

ETYMOLOGY AND ADAPTATION OF COMPOUNDS WITH THE PREFIX BIO- IN ROMANIAN TECHNOLOGY LANGUAGE

Dana Camelia Diaconu
Valahia University of Targoviste, Department of History and Letters
E-mail: diaconudanacamelia@yahoo.com

Abstract

This paper makes some remarks on the adaptation of loans in Romanian technology language. We regarded some aspects of etymology, phonetic and grammar adaptation, referring to prefixing, and, in particular to prefix: BIO-, which is very common in the European Union languages in use.

Keywords: prefixing, adaptation, etymology, technology language.

1. THE ADAPTATION OF TERMINOLOGY

The phonetic adaptation of English terms borrowed in Romanian evolved within the interdependence of morphological adaptation process that influences one another¹. Because specialized or explanatory dictionaries of Romanian language have no details of phonetic and morphological behaviour of these terms, their phonetic and morphological adaptation of Romanian system will take longer than one might think. Most of these loans are necessary, they distinguish themselves in terms of belonging to certain areas and came into public use. The terms of biotechnologies language are now known by a number of increasingly larger speakers. They are divided into:

- a) words that appears in magazines that are known strictly by experts in the field of biotechnology,
- b) words known to speakers who come in contact with these words through the media - the main channel of neologisms' penetration in Romanian. Next, we shall analyze the morphological behaviour of all of these categories, which we will illustrate with more examples and observations.

In the case of the derived words with prefixes and suffixes, as in the compounds, we find the usual problems of equivalence with corresponding affixes in Romanian or English or taking from English its productive affixes. We shall analyze, here, the more frequently found in Romanian technical terminology (related to biotechnology), limiting ourselves to systematize the prefix BIO-, the most common in scientific terminology, and the biotechnology sector in particular.

2. PREFIXES AND PREFIXING (BIO-)

Prefixes are far fewer and more uniform than suffixes into the derivational system of Romanian language. By prefixing we kept, as we know, the part of speech, because it does not involve removing the suffix, the

prefix is not added to the radical, but the whole word². Elements of erudite combining³, prefixoids are words' initial segments that do not have all characteristics of a prefix; they are words with distinct meaning from Greek or Latin, which combine with a base word, the meaning of the construction resulting from the sum of the two components. In Romanian, the technical language borrows the constructions with all the composing elements from the parent language, this vocabulary renewal being materialized through loans, loan translations and translations.

Here are some important examples with the most used prefix in the terminology of biotechnology **bio** - („referitor la viață” - „about life”):

biotehnologie / germ. *biotechnologie* - is found in MDN (2000 and 2007) and it is defined as a – „1. study of correlations between parameters of technological civilization and human adaptability. 2. technical use of micro-organisms, plants and animals cell cultures for the production of useful substances in agriculture and food industry, pharmaceuticals etc.”. This word comes from German language - *Biotechnologie*.

bioenergetic / fr. *bioénergétique*, engl. *bioenergetics* - In DEX 1998, it defines a „branch of biophysics studying energy sources and energy transformations in the material – with the etymology from French and English: fr. bioénergétique, engl. bioenergetics; of bioenergetics. In MDN 2000 and 2007 is seen as a part of physiology that studies the energy transformations in living organisms”.

bioacumulare / fr. *bioaccumulation* - „the accumulation process in soil decomposition of organic matter from plants and animals residues that contribute to soil fertilization” (DEX 1998); „a process of accumulation of organic substance in soil structure resulting from the decomposition of plant and animal debris” MDN (2000, 2007).

biostimulare / fr. *biostimuler* - „the action of *biostimulate*” (DEX 1998).

² Petre Gheorghe Bârlea, 2009, p. 232.

³ Ion Coteanu, Narcisa Forăscu, Angela Bidu-Vrânceanu, 2007, p. 66.

¹ Cf. Georgeta Ciobanu, 1997, p. 8.

biostimula / fr. *biostimuler* - „stimulate growth and body strength with growth regulators”, from the French word: *biostimuler*, found in Romanian in MDN (2000, 2007).

biodeteriorare / fr. *détériorer*, lat. *deteriorare* - Its definition in DEX 1998 is: „degradation under the action of biological factors” coming from Latin and French (fr. *détériorer*, lat. *deteriorare*); and in MDN (2000) is „degradation of archival documents, buildings etc. the action of biological factors.”

biotransformare - „metabolic transformation”, the term is found in MDN (2000). *BIO- transformare* from fr. *transformer*, lat. *transformare*.

