TOOLS USED IN DECODING MEDICAL DISCOURSE

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Abstract

Our research study started from the hypothesis that between medical terms in context and common language, *in point of the* expressed substance, there is a manifested continuity regarding the meaning of the term-word and the sense of the precise lexeme in the language. Focusing on the Romanian medical terms in context we have to admit the existence of certain tools in decoding medical discourse, acting as metaphors of the human body, having a specific semantic transfer in the anatomy, botany or neurology domains.

Key-words: *medical terms, metaphor, polysemy, semantic transfer, discourse*

Résumé

Notre recherche est partie de l'hypothèse qu'il y a une continuité manifeste entre les termes médicaux en contexte et le langage commun, sous l'aspect de la substance exprimée, concernant la signification du terme-mot et le sens du lexème précis dans le langage. En se concentrant sur les termes médicaux roumains dans leur contexte, nous devons admettre l'existence de certains outils dans le décodage du discours médical, agissant comme des métaphores du corps humain, ayant un transfert sémantique spécifique dans les domaines de l'anatomie, de la botanique ou de la neurologie.

Mots clés: *termes médicaux, métaphore, polysémie, transfert sémantique, discours*

1.Theoretical approach

The metaphor is an excellent and suggestive way through which complex phenomena can be understood due to the analogy concerned, although it leaves room for multiple interpretations and a certain dose of indecision. In scientific work, the metaphor is a necessity, a useful tool, having a specific function. For a long time, this metaphor approach has not been accepted because it was against Wüster traditional view according to which the metaphor was considered a non-rational entity leading towards vague representations, even subjective ones, lacking scientific rigor and resulting in ambiguity. Nowadays, researchers concerned with this subject share a totally different opinion. They use metaphors very frequently in scientific discourse, emphasizing their capacity of creating knowledge and designating objects/ phenomena.

Isabelle Oliveira claims that a terminological metaphor functioning in the field of cardiology may have five functions: cognitive, heuristic, denominative, meta-linguistic and didactic. The author states that this type of metaphor is a denominative and functional appeal necessary for the perception and communication of concepts in a specialized language. Specialized metaphors must possess certain specific features that make the difference as compared to common metaphors.

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Our following analysis is trying to shape a less explored issue in the literature: *metaphor in terminology*. Stated by some researchers in the field, a metaphor is not just a way of expression, but a constituent element of our existential thought and experience[1].

Semantic analysis on specialized languages has demonstrated the extensive use of metaphor in the formation of terms. Conceptualization begins with a metaphor mechanism, which does not involve a simple movement of words, but an 'exchange between thoughts', a 'transition between contexts'. First of all, it has to be identified in the current use, because language is vitally metaphorical[2]. A metaphorical process links by virtue of similarity, two things / phenomena, by bringing some unusual connections between them.

The scientific style, characterized by well-defined and unequivocal terms, without connotations, may very well allow figurative expression. The metaphor does not function in scientific discourse, just as a 'garment' or 'ornament' of language; its appearance in this type of discourse is 'related to fundamental operations (...): founding concepts, defining terms, explaining patterns', having a well established role in setting the reference and not multiplying it, so that the accuracy of scientific language may not be affected[3].

We are witnessing domain relocation, the emphasis being shifted from a rhetoric and poetic metaphor to a scientific one, and as a result, noticing a metamorphosis from the aesthetic, expressive metaphor to the cognitive, referential one, from a figure of speech to a figure of thought. In fact, 'the two aspects, cognitive and expressive, coexist, but in science the metaphor is primarily cognitive, and in arts is preponderantly expressive'[4]. So, far from being a mere 'rhetorical ornament', a metaphor works as an instrument of knowledge, compensating for gaps of 'designation' of a certain type of language, lacking terms to designate aspects of reality.

A terminological metaphor is a linguistic sign resembling any term, which means it is unequivocal, mono-referential and the designated notion belongs to a predetermined and predefined system of notions. But it is well-known that all these features face practice problems, such as synonymy, rewording and different levels of language.

Metaphors having nominative functions are to be found in medical discourse as well, due to the fact that linguistic techniques are necessary to designate scientific terms and *common words* can be used to express these notions. It should be noted that common words become different types of units, pertaining to specialized vocabulary, but having the same semantic connection with the source lexeme.

