

# OVERVIEW OF SCIENTIFIC-TECHNICAL LANGUAGE WITH ALBANIAN STANDARD LANGUAGE

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## ABSTRACT

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In the conditions of the rapid development of technics and technology in recent years, the cooperation of the scientific-technical language with the standard Albanian language is continuing with an ever-higher intensity than before. We notice a vigor of enrichment in the vocabulary of technical terminology, due to the creation and formation of new fields and subfields of technics, technology, as computing, mechatronics, telemetry; a multitude of concepts, many of which on the one hand are marked with the designations of the languages they come from, mainly from English, but on the other hand, they meet their needs with the lexical mother tongue composition (by common words being raised to terms) and with the activation of other layers, such as compound word terms. Thus, for example, in the field of computing, we notice in it the inclusion of the ordinary vocabulary for reproductive reasons, like: mi, dritare, flamur, adresë, skedar (Engl.: mouse, window, flag, address, file), and along with them, the compound word terms, serving to differentiate relevant concepts, like, adresë e hiperlidhjes, adresë e uebit, adresë relative, adresë virtuale (Engl. hyperlink address, web address, relative address, virtual address) etc.

**Key words:** terminology, terminological technical vocabulary, standard Albanian language.

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## Introduction

Mechanical technology originates at the beginning of the 17th century and refers to the English industrial revolution and the monopoly won by England. The separation of terminology as an autonomous field of study (Felber 1984: 22) of linguistics (lexicology) and as a special vocabulary (structured into a system of a particular

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subject area) in the languages of technologically advanced countries has been accepted since the mid-20th century. Some of the first works that laid the foundations of terminology as a field of study include "Standardization in Technique" (E. Wüster, Austria) (Wüster 1968: 44) and "Fundamentals of Terminology" (Lote, Russia) (Lotte 1961: 31). We mention these two works to point out that the subject of their study were largely two important areas of knowledge identified at that time (in the 1930s), as they are today, Mechanics and Electricity.

Precisely the vocabulary of one of these two domains, the terminology vocabulary of mechanics, has served as the basis for the elucidation of many of the theoretical problems of terminology, especially regarding its basic principles, which were also extended to other terminologies. Even Vyster, later identified as the father of terminology, practically applied the general principles of terminology and its processing methods to the terminological work "The Machine Tool." Even today, this work remains a model for the compilation of a proper terminological dictionary (of the systemic type with definitions). Although this dictionary was developed using classical (traditional) methods, it still serves as a model for compiling dictionaries using electronic (computer) means. It can be emphasized that for some subfields, such as the subfield of automobiles, machine tool, and machine elements, a series of two or more language dictionaries have been compiled in a wide variety of terms, especially in technologically advanced countries, such as England, Germany, Italy, Russia etc.

### **The beginnings of technical terminology in Albania**

In Albania, this activity began after 1912-1920, focusing mainly on the introduction of technology from abroad, particularly Italy, with the acquisition of machinery, initially in agriculture, and gradually also in the mechanical industry in cities, mainly machinens and tools, other parts, such as: *oil factory, flour factory*. It needs underlining that some of the designations of devices, tools, processes, were foreign (Italian), as in mechanics (mech.): *motor, aks* (Engl. motor, axis), but also loan words or word formations were adapted on the basis of foreign words such as *kolodok* (from collo d'oca) (Engl. crankshaft), *kamerdare* (camera d'aria) (Engl. inner tube) etc. A large number were Albanian words, especially those that came from special words naming crafts, but also from process designations, derived from the general language, as well as of crafts: *bosht, rrotë, rrotullos* (Engl. shaft, wheel, rotate) (proven since Buzuku (1555), and other authors, such as: Budi, Bogdani, Bardhi): *shtrat* (i qerres), *pres, sharroj, përdredh, shkrij, korr* (Engl. frame (of chassis), cut, saw, screw, melt, reap etc. A special emphasis is on the dictionary of Bindon (Bindon 1935: 8).

