

# THE EVOLUTION OF ROMANIAN MEDICAL TERMINOLOGY

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## **Abstract**

Present-day society permanently renews, transforms and changes itself in a dazzling rhythm, this having multiple consequences both on scientific domains and on language, namely on its vocabulary. The article deals with the analysis of the evolution of Romanian medical terminology, starting from a short history of medicine as a science and continuing with the description of the medical language in relation to the development of scientific language in general. The main study, however, is centered on the observation of the structure of the Romanian medical terminology starting with the 18<sup>th</sup> Century up to the present time.

**Key words:** *evolution, terminology, internationalization, language, medicine*

## **Résumé**

La société d'aujourd'hui est sans cesse renouvelée, transformée et changée à un rythme vertigineux, avec des conséquences multiples tant dans les domaines scientifiques que dans la langue, particulièrement dans le vocabulaire. Cet article présente l'analyse de l'évolution de la terminologie médicale roumaine, à partir d'un court historique de la médecine comme science, continuant avec la description du langage médical liée au développement du langage scientifique en général. L'étude principale porte cependant sur l'analyse de la structure de la terminologie médicale roumaine dès le XVIII<sup>e</sup> siècle et jusqu'à présent.

**Mots-clés:** *évolution, terminologie, internationalisation, langage, médecine*

## **1. Short History of Medicine**

The present-day society permanently renews, transforms and changes itself in a dazzling rhythm, this having multiple consequences both on scientific domains and on language, namely on its vocabulary. Thus, these changes are to be found in political, social, scientific or technical structures,

and in people's mentality as well, and, as a consequence, there have emerged terms that reflect novelty, either created within the Romanian lexicon or borrowed from other international languages, such as English, French, German or Spanish.

The specific terms of a scientific domain, either numerous or not, contribute not only to the active enrichment of the vocabulary of a language, but also to the modernization and civilization of that society by using this updated vocabulary. As Deroy himself stated "there has never existed a totally isolated language, without any borrowings" (1956: 5). Some of these borrowings have passed the test of time, others completely disappeared, while others have adapted and developed following the patterns of the Romanian language. Still, despite the continuous enrichment of the Romanian language in point of vocabulary, its grammar structure has preserved its mostly Latin nature.

All that has been mentioned so far has a correspondence in the medical field, with its specific terminology, as well. We will present a short history of medicine in order to better understand the differences among the various historical periods, since early times. Without this progress, nowadays the society would not be so rich scientifically, spiritually and, why not, linguistically.

Medical knowledge must have appeared ever since the Medieval Age. But, in fact, Greeks, Romans and Egyptians were the forerunners of medicine. Thus, Hippocrates, who lived in ancient Greece, was considered "the Father of Medicine" as he was the first scientist ever who established the bases of medicine, approximately 400 years BC. The medicine knowledge in ancient Greece was gathered in *Hippocrates's Collection* that comprised over 60 books written over a period of 150 years. Due to the long period of time passed, it is not known for sure who wrote most of these books. Hippocrates advised doctors to keep in mind the specific symptoms of a disease in order to analyze them every day after. Hippocrates's ideas were spread all over the East of the Mediterranean Sea, thus offering vast study resources to historians. Unlike the priests, who were convinced that diseases were caused by Gods, Hippocrates and other doctors of that time supported the idea that all illnesses had natural causes.

After the period of ancient Greece and Rome there was not registered any significant progress in medicine until the 17<sup>th</sup> century. Starting with the 14<sup>th</sup> Century, more and more often there were practiced organ dissections within the various medical schools, like the University of Montpellier. The numbness of the medical progress could also be due to the role that the Catholic Church played. Therefore, as far as medicines and treatments were concerned, clergymen did not always agree with them, as they said certain diseases were punishments from God. Starting with the 1900s, there was recorded a visible progress in medicine. World War I acted as a stimulus for worldwide progress, which also continued after the war. The same thing happened after the end of World War II. Despite all these, there could not be found efficient treatments for various infections caused by germs or viruses. For example, the high mortality rate (twenty million people) recorded at the end of World War I after a flu epidemic.

