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# Romanian Medical Language: Tendencies of Development

**Abstract**: This article discusses actual problems of medical language cultivation. Specialized language is produced in concrete deeds of communication and expresses the scientific matter (specialized). Medical language exteriorizes medical knowledge and uses specialized lexical units that transmit medical knowledge. Every lexical unit with specific value in a particular field is considered a specialized lexical unit and it consists of sides: a) lexical unit (signified → significant); b) cognition unit; c) communication unit. Specialized medical language consists of three layers: 1. *non-terminological lexicon* – a neutral verbal layer of a specialized language. Here are registered functional homogeneous words, emotional neutral ones that form languages basic vocabulary; 2) *scientific common lexicon* – for more fields of activity; 3) third layer represents *medical terminological lexicon***.** Here are attested Greek-Latin origin autonomous units (anat. *ligamentum, musculus* etc.) and non-autonomous, units of Greek-Latin origin which initially had a full lexical meaning, but in present state (*in statu praesenti*) are elements which make new lexical units (*hepat(o)-* “liver” [<fr. *hépat*/o/-, cf. gr. *hepar, -atos*] + *-graphy* “writing”, “which writes” [<fr. *graph*/o/-, *-graphe, -graphie*, cf. gr. *graphein*, to write] = *hepatography*–radiographic examination of the liver). Autonomous and non-autonomous “savant” units are forming the core of terminological medical lexicon. Original association of a 2, 3, 4 and more 5 lexical units ensures the creative intervention in neologizing process of the medical language. This process is also ensured by semantic variable limits and their positional labiality.

**Keywords**: specialized language, specialized acquirement, terminology, medicine, Greek - Latin origin lexical units

**Rezumat**: **(Limbajul medical românesc: tendinţe de dezvoltare)** Prezentul articol pune în discuţie câteva probleme actuale de cultivare a limbajului medical. Limbajul specializat se produce în acte concrete de comunicare şi exprimă materia ştiinţifică (specializată). Limbajul medical exteriorizează cunoştinţe de medicină şi foloseşte unităţi lexicale specializate care transmit cunoştinţe medicale. Unitate lexicală specializată se consideră orice unitate lexicală cu valoare specifică într-un domeniu specializat, având trei faţete: a) unitate lexicală (semnificat → semnificant); b) unitate de cunoaştere; c) unitate de comunicare. Limbajul specializat medical se compune din trei straturi: 1. *lexicul neterminologic* – strat verbal neutru al unui limbaj specializat. Aici se înscriu cuvinte funcţional omogene, emoţional neutre, care formează vocabularul fundamental al limbii; 2. *lexicul ştiinţific comun* mai multor domenii de activitate; 3. *lexicul terminologic medical*. Aici se atestă unităţi de origine greco-latină, autonome (anat. *ligamentum, musculus* etc.) şi neautonome, unităţi de origine greco-latină care, iniţial, aveau un sens lexical plin, iar **in statu praesenti** sunt elemente de constituire a unei unităţi lexicale noi (*hepat(o)-*„ficat” [<fr. *hépat*/o/-, cf. gr. *hepar, -atos*] + *-grafie*„scriere”, „care scrie, înregistrează” [<fr. *graph*/o/-, *-graphe, -graphie*, cf. gr. *graphein*„a scrie”] = *hepatographia* – înscrierea imaginii ficatului pe pelicule Roentghen). Unităţile „savante” autonome şi neautonome formează nucleul lexicului terminologic medical. Intervenţia creativă la nivel de neologizare a limbajului medical este asigurată de asocierea originală a două, trei, patru şi chiar a cinci unităţi lexicale, dar şi de limitele semantice variabile şi de labilitatea poziţională a acestora.

**Cuvinte-cheie**: limbaj specializat, cunoştinţe specializate, terminologie, medicină, unităţi lexicale greco-latine

In 1956, J. Dubois and G. Janannon attested the use of 150 scholar items in the French Language [1, pp. 10-13]. In 1970, Fl. Ciobanu and F. Hassan included 834 “cultisms” in the glossary of composite elements [2, pp. 243-260] In 1975, Gr. Cincilei referred to 660 elements in French and 700 in Romanian [3, p. 112]. Henri Cotte refers to a number “a little

bit higher than 2700 units" in *Dictionnaire de structures du vocabulaire savant: Eléments et modèle de formation* [4, p. 9]. Florin Marcu explains 1401 "cultisms" and 585 of their versions in *Great Dictionary of Neologisms* [5].

