
Field of effect (1)	professional+academic	professional+academic	professional+academic
Number of Key Words	9	33	5

Table 3. A Sample from Initial Data

The following correlations are set up between bibliographical entries and terms in "comparative analysis" to question the coverage of dictionaries:

1. Such variables in the first table as the number of key words – the number of pages – the number of editions are intertwined with each other in such a way to give information about the size of dictionary which will also help to obtain numerical data from the model. The entries related with preliminary phase are related with the size of the dictionaries; whereas, the number of key words are related with the coverage of the dictionaries. Therefore, the number of entries and keywords and testify the relationship between the size and coverage.
2. Such variables as origin, type of the word, procedure, field of effect, identity of the author – number of editions aim at assessing the coverage of dictionaries both in terms of size and content. In a way, they help to subject dictionaries to microscopic observation. For example, seeing the correlation between the origin and academic equivalent of the term, the trainees should distinguish more easily the academic/or professional language from the standard language. At least, this would remind them to question the fields of effect in terms of medical language use. Similarly, at the end of the research the number of eponyms, neologisms and acronyms in medical language may lead trainees to reach such a conclusion as direct transfer, naturalization that are widespread

procedures in medical translation. Or they may be aware of the indispensability of professional support as well as extra research as opposed to their past experiences limited with medical dictionaries. These variables in the "operational phase" will also give clues on relation between the identity of the authors and their capacity in language use even if they were not professionals. The number of editions can also be illuminating as an evidence of author's linguistic as well as translation competence: however it is the translation-oriented content analysis in the second part of the study that will reveal to what extent they are related with each other. In other words, the data obtained from the variables such as type of the word, procedure, field of effect and the correlations set up between them will verify or falsify the relation between the number of edition and coverage.

3. On the other hand, if the number of definitions are higher than lexical equivalents of the terms, it comes to mean that dictionary addresses only to students to obtain information, but not to translators. Although definition can be evaluated as a translation procedure in terms of explanation and is legitimate as translation procedure only when necessary, it can not help to serve for the ends of translation except for acquiring encyclopedic information as well as providing easy internal access to information.

CONCLUDING REMARKS

Subsequently such conclusions can be drawn based on the comparative analysis between the variables:

- The majority of medical dictionaries are written by academicians without the supervision of editorial board. Although studies in exhaustive fields require an editorial board which is composed of professionals and linguists. For example although "naturalization" is a common procedure in medical translation, the discrepancy in orthographic rules cause chaos not only amongst professionals, but also between the dictionaries. For example, in Turkish the suffix *is* is omitted in *tuberculosis* whereas in the term *Carcinomatosis* the suffix remains as it is in the original. Even this small example denotes that there is not a consensus neither on the part of the linguists nor on the part of the boards of the nomenclature (Ertem 1998: 1-50). It even appears in our microscale case study, the term *tetanus* is entered in Dictionary A as "Tetanos", in Dictionary B as "Tetanus" and in Dictionary C as "Tetanosis". These may seem to

be trivial problems, but when it is considered that medical jargon is composed of large number of eponyms, acronyms, terms of Greek or Latin origin, they really pose a great problem.

- These conclusions can also be expanded by the numerical data. The numerical results obtained from 66 entries are as follows, respectively: 25 for Dictionary A; 34 for Dictionary B; 36 for Dictionary C. Although the number of entries in dictionary A are lower than Dictionary B and C, the number of editions discloses it is popular in the market. It shows that not only professional terminology, but also knowledge of language use and user is effective in the popularity of dictionary. Whereas, in dictionary B, although the author is professional, his highly developed linguistic skills bridge the gap between professional and amateurish readers. In dictionary C, we see that it addresses more professionals than amateurs in terms of the high number of entries without any definitions. From the data, it can be concluded that dictionary B best serves the ends of translational purposes, it can be verified not only by the number of key words, but also by the number of editions. However, it even can not keep pace with neologisms as in the example of "bird flu", or "avian disease". In conclusion the number of entries is not always related with quality in dictionaries. With the above-mentioned concerns, this sample study has been conducted in a class of senior students to raise their awareness in medical translation. It is for this reason that two deductive variables such as *type of the term* and *procedure* have been deliberately inserted in the records to raise translational competence of trainees so that they can unite theoretical knowledge with application. By this way, they may save from the misconception that theoretical knowledge is burdensome and redundant, and gain confidence in domain-specific translation. However, it does not come to mean denying the importance of domain specific presupposed knowledge, which determines the register of the translation. On the contrary, they should themselves ask the supervision of a professional while accepting the translation task. On the side of the professionals, instead of ignoring translators, they should cooperate with them if they want medical translations gain such a degree of functionality as to raise the number of health conscious people in the society.

In conclusion, although at first sight such a sample study may reflect a micro-scale outlook, an in-depth study of the variables and the

correlations set up between them discloses the inescapable collaboration between the professionals and translators. Such a cooperation will not only increase the flow of information, but will also raise the quality and functionality of the translated texts in the market. Whereas, from the point of translation studies, developing such models from the facts of translation will not only consolidate the foundations of translation studies, but will also raise its status amongst other sciences.

NOTES

1. Nord divides instrumental translation into three groups, namely: heterofunctional translations, homologous translations and equifunctional translation.
2. The "domain" (field) is related with the content of translation: general or specialist field; the mode is related with the written or spoken form of translation; whereas, the tenor is the language used according to the hierarchical relationship between the author, thereby between the translator and reader/listener.
3. The former covers such values as dictionary, textbook, compiled work, brochure, prescription, pamphlet, brochure, monograph; whereas the later is related with goals of both source text and translation. The values can be listed as terminological, academic, informative, instructive, commercial. Of course, the same values are valid for translated texts, especially if the translator intends to alter the function of translation as a result of the agreement he/she reaches with the commissioner.
4. Calque is a translation procedure where the meaning of terms are directly translated.

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Obstacles to Machine Translation

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ABSTRACT

Interlingual translation has emerged as a prominent area of research amongst the natural language processing community over the years. In this paper, some specialized linguistic constructs and structures that are obstacles to interlingual translation are investigated. Often, these stand as obstacles because the object language of interest in translation often lacks equivalent linguistic constructs and structures to what a source language for interlingual translation may have. In this paper, we present some of such specialized linguistic constructs which are atypical of traditional usage in terms of semantics or syntax and are left unaddressed by the NLP community. Identifying these is a crucial step forward to addressing how to handle the machine translation problems. We take each of these and explain why and how they require a special treatment in machine translation. We believe that the obstacles presented here are incomplete and a part of a much bigger set of obstacles, which remains undiscovered. We conclude that due to the context-sensitive nature of the usage of the language, it is not possible to develop a translator for the entire universe of discourses of a language.

Key words: Linguistic Schizophrenia (LS), Idioms and Phrases, Figures of Speech, Rhetorical Question, Loaded Question, Machine Translation (MT) system.