# CONCEPTUAL EXOGENOUS MODELS AND TERMINOLOGICAL STRUCTURES

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*Abstract: Our study Conceptual exogenous models and terminologica structures aims to reserch the terminological metaphor from a genetic and structural perspective. From a genetic point of view we will analize the medical metaphor taking into consideration three conceptual models: the mineral Kingdom, the Cosmos and the animal Kingdom. From a structural perspective our reserch will examine the monolexical denominative metaphor on one hand and the polilexical metaphor formed on the basis of associated conceptual patterns on the other hand. The theoretical framework of the research, research methods and goals, specialized interdisciplinary nature of communication, patterns of interdisciplinarity are some other issues that are addressed in our study.*

*Keywords: terminology, conceptual models, conceptual models exogenous*

## I. Conceptual models: the mineral kingdom and the Cosmos

An important source of conceptualization in medical terminology is the mineral universe and the elements of the cosmos. Throughout history, man has found many models knowledge in the universe.

There are numerous situations where metaphors terminology referring to remedies, the hereditary anemias are modeled on the animal kingdom: *thalasso* - Greek Thalassa (cf. θάλασσα - ης , sf) signifies "great" in the medical language simillar termes ar used: ro. thalassemia , sf (cf. fr. thalassemia , sf , en. Thalassa (a ) emia ) , ro. thalassotherapy, S.F. (cf. fr. Thalassothérapie sf ; en.thalassotherapy ). The Romans observed the phenomenon of rotting wood, fruit, and wall collapse and called it in Latin, *caries, ei* (sf). Scientist conceptualized this reality by time decay (cf. fr. *carie*, sf, en. *caries*) meaning the "molecular disintegration or necrosis of bone ... ". "Calci- , calciu" (cf. Lat. calx , calcis s.f. "var") is used as a conceptual model in units such as calciferol (cf. fr. Calciferol , sm ; en.calciferol ).

The word *lit(o)-, -lito-,-lit*, was used in Greek as stone, rock ("cf. Gr . Litho - , lithos , λιθο - , λίθος - ου s.m. / s.f. stone, rock , marble") and has been pre-conceptual schema of the concept of lithiazis, sf (cf. fr. lithiase sf , en. lithiasis).

Landforms contribute to the formation of terminological metaphor. Eremo- "desert, desolate, isolated" (cf. Gr. Ήρεμος,-ον adj., silent, quiet) was another source field: eremofobie (cf. fr. eremophobie, sf, en. eremophobia) . *Stero-*, "swamp mud" (cf. Gr. Στερρός,-ά,-όυ adj., solid, hard, powerful") is a scheme that is found in establishments such as fr. sterols (S. M.), en. sterol.

An unusual phenomenon of equivalence of characteristics is the model offered by xylo-, xylo-,-Xil (a) wood "(cf. gr.ξύλον,-ου) for two medical concepts: xylene sm (cf. fr. xylene, sm, en. xylene) and xylose sf (cf. fr. xylose sf, en. xylo). These are terms that refer to the substance ("cf. xylene -, colorless liquid, soluble in alcohol and ether by distillation of petroleum, used as a solvent") and a type of pentose (xylose-cf, vegetable pentose involved in



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carbohydrates binding outside the cell; used in the investigation of intestinal function at the purely biological and / or physiological level. The conceptual model, "wood" is at least strange for ordinary human logic. On specialized languages, however, such equivalences are of great productivity.

There are numerous cases of interdisciplinary conceptual model based on the mineral concept. Terminologizare processes are varied.

A) The same lexical- semantic root knows multidisciplinary development specific to multiple domains and / or subdomains. In this case, the abstract notion replaces the usual sense in Greek and / or Latin, provided they maintain marks of opposition (semantic, notional, etc. ) of conceptual systems belonging to different scientific areas.

