Colloquium Area "Current Approaches to Terminology Translation and Interpreting"

LINGUISTIC AND COGNITIVE APPROACHES USED IN THE TRANSLATION OF MEDICAL METAPHORS



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Abstract

Nowadays linguistic studies are most often concentrated on the research of various types of discourse. The specialized discourse is often oriented both to the general public and to the specialists and by doing so it necessitates to be expressed in a comprehensive way either case. One way to do that is the employment of linguistic metaphors which further lead to the formation of terminological units and lead to the richness of the specialized vocabulary. In medical terminology, metaphor is most often considered as a phrase consisting of a word belonging to medical discourse and a lexeme from a literary language. The present article concentrates on the translation of medical metaphorical terminological units by employing two main approaches to translation: cognitive and linguistic. The cognitive approach involves the implementation of two types of scenarios: saving or changing the metaphorical projection during translation. At the linguistic level, the translation is performed either as close as possible to the original, if the norms of the target language allow it, or translational transformations are used, thus the translator can make use of the well known strategies of translation to his best knowledge and contribute to the disambiguation of the confusing cultural contexts which can appear in many cases.

Keywords: *approach to translation, cognitive approach, linguistic approach, metaphor, medical metaphor, medical discourse, metaphor translation from English into Romanian, terminological unit*

Introduction into the theory of medical metaphor

The study of metaphor in a specialized type of text started as A. Bleakley puts it as "a result in particular of the groundbreaking work of Lakoff and Johnson (1980), who note that metaphors permeate both everyday and specialist languages, and are not reifications but embodied or performed, …" (Bleakley, 2019, p. 54).

In 1997 "Geraldine van Rijn-van Tongeren published a systematic study of metaphors in medical texts, focusing upon three textbooks (in oncology, surgical oncology and vascular surgery)" (*ibidem*, p. 44), but as we notice her main focus was only on three medical domains and mostly the scientific register. The scholar also offered a classification of metaphors in the oncologic field.

Further on, A. Bleakley analyzing the impact of the device states that: "Metaphor generates theory — this is epistemological work. In parallel with this, and fundamental to the appearance of metaphor in medicine, is ontological work. Here, metaphors serve the purpose of medical students and doctors making experiential sense of the world into which they are socialized and which provides them with an identity" (Bleakley, 2019, p. 45), thus the role of the metaphor being not only to introduce new terms into the field, but also to show the culture of medical environment and that of the realia, identifying the way of thinking and also the register of the discourse.

In most English sources on medical metaphors researches speak mainly about the didactic metaphors. "Discussion of didactic or leading metaphors in medicine dominates the literature, suggesting that such metaphors are active in shaping a landscape of practice and inculcating values, rather than being merely descriptive and passive" (*ibidem*, p. 54).

As well "the most obvious appearance of tactics of literalizing and trivializing in medical culture is the use of English for Medical Purposes (EMP), or standardized medical-technical and medical-professional language, as reductive text and performance. Metaphor is seen as a symptom that must be expunged, as it brings complications and moves medicine into the territory of uncertainty or ambiguity" (*ibidem*, p. 45). The scholar claims that the ambiguity caused by the usage of metaphors in the medical texts leads to a refusal of its usage. "The primary forms of refusal are intolerance of ambiguity and reduction of complex process to literal events (for example, the "body is a machine" and can be fixed)" (*ibidem*, p. 45).

Many stylistic devices used in the medical discourse have Latin or Greek roots, thus "metaphors are often used in medical English texts to describe phenomena by comparing them with well known objects. Metaphorical terms include: 1) hybrid terms: Latin-English, Greek-English, English-Latin and English-Greek; 2) assimilated borrowings from classical languages: Latin-Latin, Greek-Greek, Greek-Latin, Latin-Greek; 3) borrowings from other languages: French, German, Spanish, Italian, etc." (Molchanova *et alii*, 2019, p. 123). The stylistic device under discussion is a source of creating neologisms and the most frequent medical domains abundant in this device are anatomy and clinical medicine, idea supported by the researchers E. Mincu and D. Macovei (Mincu, 2023, p. 117), to which we adhere.