Currently, a "new ecological paradigm" (R. Tessier) [6, pp.7-12] has started to circulate. It implies the passage from the reduction principle (investigating the internal structure) to the global one (the object of investigation constitutes the whole part).

The existence of an international general lexicon that consists of: a) independent and autonomous lexical units has been already demonstrated. It is considered that "cultisms" are the main guaranty for the specialized languages to remain perpetual.

b) Phonological, morphological, lexical rules etc. used according to informational demands. Lexicon is aimed to provide standardization, normalization and language planning.

Lexical units that are based on Greek and Latin elements integrate easily into Indo-European languages, and have the status of "internationalisms" which occupy an interlinguistic position. Any language, which has borrowings, is put in a position to offer new linguistic forms to the given notion. Massive borrowings confirm once again the viability of the Romanian language lexical system and its opened character. The monograph of Academician Nicolae Corlăteanu, *Linguistic incorporation in European realities*, tells that "the admission of neologisms in our language, as in any other language, is not done mechanically or at random from any etymological source. They are required to be adapted to notional, phonetico-phonological, morphologico-derivative, syntactic, stylistic, lexico-phraseological norms of the borrowing language."[7, p.13]

In this way, new terminological units may be (or may be not) classified as lexical neologisms. Therefore their further study should be done from the morphological point of view which will take into account: the mechanism of formation (root, prefix, suffix), the type of formation, empirical description of the items (synchronic aspect / functional system; diachronic aspect / historical plan etc.). Such analysis will help to identify the regularities (with the possible exceptions) and to put forward hypotheses on the mechanisms of terms formation, which is a timely matter for terminology investigation.

Infiltrated in the general lexicon, **autonomous lexical units of Greek and Latin origin have the status of affixoids** (elements of composition that originate from autosemantic units, which have an intermediate position between the word and affix; the status that allows them to benefit from their nominal and structural characteristics).

At various levels of analysis, medical language (especially medical terminology lexis) is attested to:

a) Morphological level: the presence of affixoids;
b) Lexical level: the existence of multi-lexemic words (formed by affixoids);
c) Semantic level: semantic polyvalence of affixoids in various medical disciplines and subdisciplines.

Medical terms have formed their meanings throughout the history. They reflect the philosophy and wisdom gathered by the mankind in the effort to understand the universe, which, in turn, determined the concept of life and death. The terms formed from the "cultisms" of Greco-Latin origin are the evidence of the fact that "the legacy of the Greco-Roman world is the cradle of European spirituality and of modern thinking in general ..." [8, p 7 -8].

**Doublets Lat. *digitus, i,* m = Gr. *dactylus, i,* m 'finge' and Lat. *manus, us,* f = Gr. *cheir, kheir,-ros,* 'hand' in medical language**

To see the functioning of the above mentioned approach, I propose to analyze the doublets of Lat. *digitus, i*, m = Gr. *dactylus*, i, m 'finger' and Lat. *manus*, us, f = Gr. *cheir, kheir,-ros*, 'hand'.

The Latin variants *digitus*, i, m and *manus*, us, f formed the anatomical terminology (it should be noticed that Latin has the status of the "language of communication" during anatomy classes in the process of acquiring medical knowledge) and entered the basic vocabulary of the Romanian language: "... cu mâna cu cinci degete cu unghii... mânule omului" [9, p 60], "mânuli", "degetul arătătoriu" [10, p. 44] [10, p. 327], "scadere de degete" [10, p. 235] etc.

Hand is a royal sign, an instrument of power and a symbol of domination. Hand and fingers are related to knowledge, ability to do "things". It is the symbol of power and dignity.

The Greek variants *dactylus*, i, m 'finger' and *cheir, chir* 'hand' form elements of complex terms used mainly in clinical terminology.