The word ăκαρι ,- εως ( sn ) has the Greek meaning of "spider, mite". In medical terminology, the metaphor "acarid, acaridan" ( fr. mites, s.m.; ro. acarian, s.m.) designates the parasite "mite"; in biology , mites designates "bed bug" order of class arachnids arthropods. Other Greek and Latin roots require semantic and notional opposition, following the trends of specialization and strict specialization of domains / branch of science:

gr . ăκανθα ,- ης (sf ) , spin , plant with thorns" with multiple terminological units developed in medicine, botany, in the military;

lat. *acinus,-i* (s.m.)/ *acina, -ae* (s.f), meaning "grape" provides the pre-conceptual schema of medical metaphors used in the study of whine making etc.

gr . άράχνη ,- ης (sf ), "spider" in medicine, biology ;

gr . άθήρη ,- ης (sf ), "mixed meal" in medicine, the food industry;

gr . ăζων ,- ονος ( sm ), "axis , stalk" in medicine , physics, mathematics, astrology

lat. *bacillum, -i* (s.n.), meaning "stick" in medicine, biology

lat. *carbo, carbonis* (s.m.), meaning "coal" in medicine, industry, technology

gr . καρπός ,- ου ( sm ), "fruit, product, seed" in medicine, botany

gr . δρόσος ,- ου (sf ) , "dew" in medicine, botany

gr . έχίνος ,- ου ( sm ), "hedgehog spike" in medicine, biology

B) The medical term neutralizes the lexical valences the word has in the matrix language (Greek, Latin). For example, the noun *ăνθραζ, -ακος* (s.m.) had the meaning of "charcoal" in the Greek language. "The set of lexical signs loses relevance in medical terminology. Of particular interest in occupational medicine the word "anthracosis" (fr. *anthracose,* s.f.; ro. *antracoză,* s.f.) is the concept of occupational disease – "pneumoconiosis" caused by the chronic inhalation of coal dust" (Valeriu Rusu, Medical Dictionary, 2007, p . 207).

In Latin *bulbus-, i* (s.m.) was used to signify "onion bulb". In medical language, a conceptual particularity is atributed to the metaphor "bulb" (fr. bulbe, s.m; ro.bulb) - part of an organ.

Fauna was, in Latin mythology, the sister or daughter of the god Faunus - God of farmers and shepherds, later identified with the Greek God Pan. It is another multidisciplinary cognitive model, as cardinal points or the Cosmos model: *aer, os,* (cf. gr. *άήρ, άέρος*) was a Greek noun meaning "*air"* and *tereia* ment "to contain". This portrais the medical term "*artery"* (the ancients believed that the arteries contain air, given that the arteries in corpses were empty). *Carcinos(-nus)* means the sign of Cancer. *Vennus,Venneris* s.f. (Venus, goddess of love)



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became the matrix of terms that refer to the medical branch (cf. fr. vénéréologie; en.venereology ; ro.venerologie).

**II. The animal kingdom**

Less numerous then mineral models are the animal patterns in terminology. It is based on the equivalence of the concepts of science in general, and the animal kingdom – body parts, attitudes, reactions, effects, and "presence" of the animal world. Zoomorphic size is based on different conceptual models. Here's a list of them:

a)fish:

*beloni-* „teleostean fish" (cf. lat. *belone,-es* s.f; gr. *βελόνη, -ης* „needlefish");

*gadi-* „cod" (cf. gr. *γάδος, -ου* s.m. „cod");

*salmoni-* „trout" (cf. lat. *salmo, salmonis* s.f. „trout").

b) wildlife:

*bufo-* „toad" (cf. lat. *bufo,-onis* s.m. „toad");

*ciconii-* „stork, heron" (cf. lat. *ciconia,-ae* s.f. „ hobbledehoy");

*cunicul-* „rabbit"(cf. lat. cuniculus,-i s.m. „rabbit");

*echin(o)-/echini* „ hedgehogs, with thorns"(cf.gr.*έχίνος, -ου s.m.* „ hedgehogs");

*falconi-* „ falcon, eagle"(cf. lat. *falco, falconis* s.m. „eagle");

*lacerti-* „ lizard"(cf. lat. *lacerta, -ae* s.f. „ lizard").