2. Semantic transfer tools

Terms already formed due to metaphorical transfer, are characterized by a complex semantic structure, as feature determining nomination selection is included in terminological unit semantics.

Our selected corpus of medical texts has provided many examples of words

[1] Oliveira, 2005.
[2] Lakoff / Johnson, 1980.
[3] Rovenţa-Frumuşani, 1994: 75.
[4] Rovenţa-Frumuşani, 2000:118.

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that through terminological process have migrated from the common lexicon to a specialized one, acquiring new meanings, on which our semantic analysis focuses. Common nouns, such as *corn*, *cordon*, *sac* (*horn*, *cord*, *sack*) may have medical terminological meanings in collocations describing the shape of organs: *corn* anterior / posterior al celulei nervoase, *coarnele* laterale, celulele *cornului* posterior, *cordon* ombilical, celule *cordonale*, *sac* colector, *sac* dentar.

The meanings of common words easily migrate to medical language, botany being a source field, thus one can find words such as *rădăcină*, *ramură*, *peduncul*, *tubercul*, *trunchi*, *bulb* (*root*, *branch*, *peduncle*, *tubercle*, *trunk*, *bulb*), which take strictly medical values in the following phrases: suferinţa *rădăcinii* posterioare, *ramuri* senzitive, *ramuri* ale carotidei externe, *pedunculi* cerebrali, *tuberculi* cvadrigemeni, *tuberculi* anteriori ai mezencefalului, *trunchi* cerebral, *bulb* rahidian, *bulb* pilos.

Names of tools or objects used in constructions may be transferred to anatomical parts of the ear creating shape resemblance metaphors: *nicovală*, *scăriţă*, *fereastră ovală*, *rotundă*, *vestibul*, *pavilionul* urechii.

Other examples of medical terms, based on shape metaphors, have been selected from the neurology domain: *bastonaşele* de la periferia retinei, *gaură* optică, *glob* ocular, *con* retinian, *vârfuri* izolate de mare amplitudine[5].

Anatomy includes a large variety of common nouns having a precise medical functionality which may create shape metaphors, as well: *tunică* musculară, *vestibul* laringian, *coarde* vocale, *foiţă* visceralã, *noduri* pulmonare, *lojă* renală, *piramide* renale, *fusul* pelvin.

Our medical corpus has provided metaphors denoting different levels of intensity and we have selected some from neurology: *criză de automatism psihomotor*, *criză epileptică atonică*, *criză epileptică automatică*, *criză epileptică parţială*, *criză de epilepsie senzitivă*, *criză de hemicranie*, *criză dureroasă*, *criză migrenoasă*, *criză uncinată*[6]. The noun *criză* (*crisis*) has three defined meanings in the dictionary: tension period, severe lack of resources, (med.) critical phase before the healing or aggravating process of a disease, sudden outburst of a disease, mental tension.

Common verbs, such as *to diminish* or *to abolish*, used in the sense of loss or cut off in process intensity are part of medical phrases in neurology, with a less common semantic feature for an unfamiliar speaker of medical language: *abolind mişcările de verticalitate*, *a aboli funcţiile corticale cerebrale*, *sindromul cerebelos va diminua în forme nerecidivante*, *a diminuat durerea* [7].

In the field of terminology, the metaphorical word loses its primary meaning requiring no explanation, but a precise definition, when naming a specific scientific concept. The word *advancement*, means ‘success’, ‘progress’ in common language, signifying *detachment* in traumatology, as a result of metaphorical transfer following direction resemblance, and can be defined as: ‘*surgical detachment, as of a muscle or tendon, followed by reattachment at a point further forward than the original position*’[8].

Thus, the term is metaphorically reinterpreted and allows the specialist to focus

[5] Cezar, 1982: 245.
[6] Idem, *ibidem*, 236, 243, 289.
[7] Idem, *ibidem*, 212, 224.
[8] DIMD, 2003:34.

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on a specific detail or feature of the concept expressed by it, being vital for perceiving the medical meaning.