biodegradare / fr. *biodégradation* - The definition in MDN (2000) is „a decomposition process, the destruction of a biodegradable” (as in fr. *biodégradation*).

biodizel / engl. *biodiesel* - It is not found in any Romanian dictionary, but it is used in the language. It means „a biofuel, liquid in form and derived from plants such as sunflower, oilseed rape and groundnut” and comes from English language: *biodiesel*.

biodiversitate / fr. *biodiversité*, engl. *biodiversity* - The definition in DEX 1998 is „diversity in terms of biological elements” and comes from the French word: *biodiversité*. We also find it in DOOM, as a noun.

biodynamic / fr. *biodynamique* - „A discipline that studies the dynamics of bodily functions; the biodynamic” (DEX 1998), it comes from French: *biodynamique*. It is also present in MDN (2000, 2007), as „the study of vital organs of living beings”.

bioenergie / engl. *bioenergy* - „organic energy”, its etymology comes from English: **bioenergy**, (DEX 1998). In MDN (2000, 2007) it is defined as: „energy generated by the activity of organisms”, also from an English word.

bioritm / engl. *biorhythm* - It is found in DEX (1998), NODEX (2002) and MDN (2000) with the definitions: „rate of biological activity due to their individual body”, „rate of biological processes with varying duration from one process to another”, and, respectively, „ongoing rhythmic, cyclical, vital activities” from the English word: *biorhythm*.

biocombustibil / engl. *biofuel* / fr. *biocombustible* - The definition is: „a fuel that is produced by a biological process; fuel of biological nature”, (DEX 1998), it is also found in MDN (2000) as a „a fuel organic origin”. (from bio- + combustibil).

biogaz / germ. *biogas* - It is a biofuel, gaseous in form; produced by the anaerobic fermentation of animal manure. In DEX 1998, its reference is as a „gas resulted in the fermentation of organic matter and used as fuel, biomethane; MDN, 2000 refers to it as „a gas by decomposing organic matter; biomethane.” (germ. *Biogas*).

biomasă / engl. *biomass*, fr. *biomasse* - In DEX 1998, the definition is: mass of organic matter related to a specific unit area and time, from English **biomass** and French **biomasse**. We also find it in MDN, 2000, as 1. „creatures density per unit of mass or volume.” 2.

„biological material” with the same etymology. In its agricultural context, therefore, biomass may include wood, crops, algae, agricultural and forest residues, sewage, manure, industrial by-products and municipal solid waste. It includes all the living material in a given area; often refers to vegetation, also called *biota*.

biomonitorizare / engl. *biomonitoring* - It is defined as: 1. „the use of living organisms to test the suitability of effluents for discharge into receiving waters and to test the quality of such waters downstream from the discharge”. 2. „Analysis of blood, urine, tissues, etc., to measure chemical exposure in humans”. This compound word is not found in any Romanian dictionaries.

biomorfogeneză / fr. *bio+morphogenèse*, (cf. gr. *morphe* – formă, *genesis* – naștere). - „development of biological and morphological characters of organisms in the conditions of existence”.

Biotehnologie / germ. *Biotechnologie*, engl. *biotechnology* - reunites techniques that use living organisms or parts of organisms to produce a variety of products. It is „1. a study of correlations between parameters of technological civilization and human adaptability.” 2. „technical use of micro-organisms, plant and animal cell cultures for the production of useful substances in agriculture and food industry, pharmaceuticals etc.”, as MDN 2000 and 2007 stated.

3. GRAMMAR AND PHONETIC ADAPTATION OF ENGLISH LOANS IN ROMANIAN

Romanian grammar adaptation of English loans is correlated with phonetic adaptations, which are common problems caused by differences in the linguistic system. In principle, these differences favoured by linguistic⁴ contacts are referring to: - the existence of grammatical category specific to any morphological class; the - morpho-lexical mechanism (derivation and composition); - contrasting both languages mainly influences the transfer of nouns, then of verbs and adjectives, at last.

Considering the general phenomena of language contact, we find by forming the scientific terms, that they provide mainly nominal classes - noun, adjective, and then, to an extent, almost comparable, the verb and after that other morphological classes. Particularly, regarding the case of biotechnological language, this fact was clearly seen to nouns that mostly form the vocabulary, followed at a great distance, by verbs and then adjectives. This is explained by the fact that the textbooks, treaties and specialized dictionaries define and classify theoretical environment processes, phenomena and realities. This means that, also the name of the actions are presented in nominal form (*biotransformation*, *biodegradation*, *biodeteriorare*, *biostimulation*, *bioaccumulation*,

⁴ Petre Gheorghe Bârlea, Roxana Magdalena Bârlea, 2000, p. 85.

bioaccumulation, etc.), especially by nouns - names of abstractions.