*lic(o)-* „wolf"(cf. gr. *λύκος, -ου* s.m./s.f. „wolf");

*melit(o)-* „bee"(cf. gr.*μέλλιττα, -ης* s.f. „bee").

*rani-* „frog" (cf. lat. *rana,-ae* s.f.„frog");

erpeto- „reptile"(cf. gr.έρπετόν,- ου s.n. „reptile");

c) domestic animals:

capri- „goat"(cf. lat.capra, ae s.f. „goat")

*cheno-* „goose"(cf. gr. *χήν, χήνος* s.m./ s.f.„goose")

*cin(o)-/chin(o)-* „dog"(cf. gr. κύων, κυνός s.m./s.f.„dog")

d) Animal body parts:

*cerco-,- cerc* „tail"(cf. gr. *κέρκος, -ου s.f.* „tail")

Term capital (cf. neutrul pl. latin *capita - capete*) denotes the concept of a firm's full financial resources (money, shares), basing the conceptual terminology for about 23 units in the international language of business: negative active capital (fr. *capital actif négatif,* sp. *capital activo negativo*), circulant capital (fr. *capital actif circulant*; it. *capitale di circolazione*; sp. *capital circulante*), human capital (fr. *capital humain*, sp. *capital humano*, it. *capitali umani*). The notion is related to a custom of the Romans when lifestok owners would lend a number of animals, a number of "capita / capitis".

If one or another category of conceptual patterns remain immutable, resisting any arbitrary substitutions, it is because the language it uses is the product of it's fundamental cultural factors.



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**III. 1.Structuri terminology: nominative metaphor monolexicală**

Notional equivalence and function equivalence are discussed elsewhere. In this context communication, we propose to tackle the problem of feature equivalence.

Greco-Roman conceptual model developed a unified and coherent system of medical terms based on features that expresses:

**a) Object downsizeing**: lat . *Granum*, i (n) - grain / grain have the diminutive *granulum -i* (s.n.) used to mean tiny seed, grains. Metaphors based on the model developed from granulum contribute to the development of interdisciplinary fields / industries, as shown in the nomenclature and definitions of general dictionaries and / or specialized dictionaries. In Microbiology, intracellular particle is a grain (med. en. *granule*; med.fr. *granule;* med. ro. *granulă*. When discussing symptoms, A particle / inclusion is still a grain located in cell / bacteria / tissue (med. en. *granulation*; / med. fr. *granulation*/; med. ro. *granulaţie*). At the same time pre-conceptual schema model plant is found in metaphor *granulitis* (fr. med. *granulie*; med. ro. *granulie*). The surface of a tissue is a tiny seed sequence, if we refer to various types of tissue: *med. granulous (fr. granuleux, -euse, adj.; ro. granulos)*. In Latin, the areola, ae / f are a diminutive noun for *area* (arie) and it designates a small "courtyard": med. areola (fr. aréole) as lat. Auricula, ae (s.f.) designates "tiny ear".

In Old French the noun *fontanelle* was a diminutive of Fontaine. In anatomical nomenclature, *fontanelle/ fonticulus* (pl. *fonticuli*) appoints a room, an ossified, membranous depression, located at the meeting points of the cranial sutures in newborns ( DM , 2007: 496).

**b) Color**: lat. *albidus, a, um* (adj.) ,,*witish*"; ἄλγος, -εος (-ους) s.n. *algo* ,,pain, sadness"; *blefaro- βλέφαρονου* (s.m.) ,,*eyelid, eye*"; *dipso δίψα, -ης* (s.f.),, *thirst*". Medical practice use a large number of chemical compounds as medicinal remedies. In Greek, χλωρός,-ά,-όν (adj.) ment *green*, *green - purple* to *yellow*; *pale* (A. Gioroceanu, 2008, p.72) and ίοειδής, - ές ment "violet". Purine base present in most tissues is called *xanthine*, whose conceptual pattern is gr. ξανθός - ή,-όν (adj.) used in the common language meaning, "yellow". In chemical nomenclature, chlorine, iodine (cf. fr. Iode, eng. Iodine) are conceptual metaphors formed the basis of the color: GREEN chlorine, iodine is violet. The Greek ίοειδής - ές had an impact on the whole European concept, becoming, image-schema "interdisciplinary numerous other metaphors - in pharmacy and medicine. Unlike chemistry, medical metaphors have a more complex structure, is used according to certain conceptual-semantic features, including:

