DIAGNOSING MEDICAL TRANSLATION
AND FRAMING CURRENT CHALLENGES

Mihai Robert RUSU[1], Titela VÎLCEANU[2]

Abstract

Specialised translation includes technical and scientific translation as research fields in their own right, on account of method, text type, purpose of translating and degree of specialisation. Being a borderline case between technical and scientific translation, medical translation requires a multidisciplinary approach. Admittedly, the paper focuses on shedding light on the complexity of medical translation, the medical translator facing as main challenges a vast range of texts and formats (even within the same sub-field of medicine), non-standardised terminology (continuing to evolve as aligned to new scientific discoveries), a lack of relevant resources (most importantly, multilingual medical databases) and the different expectations of the intended users of translation.

1. Introduction

Specialised translation is a part of translation studies, which includes scientific translation, technical translation, legal translation, medical translation, etc. as opposed to general translation. The main aim of specialised translation is to develop and organise the accurate transfer of knowledge by taking into consideration the (end) user(s), and special applications (as a process of knowledge mediation). It is based on the concept of specialised texts, which can be put in relation with the subject matter and with the degree of specialisation of the translated text; in other words, according to the *skopos* or purpose of translation and users' needs and interests, the target text may be used by experts, which involves an upgrading procedure, i.e. full equivalence of terminology is required, or by non-experts, based on a downgrading procedure, i.e. terminology and style may be simplified so as to fit for purpose (Gotti, 2008). Needless to say, specialised translation should be regarded in connection with the concept of *genre* as complying with a specific set of conventions shared by a large number of texts.

Furthermore, specialised translation is considered to be a complex phenomenon that could be approached at different levels. It is acknowledged that specialised texts are utilitarian (Pinchuck, 1977: 18) and that the main goal of their translation is to deliver new scientific / technical information, not to reproduce it *verbatim*, as a communicative response, fulfilling the criteria of comprehensibility, clarity and speed of delivery. In other words, "the structural and intellectual integrity" of the source text should be preserved while observing the target text functional and stylistic conventions (Hervey and Higgins 2002:104).

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[1] Mihai Robert Rusu, University of Craiova, rusu_mihai_1995@yahoo.com
[2] Titela Vîlceanu, University of Craiova, elavilceanu@yahoo.com

Like any other translation type, specialised translation, in general, and medical translation in particular have to connect the source and the target language (Siever, 2010; Stolze, 2011), based on *the theory of situated translation* (Risku, 1998, 2004), which is a cognitively oriented extension of functionalist approaches. Its role is to foster and explain research, to make research and technology available for ever wider audiences – it is paramount for translators to know how to interact with the source text, what translation tools to use (including medical monolingual and/or bilingual dictionaries, glossaries, multilingual databases, forums, the dedicated software) and to be aware of how their perceived professional relation with their clients / intended users affects their performance.

2. *Outlining medical translation and medical translator's competence*

We start from the assumption that medical translation supports medical research and practice, while medicine is one of the major and oldest fields of activity that involve translation:

Medical translation may well be the most universal and oldest form of scientific translation because of ubiquitousness of human anatomy and physiology (after all, the human body is much the same everywhere), the long, venerable and well documented history of medicine, and the hitherto uniform character of the language of medicine, at least in the West. (Fischbach, 1998:1)

Berghammer (2006) claims that medical translation should be viewed on a par with religious translation with respect to its role and timeframe, shaping the evolution of the western society. Furthermore, according to Jensen (2013: 3), more recently, "there has been an increased focus on the importance of health communication, especially the communication of health matters to lay people" who want to make informed decisions about the kind of health services they will be provided (surgeries, specific medication or therapy, etc.).

Like in the case of any other specialised translation, the medical translator should demonstrate mastery of the two languages involved (source language and target language), acquisition and effective use of the professional jargon (the so-called "medspeak") / terminology and phraseology, discourse competence (understood as the ability to recognise and produce a variety of text types in a variety of formats), alongside critical thinking skills, information mining skills and interpersonal skills (equated to user-centredness). Furthermore, the controversial issue of medical translators with an academic background in languages ("medically knowledgeable linguists" in O'Neil's terms, 1998) *vs.* medical translators who are qualified as physicians, cannot be solved in peremptory terms. In our opinion, the close collaboration between a medical translator with an academic background in languages and health professionals (not necessarily involved in regular translation activities) will benefit the quality of translation to a large extent. Not to mention that a medical professional specialises in a particular field of medicine and that s/he is unlikely to engage with a large number of texts pertaining to various sub-fields.