After World War II, there began a real expansion regarding the medical technology and healthcare techniques, as well. Thus, there were developed X-ray investigations and microscopes, allowing a more detailed analysis of the human body. We may also mention the discovery of insulin, so useful in ameliorating the health state of patients suffering from diabetes mellitus. Another major progress may be considered the one regarding the discovery of vaccines for childhood diseases that used to be fatal not long ago – as measles or chickenpox. There were elaborated amniocentesis tests during pregnancy that help diagnosing congenital malformations or the Down syndrome. Among other discoveries within modern medical sciences, we should mention: contraceptive methods, the results of the study of the DNA, better or more efficient medicines (as penicillin for tuberculosis or cytotoxins for cancer treatment), heart surgeries, the dialysis process, the use of laser in almost every type of surgery, cardiac valves and, last but not least, the possibility of performing the transplant of organs or stem cells. Still, the greatest challenges for medicine scientists remain the cancer and the HIV virus, even though many discoveries have been made as far as these two deadly illnesses are concerned, thanks to the use of treatments for health improvement, since a complete recovery is not possible (yet).

Obviously, there is a great difference between the medical progress before World War I and the present-day situation. Anyone would have expected a medical evolution, but what has happened in the last 60 years represents huge steps not only for medicine but also for the whole humanity. And it is almost a certainty that the medical progress will continue, maybe more rapidly than we expect.

We considered necessary to present this short history of medicine in order to best illustrate the part that medicine played in the development of the society. Alongside this scientific progress, we will see that the specific medical language used in the course of time has undergone tremendous changes, thus becoming a complex and ever interesting one nowadays.

## **2. Evolution of the Medical Terminology in Relation to the Development of the Scientific Language**

As far as medical research is concerned, one of the first manuscripts on a medical subject dates from approximately 1760-1770 (Coteanu, 1981: 183). In this material, there were described several illnesses and their treatment. Still, it is believed to represent a translation or a remaking, probably from Neo-Greek, with a difficult writing manner, not only because the author did not use an adequate medical specialized terminology, but also due to the fact that, wishing to make himself understood, he gave numerous explanations, some of these quite unnecessary. Thus, the language was burdened by using periphrases, by interrupting descriptions and, obviously, by complicating the structure of the sentence, leaving the impression that the latter did not have a concise ending: “Încuierea ficatului naște încă altele și gălbinarea, că, deacă să va încuia, adecă să va astupa, ficatul începe să să umfle și bășica veninului ce stă deasupra lui, adecă cea primitoare de venin, să împresoară și să strâmtorează și să strânge și uneori să astupă și să încuie, măcare că firește (= în mod firesc, natural) trebuie să curgă veninul încet, încet din bășica aceea înlăuntru la mațe, ca să nu să închiză și să să strângă mațile, însă acest venin cu puterea lui lepădătoare ajutorează ca să iasă afară mistuirea ce să cuprinde în mațe și prisosul” (text communicated by Gh. Chivu, researcher at The Institute of Linguistics, Bucharest, p. 188).

Within the process of elaborating the medical terminology (especially at the end of the 18<sup>th</sup> century and the beginning of the 19<sup>th</sup> century), there could be noticed significant expressions, hesitations and difficulties. We present a text by Dimitrie Cantemir from *Istoria ieroglifică*, as follows: “Că precum o boală și o fierbințeală cât de puțin în trup sau o durere cât de mică într-un mădulariu, tot trupul spre neadșezare și pătimire aduce așa neunire în poliție și nevointă în cetate, ciuma și langoarea cea mai rea, și trohana cea mai lipicioasă iaște...” (1978: 216). Next, we will see a medical text published nowadays, selected from a specialized medical review, Romanian Journal of Morphology and Embriology: “Scopul acestui studiu este de a analiza clinic, histopatologic și imunohistochimic un grup de pacienți dintr-o clinică de chirurgie generală. Markerii imunohistochimici au fost clasificați în funcție de datele obținute: analize pentru receptorii hormonali și anticorpi specifici ovarieni: ER, PGR, CA125 și CerbB-2, pentru proliferarea factorilor de analiză: Ki-67 și p. 53, pentru excluderea diagnosticului: proteina S100 și CK7” (2008: 329). We may easily draw the conclusion that two medical texts, from two distinct periods of development, illustrate in an obvious way the idea of progress, both scientifically and linguistically (i.e. terminologically) speaking. As Greimas stated, “The scientific language, being mainly designating and informing, is all built up” (1975: 39). We can find the same idea in Bachelard, too, but a little more suggestively put: “...the special language of science created alongside the discoveries is not a natural one...” (1986: 243).