a) **color component**: iodopsin (( fr. *iodopsine*; ro. *iodopsină*) has two conceptual models, namely, *iodine* (purple) + gr. ώψις - εως, "view";

b) **Purpose**: *iodoform*, local antiseptic: *iodine* (purple) + lat. *formica* (furnică);

c) **Appearance**: *iodotyrosine* (fr. *iodotyrosine*; ro. *iodotirozină*) name under which derivatives are known for tyrosine - iodine (purple) + tyros (cheese);

d) **Attraction components**: *iodophilia* (fr. *iodophilie*; *ro.iodofilie*) compound term of iodine (purple) + gr. φιλέω,-εϊν,, to love, to care"

To know thyself as a defined being, man conceptualized the reality of its own body by resembling it to the elements of the material world, concretely determined in space and time having habitat components – exogenous in nature.



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**III.2. Associated Metaphorical patterns**

The internal dynamics of medical language may use two or more pre-conceptual schemes, based on a logical links to form a new concept : med. *Bacteriorhodopsin* (fr. bactériorhodopsine, n.f; ro. bacteriorodopsină, s.f.) : gr. βακτηρία, -ας (s.f.) ,,stick" + gr. ρόδον, -ου (s.n.) ,,rose" + gr. ώψ, ώπός (s.f.) ,,sight, resemblence"; med. ,,*cytotrophoblast*" (fr. *cytotrophoblaste*, s.m.; ro. *citotrofoblast*, s.n.): gr. κύτος, -εος (s.n.) ,,cavity, urn, shield, armor, skin, body" + gr. τροφή, -ής (s.f.) ,,food, education, supplies" + gr. βλαστός, -ου (s.m.),, germ, bud, egg, son";

med.,,cycloergometer": gr.κύκλος, -ου (s.m.) ,,circle, circular object"+ gr. έργον,-ου (s.n.) ,,act, action, deed, facility, work" + gr. μέτρον- ου (s.n.) ,,mesure; mesuring instrument"

The idea of the metamorphic value of composed words is not new. The application was made in general to the common vocabulary. Michael Bréal highlighted metaphor contribution to enriching the common vocabulary (Bréal M., 1897 ), K. Bühler notice that any language that contains composed words is a somewhat metaphorical language ... " (K. Bühler , trad . It . Rome: 402) . In DSL , Angela Bidu-Vrânceanu notes that "many composed words have stylistic values " (Dictionary of Language Sciences , 2001 : p.125 ).

Our study proposes the concept of "associated metaphorical pattern" when researching specialized languages. In the compound terms (linguistic) and / or terminological phrases, the matrix patterns are expanding founded on a series of "regime" features. These features are of a conceptual or semantic nature and they lead to the formation of new concepts: med. en. neuroblastoma (cf. fr. granuloblastome , en. neuroblastoma , en . granuloblastom ) en. granulocytosis (cf. fr. granulocytose , en. granulocytosis , en . granulocytic ) med. en. granulopexic (cf. fr. granulopexique , adj. , en. granulopexic , en . granulopexic ) med. en. granulopenia (cf. fr. granulopénie , en. granulopenia , en . granulocytopenia) etc. . Compatible from a semantic and conceptual point of view, two (three or more) structural metaphorical models form a new terminological unit, motivated purely nominative. Medical language developed on an impressive number of associated patterns, the extension of this patterns in metaphorical expressions as well as composed words ensure continuity and consistency of the Greek- Roman model..

The metamorphic pattern we call "associated" has a strong impact on conceptual dynamics of terminology. The term granulocytopenia, for example, consists of three components: granular (cf. lat. Granum, seed) + cyto (cf. Gr. Kύτος,-εος-, armor, shield, cavity, cell ") + FTEs (cf . g. πενία,-ãς-, poverty, shortage ") - based on the trait, compatible".