In this context we have to remember that Latin is the lingua franca of all the doctors around the world, this means many medical terms come from this dead language, including metaphors. Some terms come from Greek or have a combined Latino-Greek etymology, for example "*patient* entered the English language in the fourteenth century. It is akin to the Greek *pema* (suffering) and derived from the Latin *pati* — 'to suffer'. The Middle English "pacient" gives us the noun that describes the one who is suffering — "the patient". The word "patience" is derived, then, from a word meaning *putting up with suffering* (our emphasis)" (Bleakley, 2019, p. 71).

Nevertheless doctors are humans who belong to a certain culture, who live in a certain society, besides their belonging to the common medical culture thus by

identifying this cultural dependence of medicine "a cross-linguistic study of medical metaphors was done by Salager-Meyer in 1990 and more recently, problems in the identification of metaphors in doctor-patient interviews about cancer have been studied by Gibbs and Franks (2002), and Semino *et alii* (2004)" (Mungra, 2007, p. 101), fact which means metaphors help mediate the conversation from a purely terminological one to a folk discussion by comparing the medical domain with more common domains to make it intelligible for the patients.

"Thinking with metaphors in Medicine explores how the landscape of medicine is historically shaped by leading or didactic metaphors, such as 'the body as machine' and 'medicine as war', which may conflict with other values or perspectives on healthcare, for instance, person-centered care" (Bleakley, 2019).

In the same source we find out that "the ancient Egyptians viewed the body as a series of conduits for carrying blood and the 'humours' — the flooding and receding cycle of the Nile's movement was projected onto the human body, which similarly flooded or dried out to create symptoms (Osherson and AmaraSingham 1981)" (Bleakley, 2019, p. 56), a true idea found in some examples analyses further in this paper.

Even in the famous American movie "House, M.D." (the series run from 2004-2012) the script writers knew that "diagnostic medicine, in particular, depends upon metaphors" (Bleakley, 2019, p. 52).

Another didactic or leading metaphor in Medical Care is "medicine is war". "A 'war against cancer' was first described in a lead article in the British Medical Journal in 1904. This rhetoric was extended to identify the 'fight against cancer' as an issue of imperialist domination; the disease itself was described as 'darkest Africa' waiting to be discovered and conquered" (Bleakley, 2019, p. 62), which means that the medical metaphor becomes clear when compared with familiar phenomena and this way of thinking and expression in specialized language are not a recent inventions, but have become very popular among linguistic researchers as topics of investigation.

The classes of medical metaphors identified by scholars do not reduce to the idea of war or car construction. In the scientific literature devoted to the study of medical metaphor we find out about the so called "fruit metaphor". "To return to the historical development of culinary metaphors in medicine, Volk notes that the Romans named the *biconvex lens of the eye* after the similarly shaped seed of the *lentil plant* (our emphasis). "Fruit metaphors" were particularly popular — cheekbones, bulging like apples, are *poma facies* ('face fruit')" (*ibidem*, p. 76), and the Romanian variant of this term is from the same source but adjusted grammatically as "pomeți".

Finally focusing on the cross-cultural issues about medical metaphors we have to point out the fact that they are culturally biased. "…uncontrollable crying and headaches are symptoms of panic attacks in some cultures, while difficulty breathing may be the primary symptom in other cultures. In Japanese culture, 'social anxiety' is described not as a *worry* that I might not fit into a social group, or that I *fear meeting people*, but rather, the concern that *I might unintentionally upset some-*

body else (our emphasis)" (Bleakley, 2019, pp. 116-117). And later on, the scholar explains that one has to be aware of the type of culture to understand and diagnose a patient by employing a metaphor, as the symptoms are culturally conditioned. "As we think this way, we find ourselves thinking in circles. Surely the particular cultural 'cause' of anxiety — personal embarrassment in one culture, fear of offending others in another culture (the distinction between such 'guilt' and 'honour-shame' cultures, respectively, was drawn in 1940 by the American anthropologist Ruth Benedict (Benedict, 1947)) — is the idiosyncratic cultural expression. Such a view, notes Angel Martinez-Hernaez (2013), is to turn a biomedical theory of stress into an ethnographic object, or cultural metaphor. If this is the case, while 'anxiety' is patently deeply felt and real, it is also an embodied metaphor. A good metaphor is felt somatically and emotionally…" (Bleakley, 2019, p. 117).