The introduction of mechanical engineering in Albania (Çabej 1980: 48) (especially the processes related to *electricity*, *automation*, later partially to *electronics* (programming), remote control (in cranes, military vehicles), led to the implementation of the technology results, although to a limited extent. This restriction was also influenced by the policy of isolation of a monist society, and especially the policy of building everything with its own forces, which brought disconnection from the results/outcomes of modern foreign technologies (1945-1990).

A great influence for the development of technology in Albania in the period from 1945 to 1990 was caused by the acquisition of machines and technical means (tools, equipment) from ex-People's Democracies' countries (mainly from the former Soviet Union) and the training of relevant specialists abroad. The *technical terminology as a system* was created on this basis, based mainly on the formations created by borrowings from the Russian language and its term-forming model, as well as the albanization methods of terms through the native lexical dough and the corresponding term-forming models. Russian term-forming models also served to create compound word terms that took root in numerous terminological dictionaries (only from the terminology series dictionaries there are up to 33 such).

### **The organization of technical terminology in Albania and Kosovo**

In Albania, organized work on terminology began decades later (after World War II) compared to other Western European countries, to some extent Eastern Europe as well. This work mainly focused on the designing of terminology dictionaries, based on terminologies created in different areas of knowledge in the Albanian language under the influence of contacts with scientific and technical literature of foreign languages (mainly Russian), as well as consequently to the introduction of modern technologies in Albania and the connection with the scientific-technical revolution in almost all spheres of human activity, as in every country in the world. Viewed from this standpoint, it can be underlined that the work in the field of terminological practice preceded study and research work in this field until the 80's of the 20th century. Composition work of terminological series dictionaries continued up to this time, in which the broad fields of knowledge, among them the field of mechanics (Glossary 1963: 6), became the object. However, the principles and methods upon which the dictionaries were developed were borrowed from the language experience of other countries with developed terminologies.

In Kosovo the work in the Albanian terminology field, within the framework of the Federation of Yugoslavia, was further restricted to the reproduction of terminology dictionaries, drafted in Albania, by accompanying them with terms from the Serbian language.

### **Albanian technical terms and their conceptual interior**

Most of the terms are motivational (Duro 2001: 133-139) in their conceptual content, which means that each of them has a base from which they originate and, the same way as the basis is developed, it develops itself in its content also. However, some terms derive from *common words* and enter a knowledge domain on the quality of the term, preserving the conceptual content, ie. its content as a word and as a term is more or less the same. Here we are dealing with the same concepts that move from a *lower conceptual level* (as a word) to a *higher level* one (as a term). It should be borne in mind that each of these is further developed, as in *dritare (ndërtëse-building)* from *fënestrë shtëpie*, and *dritare (fryrjeje-ventilating)*, *derë (ndërtëse-building)* and *derë (fur-re-oven)* to nowadays (Pllana 2017:48).

### **Standard Albanian and its lexicon**

Albanian is the language that was spoken and is spoken by Albanians wherever they are, since its formation after the separation from Illyrian Language and to this day (Thomas 2015: 24). In Albanian Dictionaries, as a rule, *special units are presented as words, and specialized units as terms*, in which the former is not marked, while the second is marked or marked through its scope as: *parmendë, zgjedhë, kusi and plug (agr.), bosht (tek.)* (Eng. *plow, pick, cork and plug.*), *shaft (tec.)*.

Specifically, when designing terminology dictionaries the differentiation between these two units has direct practical value, as it relates to the exclusion of craft units in them which resemble terms, or to include those units that may have been transposed into terms.

### **The enormous enrichment of technical terminology lexicon mainly from English**

As has been accepted to this day, the first place among these languages is the *English Language*, which nowadays has acquired the right as a wide-ranging international language. Certainly, here the terminology of this language in a comparative manner to an Albanian terminology (or its terminology in general) would shed light on many problems of the Albanian terminology, especially for resolving issues of systematization and standardization of terminology.

In the recent years, with the opening of Albania to the world, and, especially the penetration of the phenomenon of globalization into the field of technical terminology as well, terms from English were introduced, but mainly in the new fields of knowledge such as computing, telemetry, genetics, biotechnology. It should be noted, however, that in the areas of technical terminology, compared to other areas of knowledge,

English terms have been introduced to a limited extent, since these terminologies are nowadays defined as lexical entities shaped and consolidated.