At the beginning of the 19<sup>th</sup> century, medical sciences still had not come out from the era of looking for ways of expression, although medicine was one of the first sciences that entered the process of organizing the scientific language, together with mathematics. Only starting with 1840-1850, these sciences, and others as well, had purchased and finally reached the means to combine the necessities of content with those of expressing specialized information in the Romanian language. But, even though we may consider the process of modernizing medical terminology a spectacular one, this did not mean the modernization of the style as a whole. As long as the new words had a scarce occurrence that needed to be glossed in a context, there could not be the case of a modern scientific style, although

Petru Poni made a huge step in this direction in 1869 in his *Course of Elementary Chemistry* – transl. (Coteanu, 1981: 195).

Actually, the development of the literary Romanian language starts with the first texts between the 16th century and the end of the 18th century, when the literary Romanian language was primarily influenced by Church Slavonic, followed afterwards by a period of assimilation of Latin and Greek borrowings (Ivănescu, 1980: 583). Subsequently, both literary language and scientific terminology had been going through a process of neologization, mostly with elements from Western languages.

As far as the medical terminology is concerned, the causes for neologization were numerous. Among these, we present the opinion of Sextil Pușcariu who stated that, by using a neologic language, “doctors could communicate near the patient’s bed so that the patient could not understand them” or that “an illness holding a foreign name seemed more interesting than the one with a ordinary name” (Pușcariu, 1937: 69). To these subjective factors there may also be added other objective ones, such as: a rapid information flow, facilitating communication between specialists speaking different languages, the internationalization of scientific terms. The development of the scientific medical style, starting with the 19th century, was especially favoured by the translation of some foreign medical papers: *Alegerile lui Ippocrat* (from Neo-Greek), about the middle of the 18th Century, *Meșetșugul doftorii* (also from Greek), approximately between 1760 and 1770, whose authors are unknown, *Învățătura pentru ferirea și doftoria boalelor* (a translation from Hungarian by Petru Maior in 1816), translations from German and French originals, after 1830, especially in Moldavia, *Instrucție în scurt de prințipurile igienismului* (translated from French by C. Veisa, Jassy in 1836), *Macroviotica sau regulele pentru păstrarea sănătății și prelungirea vieții* (from German, Jassy, 1838) and many more. There could not be omitted here the paper *Apele minerale de la Arpătac, Bodoc și Covasna, despre întrebuițarea acelorăși în deschilinite patimi*, written by Vasile Pop, in Sibiu 1821, as it was considered the first Romanian scientific work (Ursu, 1962: 63).

In conclusion, the formation period of the Romanian medical terminology starts with the end of the 18th Century – the beginning of the

19th century. The history of “medical art” reveals that until 1760 there had been no medicine book written in Romanian, and, therefore, in order to make an inventory of the Romanian medical terms, it was necessary to study various sporadic medical annotations such as: lexicons, administrative papers or works of famous writers like Dimitrie Cantemir or Nicolae Mavrocordat.

### **3. Overview on the Structure of the Romanian Medical Terminology**

The linguists’ interest is more and more often concerned with the study of terminologies. The surprise they experience when dealing with the variety of linguistic realities is accompanied by the intention of trying to establish rules and criteria that may act towards a structuring and standardization of the lexical material provided by different scientific domains. As such, medical, legal, economic or linguistic terminologies represent only a few microsystems that linguists have dealt with over the last decades.