Having synthesized the main English theoretical sources on the types of metaphors in medical discourse we will precede with the translation procedure of this device in the Romanian language to identify the types of metaphors in the source language and the target language, when the metaphor is preserved in the translation (either by employing an equivalent or by creating a new metaphor) or notice cases of omission, modulation or compensation.

Specifics of translating medical metaphors

"Cognitive linguists paid special attention to the translation of metaphors for the reason that the rendering of the metaphorical nature of a statement is closely related to linguistic and cultural peculiarities. For this reason, at the early stage of research, the following three mutually contradictory viewpoints on the translatability of metaphors appeared:

1. Metaphors as such are not translatable: as a result of translation, a new metaphor will appear in the target language of translation.
2. Metaphors are completely translatable from the point of view of the general theory of translation: there is no special theory explaining the translation of metaphors.
3. Metaphors are translatable, but the accuracy of the result depends on the degree of context-specific equivalence of a metaphor between the source and target languages as well as on its function and type (Molchanova *et alii*, pp. 124-125).

We adhere to the first and last points of view and try to prove them by analyzing the ways the metaphors in English and Romanian texts correspond after having been translated.

As well we would like to recall the strategies of translation which are generally applied by translators when working with a source text and a target one. Thus N. Talavan in "A University Handbook on Terminology and Specialized Translation" introduces 9 strategies. They are: borrowing; transposition; modulation; reformulation; compensation; expansion; neutralization, simplification, omission (they come together); equivalence and adaptation (Talavan, 2016, pp. 49-51, 53-54).

In our study we identified cases of borrowed terms from the classical languages (Latin and Greek) in the texts in both languages: Romanian and English, there

were cases of modulation, which means that the translator used a phrase that is different in the SL and TL to convey the same idea, but without changing the concept. Also there were cases of adaptation, i.e. when the translator needed to reword a sentence and adapt it so that it fitted the norms and usage of the TL. The cases of equivalence in translation coincided with the cases of borrowed terms, a phenomenon which is natural for medical terminology as Latin was the basis of the first written papers/books in Medicine. There were several cases of omission or simplification when the metaphor in the source language was substituted by plain language or totally omitted in the target language and transposition as a strategy appeared in several translated texts as the parts of speech changed their structures when they were translated.

In the following compartment of our paper we come with concrete types of metaphors (identified according to the mentioned above classifications) found in the source texts and their translations in the target texts accompanied with the concrete strategy of translation applied by the translator in each case.

The empiric analysis

Our study of medical metaphor translation is based on 20 abstracts of research articles from the book of abstracts published for the Neurologists Society from the Republic of Moldova Congress, 8th edition, organized in 2025 at Moldova State University of Medicine and Pharmacy (Congress, 2025). The abstracts under analysis are written in Romanian and translated into English.

In the reviewed material we have identified 60 cases of metaphorical expressions in the 40 texts in two languages, in some cases the metaphor appears in the Romanian text but it is omitted or substituted by explanation in the English translation. Speaking of the same contexts, in other cases the Romanian text does not make use of a metaphorical expression to denote a disease or a symptom of it but the English translation employs a linguistic metaphor, a comparison or a metonymy.

At the same time we have to keep in mind the two approaches used to translate a metaphor: *the cognitive metaphor translation and the linguistic metaphor translation.* The former type of metaphor contributes to the message comprehension and the latter one gives the text an aesthetic aspect, which is also an important factor.