In line with Abootorabi and Moeinzadeh (2017: 26), we draw attention to the importance of medical translation and to the visibility of the medical translator in case "something goes wrong" and in the event of the translated text becoming "a life-threatening piece of paper"; paradoxically, when everything runs smoothly, medical translation is "not a big issue", it is even a "non-issue" when "compared with the total effort of the medical professionals" until "producing patient or user information".

2.1. Medical text typology

The medical discourse can vary with the different types of documents that it underlies: "Medical translation does not concern a single genre or a homogenous discourse" (Karwacka, 2015: 272). Admittedly, translation addresses a various readership or users, ranging from doctors to patients, while expert-lay communication accounts for a large portion of the medical discourse and translation, encompassing documents prepared for patients by medical professionals, quite often in order to comply with regulatory requirements.

According to the surveys reported in mainstream literature, research papers seem to top the most frequently translated medical texts fulfilling an informative function, followed by the informed consent forms (ICFs) / informed consent documents (ICDs) with an operative value as they explain the related methods and procedures (notably, Sand, Eik-Nes and Lodge, 2013). Accessibility and accuracy become the overriding parametres for the evaluation of translation in this case on account of the fact that such target texts have to carry across an unambiguous and user-friendly message. On the other hand, ICDs are featured by complex language and terminology that might impede on data processing by lay readers (Gotti, 2008; Pilegaard, 2014), which means that special attention should be paid to the ways of rendering highly specialised language into plain language so as to secure readability (the lay-friendliness of medical translation) as well as expert credibility.

Another type of documents refers to user manuals, instructions for use (IFUs), providing detailed information on the proper use and maintenance of medical devices, which also have to be translated, irrespective of the fact that a given device is a highly specialised tool to be used by trained professionals, unless formal approval is granted for the English version of the documents.

Pharmaceutical products documentation also accounts for a large body of translated texts, and EMA (The European Medicines Agency) recommends that such documentation should be translated in the twenty-four official languages of the European Union, including Icelandic and Norwegian (see also, Andriesen, 2006; Jensen, 2013) "allowing for regional translation flexibility, whilst maintaining the same core meaning" and thus supporting a plain language movement through a "medical terms simplifier" that "gives plain-language descriptions of medical terms commonly used in information about medicines[3]".

Last but not least, clinical documents, such as trials, scales, case reports, make up a large bulk of medical translation, and they address specialists in the medical field. The list of the documents (alphabetically ordered) that are subject matter of translation are presented below in Table 1 (see Karwacka, 2014, 2015; Schils, 2015):

Abstracts
Advertising documents (information leaflets, brochures)
Anatomical atlases
Case reports
Clinical guidelines
Clinical trial reports
Clinical trial protocols
Consent forms
Core data sheets
Discharge summaries
Product characteristics summaries
Fact sheets for patients
Health surveys
Informed consent documents (for clinical trials)
Informed consent documents (for surgery or diagnosis)
Instruction manuals of medical devices
Market research documents
Marketing authorisation applications
Medical records
Medical reports
Medical treatises
Patents
Patient information leaflets

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[3] https://www.ema.europa.eu/en/about-us/about-website/glossary

Popularisation books
Press releases
Protocol amendments
Quality of life questionnaires
Research articles
Review articles
Standard operating procedures
Textbooks
User manuals
Websites
Others

Table 1 - The documents that are subject matter of translation

2.2. Medical terminology and medical linguistics

Medical terms fall into the following categories (Salager-Meyer, 1994; O'Neill, 1998: 70; Fogelberg and Petersson, 2006: 13, 22):
• scientific medical terms used among professional medical staff (basic medical terms);
• general medical terms used between medical staff and patients (fundamental medical terms);
• medical terms used among medical staff (jargon or idiosyncratic phrases) (specialised medical English).