***Cheir(o)-, -cheirie / chir(o)-,-chirie***, elem. 'hand' (< Fr. *cheir/o/-. -cheirie*, chir/o/-,-chirie, cf. *Gr.kheir, -ros*)

***Dactil (o) -,-dactil, -dactilie,*** elem. 'finger' (cf. Fr. *dactyl/o/-, -dactyle, -dactylie*, cf. Lat. *dactylus*, Gr. *daktylos*)

**Etymology.** It is considered that the meaning of "cultisms" *cheir(o)-, -cheirie / chir(o)-, -chirie* is linked to an arrow, and reminds us the name of Chiron, Sagittarius, whose ideogram 'arrow' comes from the word 'hand' [11].

Chiron was a Thessalian god of healing, but in later Greek mythology, he survived as one of the Centaurs. When Chiron was born half-horse and half-man (or centaur), Philyrei was so ashamed that abandoned him in a cave. It is considered to be the first psychic trauma in mythology, Chiron's wound being well-known.

Chiron learned the art of music and naturopathic and homeopathic healing; became master in the art of war by developing fighting skills and practicing archery during hunting. Facing difficult challenges, each time he exceeded the limits imposed by his condition of being and achieved great wisdom in many areas of life [12].

It is believed that from the name Chiron derived the terms *chirurg, chirurgie* (*surgeon, surgery*), from the Latin *chirurgiae* which means 'laboring hand' [13] < Latin *chirurgia* < Greek χειρουργία (*cheirourgia*) consisting of χείρ (*cheira,* 'hand') + έργον (*ergon*, 'work') [14], and which might be translated as the practice of hands usage. In medicine the word 'surgeon' means physician who treats 'with hands' and 'surgery', a medical specialty where diseases are treated 'with hands'.

The scholar element *dactil(o)-,-dactil, -dactilie*, also refers to the ancient mythology. Dactyls Δάκτυλοι, five in number, are considered to be demonic creatures who lived on the mountain Ida in Phrygia (Crete, Asia Minor) during the cult of Reia-Kibela. It is believed that Dactyls discovered iron manufacturing, as their names indicate - Kelimys (from 'to melt'), Damnamenei (from 'to tame') and Akmon (the 'anvil') etc. who are also considered to be the organizers of Elide Olympics [15]. The status of the autonomous lexeme is used in modern prosody. Being taken from the Greek and Latin the word *dactil* in semantics of poetry means composed of three syllables, the first long and the other two short.

**Scholar elements *dactil(o)-, -dactil, -dactilie and cheir(o)-, -cheirie / chir(o)-, -chirie* as formants of compound terms**

The scholar elements *dactil(o)-, -daciil, -dactilie* and *cheir(o)-, -cheirie / chir(o)-, -chirie* form the terminology for several areas of activity, including the medical one. Both "cultisms" are affixoids (primary or secondary position within a compound term).

*The Great Dictionary of Neologisms* (*GDN*) [5] attests 22 terms containing prefixoid *dactil*(o) -, among which are:

**dactil(o)-**, the primary meaning 'finger' - *dactiloplastie* 'plastic surgery operation to restore the damaged fingertips', *dactilomegalie* 'fingers hypertrophy' etc.; in medicine - 5 terms;

**dactil(o)-[1]**, ennobled meaning 'signs with fingers', 'keyboards devices' - *dactilofazie = dactilogie* 'communication between deaf people, consisting of conventional signs made with fingers' in defectological medicine - 3 terms;

**dactil(o) -[2]**, ennobled meaning 'fingerprint' - *dactilogram* etc.; in jurisprudence - 3 terms;

**dactil(o) -[3]**, ennobled meaning 'typewriter' - *dactilograf* etc., in secretarial work - 6 terms;

**dactyil(o) -[4]**, ennobled meaning 'hand' - *dactilomantie* etc., in palmistry – 1 term.

Interdisciplinary use of affixoids indicates the availability to cover the informational gap by semantic incorporations, which will ultimately generate the changes of concept.