A large number of polysemantic verbs cover the medical terminology field, being invested with precise meanings to highlight the functionality of medical processes and procedures. For example, the verb *to evoke* has two well-defined meanings in the Academy Dictionary: 'to bring somebody notice of facts, events, past circumstances; to depict the image of a known fact, but which happened a long time ago'[9], apparently having no connection with the medical domain. Yet, a closer analysis has determined some metaphors in our medical corpus, built on functional similarity: *utilizarea potenţialelor vizuale evocate*, *răspuns evocat al trunchiului cerebral*, *se evocă un reflex polisinoptic*[10].

Furthermore, the nouns *instalare*, *interesare*, *invazie* (*installation*, *involvement*, *invasion*) acquired new terminological meanings through functionality metaphorical expansion within collocations: *instalarea ameliorării poate fii rapidă*, *instalarea bruscă a simptomelor rinitei alergice*, *interesarea formaţiilor anatomice învecinate*, *complicaţiile diabetului cu interesare renală*, *invazia virală urmează unei perioade de incubaţii de şapte zile* [11].

The verbs *a iriga*, *a recidiva*, *a incrimina* **(***to irrigate, to recur, to incriminate*) encountered in the common language with different meanings, are included in the structure of medical collocations, with other terminological meanings and thus creating metaphors built based on functional similarity: *paralizia poate recidiva*, *vasele care irigă centri nervoşi*, *s-a incriminat o transmisie genetică* [12].

The verb *a căptuşi* (*to line*) acquires in the medical language a rich functional metaphoric feature within the examples from anatomy: „pleura costală *căptuşeşte* faţa posterioară a sternului"; „tunica mucoasă *căptuşeşte* ansamblul fibroelastic". This polysemantic verb took the main meaning provided by the dictionary, "to cover an object, inside or outside, with a protection, insulation layer" applying the same function as in the anatomic descriptions previously exemplified.

In medical discourse, the noun *debut* and the verb *to debute* identify their polysemantic structure, used with a terminological meaning in metaphorical collocations built on temporal similarity: *debutul bolii*, *debutul ameliorării simptomelor*, *sindromul poate debuta acut*, *reacţie cu debut gripal şi febră*, *migrenă cu debut ictal de ischemie cerebrală* [13].

A contextual analysis of the polysemy can contribute to semantic differentiation / disambiguation. This analysis is required especially due to the fact that some terms, in free combinations, come to designate new concepts, which is motivated by the dynamics of the medical field.

3. Conclusions

We have analysed metaphorical expansion at the level of medical term, as a means of developing word semantic structures, due to the fact that it is of great

[9] MDA, 2010: 847.
[10] Cezar, 1982: 247, 341.
[11] Idem, *ibidem*, 212, 324.
[12] Idem, *ibidem*, 290.
[13] Idem, *ibidem*, 103, 144, 291.

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importance in the specialized language. This type of discourse cannot function without metaphor because metaphor stimulates vocabulary in general and scientific language in particular.

In medical language metaphor has a nominative function as for scientific patterns, there are linguistic means involved and in order to express these concepts one can also use even ordinary words.

In scientific language these common words are constituents of a different type of units being part of a different kind of vocabulary. The semantic relationship with the source lexeme remains, however, although it may not be present in any term definition.

Therefore, terminological metaphor is an extremely important component of specialized discourse. Metaphor in science is a linguistic key of cognitive conceptualization[14].

Thus, analyzing the metaphorical mechanism of medical terms that refer to parts of the body, we conclude that most of metaphor terms (65%) are based on shape similarities, others (15%) aim at functional resemblance and the remaining percentage is divided into other types of similarities.

The metaphorical shaping process allows to highlight the underlying features of word to term semantic transfer. Achieving metaphorical terminological meaning is a complex process that includes not only the semantics of a common word, but also systemic relations of the lexical unit, its paradigmatic and syntagmatic features.

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[14] Oliveira, 2002.

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ABBREVIATIONS

DIMD = *** *Dorlnad's Illustrated Medical Dictionary*, 30th edition, Saunders/Elsevier, Philadelphia, 2003.
DM = Valeriu Rusu, *Dicţionar Medical*, Bucureşti, Editura Medicală, 2007.
MDA = Academia Română, *Micul dicţionar academic*, Bucureşti, Univers Enciclopedic Gold, 2010.
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