Due to the fact that most specialized terminologies are marked by interdisciplinarity, it is a normal thing for the linguists to be faced both with different and with similar lexical elements. Common features are explained through the existence of some crystallization methods, more or less identical within the study of specialized terminologies (Focault, 1996: 130). Diachronically speaking, we may observe that the medical terminology comprises, both in the 19th and 20th Centuries, approximately the same linguistic methods and sources. Thus, we have both the internal source, characterized (in the 18th Century, but especially in the 19th Century) by folk lexical elements, derivative lexical creations, periphrastic terms or calques: *a purcede îngreunată* (N.K., 1827: 117), *pierdere de copil* (Ibidem, p. 36), *obrinteala mătcii* (Ibidem, p. 88), *tusăros* (I.I., 1978: 349), or calques after Latin medical terms: *cercuire a sângelui*/ ‘circulation’, *folcuțale inimii*/ ‘ventricles’, *gâlcile balelor*/ ‘salivary glands’, *urechile inimii*/ ‘auricles’ (apud Ursu, 1962: 68).

On the other hand, the structure of the Romanian medical terminology is enriched by the *external source*, namely the *neologisms*. From a

sequential analysis on the medical terminology, we may notice that the greatest number is represented by the *Latin-Romance neologisms*, both *unadapted-Latinisms* (*balsamum peruvianum, gas carbonicum, gas azoticum, mentha piperita, natrium sulphuratum, zyncum oxydatum, valeriana officinalis*, etc.) and *adapted* ones (*epidemie, colică, alveolă, auricul, respirație*, etc.). Within medical terminology, most of the anatomic terms, names of some illnesses or medicinal plants are in Latin. In spite of this fact, in the structure of the Romanian medical terminology there may also be found a numerous class of Greek-origin terms. In most modern languages, within specialized languages, there is a tendency to use borrowings from Classical languages. As a natural consequence, medical terminology contains a well-represented class of Neo-Greek elements. At the end of the 18th Century and the beginning of the 19th Century, especially in the works of Dimitrie Cantemir and the first authors of medical scientific papers, there may be found Greek-origin words like: *sfigmos, melanholie, organismos, flogosis, chicloforie*, etc. Neo-Greek neologisms are also preserved nowadays, among them being: *diaree, reumatism, gangrenă, lehză*, etc.

Quite an interesting phenomenon during the evolution of the Romanian medical terminology is represented by the latinization of some Greek-origin terms, thus leading to the emergence of some Latin synonyms for the Greek terms. We present here some of these synonyms with double etymology (i.e. Greek and Latin): *glandă* (Gr. *aden, -os*, Lat. *glands, -ndis*), *mână* (Gr. *kheir, -iros*, Lat. *manus*), *lacrimă* (Gr. *dacryon*, Lat. *lacrima*), *limbă* (Gr. *glossa*, Lat. *lingua*), *sânge* (Gr. *haima, -atos*, Lat. *sangvis, -inis*), *măduvă* (Gr. *Myelos*, Lat. *medulla*), *rinichi* (Gr. *nephros*, Lat. *ren, renis*), *ombilic* (Gr. *Omphalos*, Lat. *umbilicus*), *venă* (Gr. *Phelps, phlebos*, Lat. *vena*), etc. Most of these medical terms are anatomic in nature, the Greek ones dating from the period of ancient Greece, when Hippocrates lived. Later on, when Latin people met the Greek civilization, they borrowed not only the medical knowledge but also its specific terminology.

The influence of French language contributed to the modernization of the Romanian literary language, both due to the common Romance origin of the two peoples, and also to their linguistic relationship. Among other

causes of the massive influence exerted by French over Romanian, there was the cultural prestige of France as well as the economic and political relationships between the two countries (Munteanu, Țâra, 1978: 67). D. Macrea (1982: 74), in a presentation within the Congress of Romance Philology in Madrid, regarding the study of neologisms with French etymology, emphasized the fact that 27% of scientific and technical terms are solely of French origin.