Thus having classified the identified metaphors according to the categories suggested by I. Molchanova, V. Kurilenko, Iu. Biryukova, E. Kulikova, and M. Makarova (Molchanova *et alii*, 2019, pp. 122-128) as most of the topics discussed at the symposium were about cardio-vascular diseases (mainly "stroke") and some other cases of "epilepsy", we have included most of the metaphors into the following types: 1) pipeline construction and 2) car navigation, 3) natural hazard and 4) illness as a living being as opposing the treatment (the metonymy).

Another classification of the collected examples is based on the types of metaphors as suggested by Smirnova: 1) colloquial metaphors, which are based on a comparison with household items and human environment; 2) conceptual metaphors reflecting the ideas that exist in the human mind; 3) geographical type of metaphors, which are based on a similarity with the terrestrial landscape; 4) biomorphic metaphors, which are based on similarities with wildlife; 5) metaphors-

somatisms, built on the similarity of human states or parts of the human body; (6) geomorphic metaphors, based on a comparison with the shape of an object or letter (Molchanova *et alii*, 2019, p. 124), out of which we have identified conceptual metaphors reflecting the ideas that exist in the human mind and the geographical type of metaphors, which are based on a similarity with the terrestrial landscape.

In what follows we would like to concentrate on the examples of metaphor translation from the Romanian language into the English one. In the category of illness as a living being which resists the treatment, in Romanian we have the example "debutul bolii … care *nu ceda* la administrare de antiinflamatoare nesteroidiene" vs. "the onset of the disease … which *did not subside* with non steroidal antiinflamatory drugs", a newly created metaphor in English which belongs to the category *illness as a natural hazard* (like a flood). A similar method/strategy of translation was noticed in the example "tulburări cognitive" which in the Romanian text refers to a psychological type of metaphor, associating with the *muddy water* compared to the *foggy or blurred mind* translated into the English text with a different type of metaphor: mechanical of physical one: "cognitive impairment", thus using the cognitive approach in translation. Also the English phrase "migraine and epilepsy share overlapping clinical features" illustrates an example of personification of the illnesses while in Romanian this idea is rendered by means of metaphor omission: "migrena și epilepsia au caracteristici clinice similare".

Another interesting case is the Latin term borrowed into Romanian which stands for the English "stroke", "accident vascular cerebral". As a borrowed metaphoric term it belongs to an engineering domain, mainly 'car accidents' in the Romanian language while the English equivalent is a Germanic word which in its medical meaning comes from the idea of being suddenly "struck" down, also known as divine blow (Stroke of God's hand).

Next comes a terminological unit used in both languages as a borrowing from Latin/Greek: "Stimularea transcraniană prin theta burst" (TBS) in Romanian and the English similar expression only adapted to the syntactic relations and word order existing in the language: "transcranial theta burst stimulation" (TBS) which stands for an emerging neuromodulation technique demonstrating potential as a therapeutic intervention in epilepsy (Congresul, 2025). As a method/strategy of translation this is foreignization (Yang, 2010, p. 77), i.e. preserving the metaphor used in the source text. A similar case refers to the expression "protocol multifocal de cTBS" which in English is similar following the language rules of combinability of words in a sentence: "multifocal cTBS protocol". Here we can also include a similar case of translation strategy for the Romanian expression "statusul epileptic refractor" and its English equivalent "refractory status epilecticus", which in English preserves its Latin origin in spelling for the adjective formed from the noun "epilepsy".

Among other categories of metaphors included into our study we would like to mention the Romanian expression "amplificând astfel povara bolii". The literary word "povara" used in combination with the medical term shows us the connection of the two domains and the comparison of "the illness" with a human's life

(Ro. "povara vieții" En. "life burden"). The equivalent of this metaphor in the English language is "burden of disease" or "disease burden", being a metaphor which originated in English and in this case the Romanian text prepared for the Congress used calquing as a strategy of translation to render this concept which according to WHO means "the financial cost, morbidity and mortality of a disease" and the first disease burden study was conducted in 1990. Another case of calquing translation is the example of a *mechanical metaphor* in the English language "the rupture of an intracerebral dermoid cyst" found in the Romanian translation as "ruperea CD intracerebral".