4. CONCLUSIONS

Although this is an era of globalization, we think that we should not allow massive penetration of terms from English or French, as long as their correspondent in Romanian exists. Audiovisual and written media today are „invaded” by Anglicisms, making the message reception by the public increasingly difficult, with serious consequences: deterioration of spoken and written Romanian language.

Our work regarded technological terminology with the current meanings from French, German or English; diachronic analysis also required other approaches from other perspectives. We should point out, for example, that, some phonetic and morphological phenomena influenced loans in a great deal. There are researchers who devoted their studies to linguistic contacts between Romanian and French or Romanian and English and described in detail the processes that marked lexical loans of all language levels, including specialized languages⁵. Unfortunately, there are few who turned to technical language analysis, in particular, which made our task even more difficult⁶.

Regarding this approach, we tried an overview of these issues, emphasizing the need for the current state of technical loans from international languages in Romanian.

5. REFERENCES

- [1] Dicționarul explicativ al limbii române, (DEX), 1998, ediția a II-a, București: Academia Română & Editura Univers Enciclopedic.
- [2] Noul dicționar explicativ al limbii române, (NODEX), București-Chișinău: Editura Litera Internațional, 2002.
- [3] Dicționar ortoepic, ortografic și de punctuație al limbii române, (DOOM²), VINTILĂ-RĂDULESCU, Ioana (coord.), 2005, Ediția a II-a, revizuită și adăugită, București: Univers Enciclopedic.
- [4] Marele Dicționar de neologisme, (MDN), MARCU, Florin, 2007, București: Editura Saeculum Vizual.
- [5] Avram, Mioara, 1997², *Anglicismele în limba română*, București: Editura Academiei Române.
- [6] Bârlea, Petre Gheorghe, Bârlea, Roxana-Magdalena, 2000, *Lexicul românesc de origine franceză*, Târgoviște: Editura Bibliotheca.
- [7] Bârlea, Petre Gheorghe, 2009, *Limba română contemporană. Fonetica și fonologie. Ortografie, ortoepie și punctuație. Vocabular.*, București: Editura „Grai și Suflet-Cultura Națională”.
- [8] COTEANU, Ion; FORĂSCU, Narcisa; BIDU-VRÂNCEANU, Angela, 2007, *Formarea cuvintelor în limba română*. Derivarea. Compunerea. Conversiunea, București: Editura Universității București.
- [9] Ciobanu, Georgeta, 1997, *Adaptation of the English element in Romanian*, Timișoara: Editura Mirton.
- [10] Ciobanu, Georgeta, 1998, *Elemente de terminologie*, Timișoara: Editura Mirton.
- [11] Cook, Guy, 2003, *Applied Linguistics*, Oxford: University Press.
- [12] Gruică, Mariana, 1974, „Adaptarea cuvintelor de origine engleză la sistemul fonetic și ortografic al limbii române”, în *Limbă și literatură*, nr. 1, București, pp. 51-57.
- [13] Hristea, Theodor, 1973, „Contribuții la studiul etimologic al neologismelor românești”, în: *Limba română*, București, XXII, 1, p. 3-7.
- [14] Stoichițoiu-Ichim, Adriana, 1994, „Observații privind compunerea în româna actuală”, în: *Analele Universității din București. Limba și literatura română*, anul XLIII, București, pp. 47-51.
- [15] Stoichițoiu-Ichim, Adriana, 2001, *Vocabularul limbii române actuale. Dinamică, influențe, creativitate*, București: Editura All.
- [16] Stoichițoiu-Ichim, Adriana, 2002¹, „Asimilarea împrumuturilor englezești: aspecte actuale ale dinamicii sensurilor”, în: *Aspecte ale dinamicii limbii române actuale*, I, București: Editura Universității din București, pp. 249-262.
- [17] Trif, Radu-Nicolae, 2006, *Influența limbii engleze asupra limbii române în terminologia informaticii*, București: Academia Română, Fundația Națională pentru Știință și Artă.

⁵ From all the researches of phonetic and morphologic adaptation in Romanian, we mention: Mioara Avram, 1997², Georgeta Ciobanu, 1997, M. Gruică, 1974, Th. Hristea, 1973, Adriana Stoichițoiu-Ichim, 2002¹ etc.

⁶ Radu-Nicolae Trif, 2006, pp. 28-52.