Starting with the 19th Century, French had a significant influence not only on the Romanian literary language, but also on the medical terminology. Therefore, terms like *dietă* (< fr. *diète*), *icter* (< fr. *ictère*), *colon* (< fr. *côlon*), *medicament* (< fr. *médicament*), *pansament* (< fr. *pansement*), *stomatologie* (< fr. *stomatologie*), etc. entered Romanian medical terminology and continue to be very often used even at present. The terms *abdomen* and *absorbție*, registered in the *Dictionary of the Romanian Language* released by the Romanian Academy are also found in Vaillant's *Vocabulary – 1839* (Seche, 1966: 43-44). We should also mention the medical terms having a Francophone source pertaining to the “Latin cultural substrate” or the so-called “patterns” that became universal in the 19<sup>th</sup> Century: *anorganic* (< fr. *anorganique*), *contamina* (< fr. *contaminer*), *contagios* (< fr. *contagieux*), *curativ* (< fr. *curative*), *epidemie* (< fr. *épidémie*), *organ* (< fr. *organe*).

In the 19th Century, the number of neologisms and internationalisms was more or less under control because of the tendency to replace foreign medical terms by Romanian words – calques, derivatives, periphrases, etc. This can no more be taken into consideration at present, the attitude of reserve regarding neologisms being almost unperceivable within the Romanian linguistic area, and not only. If we take a retrospective look over the Romanian-English relations, we may state they these have favoured the entrance of English-origin neologisms within the Romanian language. Thus, starting with the 19th Century, there emerged translations of various famous English and American literary works. As far as the scientific domain, especially the medical one, the 19th Century represents a period of flourishing. Numerous Romanian people go to study medicine and work as doctors in England and America, while English and American doctors

come to live in our country. In 1842, the English oculist Meiler Bei performed surgeries for squint or deafness, while dr. J.B. Mawer from London was known as a good pediatrician, both living in Bucharest (Bercuş, 1981: 295). Doctor Mawer also played an important part during the Independence War (1877-1878), because together with his wife managed to impress the English press and the English people as well, and, due to their donations, they inaugurated a Romanian hospital. In the same manner, the English surgeons McNalty, Conolly, Stephens and Pattison worked in the Romanian hospitals during the same war, hospitals that had been entirely equipped by the English (Hope, 1977: 299).

At the end of the 19th Century, more and more Romanian doctors left for America and England in order to participate in conferences or congresses, even presenting their own scientific articles on medical themes. As a consequence of the translations of English medical papers into Romanian, there was possible not only the transmission of information but also the acquisition of a considerable number of neological medical terms of English origin. If in the 19th Century, the diffusion of the English-origin terms was quite reduced, in the 20th century, and especially in the last decades, we are faced with a real “invasion” (not used here with a negative meaning) of these neologisms. In time, doctors’ tendency to use the French language has dropped, as nowadays the English language is primarily used both for abstracts and *in extenso* articles as well. We will often find in the scientific medical reviews English notes, translations or explanations: *textul de semnificație bilateral/two-tailed significance test* (RMChi, 1998: 130), *non-microcelular/nonsmall-cell* (RMChi, p. 129), *pe molar se utilizează claveta sau inlay-onlay înşurubat pe coroană* (RMS, 1999: 45), *în cazul grefelor cross-face* (RMChi, p. 199), *opacități imprecis conturate/snow-falke* (RMChi, p. 32), *focar de microcalcificări grupate cluster* (RMChi, p. 33), *tehnicele light-scattering prin laser* (RMChi, p. 54), etc.

It is also interesting mentioning the fact that English medical terminology has taken, in its turn, the Latin and Greek terms, keeping their unaltered form in most cases: the *adductor, brevis, longus, magnus, flexor carpi radialis* muscle, etc (Merriam Webster Dictionary Online, 2010).

#### **4. Conclusions**

In general, medical terminology is characterized by a various and rich number of terms, both regarding their form, diffusion or frequency, and also their origin. Moreover, in the 20th Century we may easily notice the constant presence of some new lexical elements in the medical terms corpus already fixed during the last centuries. A consequence of this accumulation of neologisms is that we are faced now with a real medical neolanguage, together with another characteristic of present medical terminology, namely the tendency of internationalization, through the impressive number of internationalisms, represented by Latinisms and Anglicisms. These terms facilitate the accurate decoding of the medical message by medicine specialists who speak different languages.

Starting with the second half of the 20th Century, medical terminology has been considerably enriched by the English lexical element. This fact only strengthens our belief that Romanian medical terminology represents a linguistic territory in a continuous process of moulding and renovation.

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