Somatic metaphor is another category of metaphor we would like to focus on in this paper, thus as a symptom of "epilepsy" the expression "the floating eyes" is used in the English text translated into the Romanian one by using a calquing strategy "ochi plutitori, as if showing their dysfunctions and associating them with some object (not controlled by the human) "floating on the river or pond". A similar case of *somatic metaphor* we notice in the English example "severity of brain injury" which finds its Romanian equivalent in a similar metaphor which substitutes the noun "brain" with its Latin corresponding adjective found in the Romanian medical terminology "severitatea leziunii cerebrale".

A special case in our study (as it is unique among our examples) is the *eponymic metaphor* which refers to the proper name of the doctor or scientist who discovered the disease (in our case named after P.M. Jeavons who first described the given syndrome in 1977, University of Birmingham.), found in the English text as "with Jeavons syndrome" and translated into Romanian by a calquing expression "cu sindrom Jeavons".

And finally we would concentrate on another interesting case of medical metaphor encountered in the medical context that would be attributed to *social interaction type of metaphor*, which in English sounds like "a minimally invasive hematoma evacuation", being a complex mixed term "hematoma" from Greek for "blood" and "evacuation" as "removal" and the Romanian equivalent of this expression is "evacuarea minim invazivă a hematomului" translated by means of calquing.

Conclusion

Having conducted the study on the medical metaphors and the ways of their translations from Romanian into English we came to the following conclusions: the theoretical sources we reviewed indicated that the specialized type of text from the domain of Medicine is abundant in metaphors; the metaphorical way of expressing in Medicine started with the Romans who used Latin as a language of science and communication; as well many modern Romance languages (like Romanian and others) and the rest of the Indo-European languages which use Latin as a universal language in the medical field, slowly introducing these terms into the national languages as borrowings which were later adapted morphologically to their language structure but kept to stand for the old, well known medical concepts, make use of typical medical metaphors. Many metaphorical terms have a mixed Latino-Greek etymology and the way they were created indicate that people based their understanding on the known technical concepts about war and

engineering but also about nature (as in the case of fruit metaphor). Thus this cognitive construct expressed stylistically in the language is classified into various cognitive units according to the domain of resemblance and is used in texts from various linguistic registers: from the scientific to the colloquial way of communication between doctors and patients.

Medical metaphors can be translated by means of equivalence (in the case of the Latin/Greek source of the metaphor), they can be interpreted employing new metaphors in the target language as adapting to the new cultural environment but preserving the same idea or denoting the same concept, they can be omitted in the target language and as well the method or strategy of paraphrasing is used to translate certain medical metaphors.

In the present study we have worked with 60 metaphors identified in the abstract book for the Congress of Neurologists Society from the Republic of Moldova in 2025 at the Moldova State Medical and Pharmacy University. The texts were printed in the Romanian and the English languages, each comprising about 250 words. It was interesting to notice that in the three of these pairs of texts only the announced disease (mentioned in the title of the abstract) was metaphorically expressed by employing a Latin/Greek metaphor which was similarly translated into the English language. Such types of equivalent metaphors were found in 52% of the medical metaphors. Very few abstracts were of a better linguistic consistency and made use of different metaphors in both languages of work, they comprised about 19% from the total examples. In about 7% of cases the metaphors used in the Romanian language were paraphrased in the English language and an amount of 15% of cases found in the opposite direction and we calculate them together as 22%, the rest were instances of metaphor omission mostly in the Romanian language and comprised only 7% of our examples.

Referring to the approach of translation announced in the title of this paper we can claim that the cognitive metaphor translation was noticed in 19% of examples and the literary metaphor translation was identified in 74% of cases.

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