- Granulocytopenia (the dictionary definition, particles decrease in blood cells, "cf DM, 2007: p.343) is a term that bares an autonomous cognitive content. Study of the structural elements may interest the linguist and / or etymologist, the language researcher, but never the scientist.
- the composed word sums the conceptually stabile image eliminating the subjective traits belonging to the associated metaphorical patterns.

Associated metaphorical patterns indicate four fundamental aspects in the birth of medical terminology:

1. linguistic in nature
2. onomasiology nature
3. logical in nature, meaning that the components must be compatible grammatically



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3. The nature of specialization and specialization education

Metaphorical composed words are exocentric: the referent designate an entity, an object that is extra linguistic that is designated based on a pattern, referring to only one meaning: ignipuncture "(cf. fr. Ignipuncture ; ro.ignipunctură ) is a metaphor developed based on two compatible models: fire ( cf. lat . ignis , is , torch , lightning, fire ") + puncture ( prick) - identifying the notion of , cauterization by applying electro cautery points ... " ( DM 2007:583) . The feature that makes the composed word compatible "allows the creation of a double filter : one and the same medical concept meets concurrently - the semantics compound - both metaphorical models ( ignipunctură = stinging fire ). At this point, the denomination of compusele terminology differs from existing metaphors compusele lexical category , where two separate connotation does not meet pre-conceptual designs ro . Barbăneagră , ro . Fruntelată became surnames , ro . ragamuffin , ro . roasted maté have stylistic values . And the effects are different : if compuselor terminology , the effect is purely cognitive , reported the signified and representation of lexical compuselor effect is primarily iconic and then cognitive.

Three are the conclusions drawn from our examples: the field of medicine, anatomical metaphor "is generating numerous metaphors terminological level subdomains / branches; model matrix remains metaphorical disease, before any kind of abstraction / conceptualization, keeping and quasi-universal character. In science, nothing is born ex nihilo. Conceptual differences between the same matrix metaphorical terms are determined semantically by the tools available to each natural language.

**Sources**

DLR= Dicţionar latin-român. Guţu, Gheorghe. 2003. Humanitas, Bucharest.
DM=Dicţionar medical. Rusu, Vasile. 2007.Editura Medicală, Bucharest.
Dorland, 2003. Dorland`s Illustrated Medical Dictionary.30th edition, Douglas Anderson (editor). Saunders. An imprint
of Elsevier 2003.
Gioroceanu, Alina, 2008.Terminologia greco-latină în româna actuală.Editura Aius Print, Craiova.
Walter W.Skeat, 2007. The Concise Dictionary of English Etymology. Wordsworth Editions Limited.

**References**

Béjoint, Henri şi Philippe, Thoiron, 2000. Le sens en terminologie. Presses Universitaires de Lyon, Lyon.
Benveniste, Emile, 1999.Vocabularul instituţiilor indo-europene.Paideia, Bucureşti.
Bidu-Vrănceanu, A., 2012. In :Terminologie şi Terminologii. Editura Universităţii din Bucureşti, Bucureşti,11-71.
Cabré, M.T., 1998. La terminologie. Théorie, méthode et applications. Presses de l` Université d` Otawa et Armand Colin.



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Depecker, L., 2002. Entre signe et concept. Eléments de terminologie générale. Presses Sorbone, Paris.
Eco, Umberto, 2009.De la arbore spre labirint. Translation by Ştefania Mincu. Editura Polirom, Iaşi.
Gentner, Dedre, 1980.The structure of analogical models in science. In: Technical Report No. 4451,Cambridge.
Lakoff G. & Johnson, M.,1980. Metaphors We Live. University of Chicago Press, Chicago.
Steen, G., 1999. From linguistic to conceptual metaphor in five steps. In: Metaphor in cognitive linguistics, edited by G. Steen & R. Gibbs. John Benjamins, Philadelphia.
Turner, M., 1987. Death is the Mother of Beauty: Mind, Metaphor, Criticism. University of Chicago Press, Chicago.



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