There were attested eight terms in which the element has the status of suffixoid and it maintains the primary meaning 'finger, referring to finger / fingers' - *anhilodactilie* 'deformity by pathological suture of fingers', *anizodactilie* 'unequal fingers', *brahidactilie* 'congenital malformation characterized by shortness of fingers'.

For the second element *cheir(o)-cheirie/chir(o)-, -chirie* the GDN attested 18 terms for the first position of the term, of which 5, with the meaning of 'hand', are used in medicine: *cheiralgie* 'syndrome characterized by pain in the hands', *cheirospasm* 'convulsive movement of the hand' etc.

The ennoblement of the sense is registered either in the "cultisms" used in medical subfields or in other areas of activity:

***cheir(o)-/chir(o)-[1]***, 'finger and han' - *cheromegalie* 'hypertrophy of the fingers and hands', in medicine; *cheironomie* 'a kind of choir conducting carried by the movements of hands and fingers', in church music etc. - 5 terms;

**cheir(o)-/chir(o)-[2]**, 'thumb' - *cheroplastie* 'surgical reconstruction of the destroyed thumb', in medicine - 1 term;

***cheir (o)-/chir(o)-[3]***,'palm' - *chiromant* 'palmist' - 2 terms;

***cheir(o) -/chir (o)-[4]***,'written' - *cheirofobie* 'pathological fear, phobia of writing', in medicine - 2 terms;

***cheir(o)-/chir(o)-[5]***, 'signature' - *chirograf* 'document under private signature'; *chirografar* '(person) creditor who holds a personal right on an act under private signature', in law - 2 terms.

***cheir(o)-/chir(o)-[6]***,'wings' - *cheiropter* 'order of mammals with membranous wings', in biology - 1 term.

There are cases of synonymous items: *chiromanţie = dactilomanţie*, both have the meaning of 'palm'.

**A distinction of scholar elements is the conjunctive availability: terms consisting of 2, 3, 4 and even 5 lexical units (autonomous and non-autonomous)** *angio + + dia + termo + ciclo + punctura* 'cyclic puncture blood vessels through heating' etc.

The language is not composed of simple words, but of the meanings that are stored in these words. Words**'** limits are, in fact, the limits of their meanings.

The semantic limit of the word composed by affixoids depends directly on the number of the affixoids of which they are formed. The attachment of a new affixoid-- creates a new semantic limitation, completing the meaning of the whole word:

1. *chiralgie (kir- < Gr. cheira 'hand' +-algie < Gr. algos 'pain')* – 'pain in the extremities of the hands'.
2. *chiropodalgie (kir-< Gr. cheira 'hand' +-pod- < Gr. pous, podos 'foot' +-algie, Gr. algos 'pain')* – 'pain in the extremities of the hands and feet'.
3. *chirobrahialgie (kir- < Gr. cheira 'hand' +-brah- < Gr. brakhion 'arm' +-algie < Gr. algos 'pain')* – 'pain in hands and arms'.

Each segment offers new lexical semantic nuances, and the word formed by the affixoid conjunction, is actually the expression of two tendencies: a) subtlety, concretization of certain entities of relationships; b) verbal economy which dictates the shortened form of the term.

**Semantic relationships**

**The existence of Latin-Greek doublets favors the establishment of the same semantic relationships of synonym between separated lexical segments of the word formed by affixoids.** Greco-Latin doublets were formed during the Greco-Latin bilingualism since I cent. BC [16, 118]. Many words of Greek origin were so well integrated into the structure of the Latin language that they could serve as the basis for derivation in compositions, conversions etc. However, Greek origin of affixoids does not mean that they cannot share synonymy relationship. Another feature of the words formed by affixoids is to establish semantic relationships (synonymy, antonymy, homonymy, paronymy) among certain segments of a compound word:

**1. Synonymy relationships**:

a) Synonymy relationships in the first word element: *grafofobie = cheirofobie* 'pathological fear, phobia of writing'.

*Grafofobie (< Gr. grafien* 'write' + < *Gr. Phobos*, 'fear','phobia'*)* = *cheirofobi*e (< Gr. *kheir, -ros* 'hand' + < Gr. Phobos 'fear', 'phobia')

b) Synonymy relationships in the second word element: *dactilologie = dactilofazie* 'means the agreement (between deaf people) by conventional signs made with the fingers'.