Medical terms are used for describing diagnoses, body organs and diseases (Fogelberg and Petersson, 2006: 13). Definitely, apart from these all-inclusive categories of terms, other categories and associated sub-divisions may be identified, especially if we take into consideration the latest developments of the medical and para-medical field, the emergence of new areas of expertise, etc. – we exemplify by *hypertensiology, nano-medicine, psycho-oncology* (Badziński, 2019: 159). In medical terminology, two phenomena are tracked down: (1) a very precisely worked-out, internationally standardised anatomical terminology and (2) a quickly developing clinical terminology of all medical branches, characterised by a certain terminological irregularity, to say the least. The main cause of the latter phenomenon is the fast-paced development of scientific knowledge (powered by technology) and a need to timely coin names for new devices, diseases, symptoms, etc. (Džuganová, 2002: 56), sometimes resulting in new culture-specific references.

Medical terms are complex and, on account of their morphological structure, they can be divided into one-word (single units) and multiple-word descriptive terms. One-word terms fall into derivatives (e.g., *conjunctivitis, hypodermic, syndrome*, etc.) compounds (*cardiopulmonary, gastroenterology, pacemaker, osteosarcoma*, etc.), abbreviations (*AIDS - Acquired immune deficiency syndrome*, *GP – General Practitioner, PE – Pulmonary embolism, TSH - Thyroid stimulating hormone*, etc.) as basic word formation processes whereas multi-word phrases are mostly represented by collocations (e.g., *medical condition, develop a disease, occupational therapy*) (Drozd and Seibicke, 1973; Poštolková, Roudný and Tejnor, 1983: 34; Montalt et al., 2018: 29ff.; Badziński, 2019: 168ff., Nazbean, 2019, etc.). As far as the productivity of word formation in the medical field is concerned, Peprník (1992: 7) adds borrowings to the list, and states that loan words are justified by the need to designate new realities, to narrow or to extend meaning by metaphoric and metonymic transfer of the previous meaning – we exemplify by *Alzheimer's disease, Parkinson's disease* (eponyms); *myelitis* (a case of polysemy) - *inflammation of the spinal cord or of the bone marrow,* therefore the term simultaneously pertains to neurology and orthopaedics (notably, Poštolková, Roudný and Tejnor, 1983: 34; Montalt et al., 2018: 29ff).

Therefore, we can rightly state that the specific medical vocabulary is difficult to learn and even more difficult to use in practice (Sinadinović, 2013: 275), the practice of translation, included. Moreover, this difficulty is caused by the use of hedging and mitigating devices (Salager-Meyer, 1994), metaphor and

metonymy, and, occasionally, of the language of evidence-based medicine (EBM) (Gajewski et al., 2003; Górnicz, 2007, 2009).

Dwelling on the specific vocabulary and on terminology management, we would like to emphasise the fact that translators should demonstrate a good understanding of the formation, structure and use of terms specific for each field of medicine, fairly extensive knowledge of the subject matter, understanding of the link between general language and the language of science, as well as understanding of the dynamics of the medical language(s).

The challenges of medical translation cannot be said to be represented by the management of terminology alone, as morpho-syntactic features of medical texts also render their complexity – in this respect we mention nominalisations, heavy pre- and postmodification, long sentences, use of passives and third person (Askehave and Zethsen, 2000), although some scholars seem to downsize this dimension: "the medical translator has much more freedom with grammar than with lexis" (Newmark, 1979: 41), grammar being deemed to be more versatile.

2.4. Users of medical translation

More recently medical translation has been redefined to encompass not only a great variety of specialities and medical concepts, but also of resources, texts, communicative situations, organisations, contexts, and participants. (Montalt et al., 2018: 29)

Before enlarging on the categories of medical translation users, it is noteworthy to pint to the increased demand for medical translation ss not only the result of the development of science to be shared among specialists speaking different languages, but also due to emigration and to "patients who seek medical help outside their own country of residence" (Karwacka, 2015: 272). Seen in this global context, the users of medical translation are various and include medical doctors, patients, scientific researchers / academics, relevant bodies and institutions, etc., and the user involvement is informative or consultative at the most (Damodaran, 1996). Admittedly, they are the real users and they may be allowed to comment on predefined design solutions or to act as providers of information and as objects of observation even if some of them do not actively participate in the (translation) design process.

Most likely, patients are one of the most important users and the patient decision aids are structured tools, such as often booklets or websites, that aim to provide unbiased, evidence-based information and guidance to patients making health decisions (Lenz et al., 2012).

The framework of user-centered design (Figure 1) could help the patient in making a decision, depending on the effectiveness of the translation of the medical text, i.e., depending on how the translated text enables him /her to understand the procedure, the expected results and potential methods for developing tools for patient use.
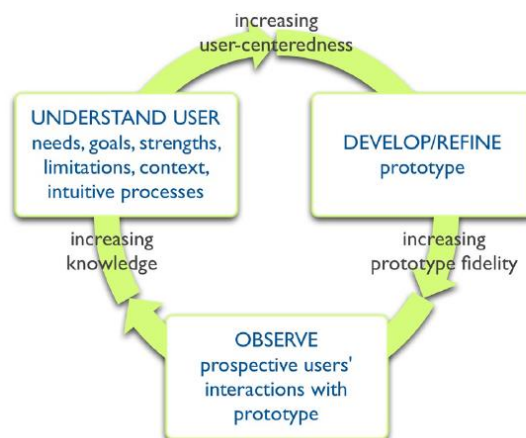

Figure 1. Framework of user-centered design (Witteman et al., 2015)

If the intended end users are represented by medical staff, as it may be the case with the translation of medical research and technology (medical devices instructions) to be used in clinical environments, another condition for a successful translation is formal training, designed to facilitate safe and effective device use. Without a shadow of doubt, the dissemination of research findings through translation involves health professionals who have to be informed on the best available evidence. For this reason, "translating research evidence to clinical practice is essential to safe, transparent, effective and efficient healthcare provision and meeting the expectations of patients, families and society" (Curtis et al., 2016). Under the circumstances, medical translation is assimilated with transfer of learning, activating the historiographical notion of *translation studii* in a dialectical relationship with *translatio imperii* - transfer of the power of legitimacy, which is the process through which research knowledge is circulated and adopted into clinical practice. Translatorial action in this case is based on multiple processes and interactions to enhance the effective application of knowledge and contributes to bridging the medical research - practice gap.

3. Conclusions

Currently, medicine can benefit from medical translations not only to secure and develop interlingual and cross-cultural communication, but also to enlarge and improve the body of knowledge in areas such as health care, patient education, health promotion, clinical research, drug development or medical practice, among others. Going further, the areas and markets of medical translation include health organisations, pharmaceutical laboratories, medical publishers, research centres, hospitals, health institutes, research organisations, etc.

Healthcare service providers, medical staff and patients need to have access to accurate and updated information in a transparent and sustainable way, and medical writers are increasingly expected to target a new audience - translators - when producing documentation for international and global markets. In the light of this, we think that translation should be considered in medical research design, and should no longer be regarded as a "side effect" (to use a medical term). Writing for translation, reducing ambiguity and avoiding culture-specific items and culturally-determined practices, will facilitate more effective translations. We are optimistic about the future of medical translation – English is the *lingua franca* of medical communication and research (while not wiping out the classical heritage of Greek and Latin), therefore, globalisation rather than localisation strategies will continue to be employed.

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The authors

Bionotes

Mihai Robert RUSU PhD student phil. He is Assist. Professor at Faculty of Physical Therapy, University of Craiova. His main research interests lie in translation studies, medical translation, pragmatics and intercultural communication. His PhD thesis subject is focused on medical terminology and medical translation. He is member of the Romanian Society for English and American Studies (RSEAS). E-mail: rusu_mihai_1995@yahoo.com.

Titela VILCEANU PhD, phil. hab., Director of the *Translatio* Centre for Translation, is Professor at Faculty of Letters, University of Craiova. Her main research interests lie in in translation studies, pragmatics and intercultural communication. She is President of the Romanian Society for English and American Studies (RSEAS) and board member of the European Society for the Study of English (ESSE). She is a member in the editorial board of *The Scientific Bulletin of the Politehnica University of Timişoara – Transactions of Modern Languages*, a reviewer with *Swedish Journal of Romanian Studies*, University of Lund, Sweden, a member of the Scientific Council of Universitaria and Prouniversitaria publishing houses, and head of the *Translation, Terminology and Corpus Analysis (CoTraT)* research laboratory. E-mail: elavilceanu@yahoo.com.