*Dactilologie* (< Gr. *daktylos* 'finger' + < Gr. *logos* 'speech') = *dactilofazie* (< Gr. *daktylos*, 'finger' + < Gr. phasis 'speaking')

**2. Antonymy relationships:**

a) Antonymic relationships in the first word element**:**

*microdactilie* (< Gr. *micros* 'small' + < Gr. *daktylos* 'finger') 'formation characterized by insufficient fingers development' ≠ *macrodactilie* (< Gr. *makros* 'high or very high' + < Gr. *daktylos* 'finger') 'exaggerated development of fingers'.

**3. Homonymy relationships:**

a) Homonymic variants related to invariance:

*dactilo- < Gr. daktylos* 'finger': *dactil(o)-*[1] 'signs with fingers', 'keyboard devices'; *dactil(o)-*[2] 'fingerprint'; *dactil(o)-*[3], ennobled meaning 'typewriter'; *dactil(o)-*[4], ennobled meaning 'palm'.

**4. Paronymy relationships.** Among analyzed scholar elements there can be observed some paronymic relationships:

a) paronymy relationships attested in scholar elements *cheir(o)-, -cheirie / chir(o), -chirie*, 'hand'. (< *Fr. cheir/o/-, cheirie, chir/o/-,-chirie* < *Gr. kheir, -ros*):

In medical terminology, the term *chier(o)-* has a especial use. It preserved the primary meaning of the word 'hand': *cheirospasm* 'convulsive movement of the hand' etc. The second meaning of *cheiro(o)-* refers to the ennobled sense of the term: *chiroman, chirograf* 'palmist' registered in other different fields;

**b) paronymic relationships attested in other scholar elements:**

***Chero-,*** *elem.* 'joy' (< Fr. *chero-*, cf. *Gr. kairein* 'to cheer')

***Cheir(o)- ,*** *elem.* 'hand' ( < *Gr. kheir, -ros*)

***Hiero-,*** *elem.* 'saint', 'sacred' (< Gr. *hieros*)

***Cheirofobie*** (*cheiro-* < Gr. *kheir, -ros* 'hand' + *-fobie* < Gr. *Phobos* 'fear', 'phobia') – 'phobia of writing'.

***Cherofobie*** **(***chero-* < Gr. *kairen* 'to cheer' + *-fobie* < Gr. *Phobos* 'fear', 'phobia") – 'pathologic aversion of joy, good mood'.

There exists a paronymic relation with the item *dactilio-* 'ring, stone' from Greek *Dactylios*. However, bearing in mind the mythological references, we can submit the hypothesis that both elements have a common etymology and originate from Δάκτυλοι, especially because they were craftsmen in mineral processing and the ring is the jewelry that is worn on the finger. The depiction of the synonym relationship between the words *dactilomantie* and *dactiliomantie* which mean "the art of fortune telling" only confirms our hypothesis.

As formant element the term carries this status ever since ancient times, like in *dactyliothēca* 'box, coffer for keeping rings or precious stones.' (< Gr. *daktylios* 'ring' + < Gr. *theke* 'shelf' [17].

**Conclusions:** Lexical neological formations (formed on the basis of Greek and Latin terms) that were introduced in medical language correspond to universal dimensions and define the specialized knowledge attained through additional learning of the reality (field of medicine). Attributed to the morphological system, "cultisms" hold the status of affixoids. The inventory of affixoids is included in an international translingual and transdisciplinary lexicon. As for affixoid composition, it follows the Greek model of word formation, which, if revived, is "easily imitated and used in practice", and "seems to have no limits" [18, pp. 420- 421].

Iordan I.). Terminological neologisms (formed on the basis of affixoids), once used in a specific language, become part of the national terminology and receive the national status keeping at the same time their international status. It facilitates the unification, planification and standardization of international terminology. Investigating the historical formation of medical terms is quite a difficult task, but it gives us the advantage of understanding and explaining the formation and evaluation of medical language.

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