We give as an example a series of one-word terms in Albanian and English whose conceptual weight is "downloaded" into multiple phrasal units, which are numerically given. Examples are extracted from the "*Fjalor i termave themelore të mekanikës-Glossary of Basic Mechanics Terms*" (Tirana, 2002) (A-K) (Pllana, S. 2014: 80-90).

<b>Shqip (Albanian)</b>	<b>Anglisht (English)</b>	<b>Shqip (Albanian)</b>	<b>Anglisht (English)</b>
<i>aftësi (8)</i>	<i>capacity (9)</i>	<i>fazë (12)</i>	<i>phase (12)</i>
<i>ajër (13)</i>	<i>air (13)</i>	<i>fërkim (9)</i>	<i>friction (9)</i>
<i>aks (11)</i>	<i>(axle) (11)</i>	<i>fikatës (9)</i>	<i>shok absorber (9)</i>
<i>aparati (6)</i>	<i>apparatus (6)</i>	<i>filetë (30)</i>	<i>thread (30)</i>
<i>automjet (8)</i>	<i>vehicle (8)</i>	<i>filtër (22)</i>	<i>filter (22)</i>
<i>automobil (24)</i>	<i>automobile (24)</i>	<i>fren (27)</i>	<i>brake (27)</i>
<i>avull (10)</i>	<i>steam (10)</i>	<i>frezë (25)</i>	<i>milling cutter (mill)(25)</i>
<i>avullpërfitor (13)</i>	<i>stema generator (13)</i>	<i>frezim (12)</i>	<i>milling (12)</i>
<i>baraspeshë (15)</i>	<i>balance (15)</i>	<i>fuqi (31)</i>	<i>power (31)</i>
<i>bosht (33)</i>	<i>shaft (33)</i>	<i>furrë(42)</i>	<i>furnace (42)</i>
<i>bulon (18)</i>	<i>bolt (18)</i>	<i>gabim (10)</i>	<i>error (10)</i>
<i>cak (13)</i>	<i>limit (13)</i>	<i>gaz (20)</i>	<i>gaz (20)</i>
<i>cikël (21)</i>	<i>cycle (21)</i>	<i>gizë (29)</i>	<i>cast iron (29)</i>
<i>cilindër (17)</i>	<i>cylinder (17)</i>	<i>gomë (19)</i>	<i>rubber (tyre) (19)</i>
<i>çekan (12)</i>	<i>hammer (12)</i>	<i>gjendje (22)</i>	<i>state (22)</i>
<i>çelës (16)</i>	<i>wrench (16)</i>	<i>hap (15)</i>	<i>pitch (15)</i>
<i>çelik (61)</i>	<i>steel (61)</i>	<i>helikë (8)</i>	<i>screw (8)</i>
<i>çift (6)</i>	<i>pair (couple)(6)</i>	<i>humbje (10)</i>	<i>loss (10)</i>
<i>dado (22)</i>	<i>nut (27)</i>	<i>impiant (14)</i>	<i>instalation (plant)(14)</i>
<i>detal (10)</i>	<i>part (10)</i>	<i>kalibror (19)</i>	<i>gauge (19)</i>
<i>disk (19)</i>	<i>disk (19)</i>	<i>kanal (14)</i>	<i>channel (duct)(14)</i>
<i>dritare (8)</i>	<i>window (8)</i>	<i>kapak (11)</i>	<i>cap (cover) (11)</i>
<i>dhëmb (15)</i>	<i>tooth (15)</i>	<i>kënd (55)</i>	<i>angle (55)</i>
<i>dhomë (26)</i>	<i>chamber (26)</i>	<i>koeficient (38)</i>	<i>coefficient (38)</i>
<i>ekuacion (10)</i>	<i>equation (10)</i>	<i>kohë (9)</i>	<i>time (period) (9)</i>
<i>elektrodë (15)</i>	<i>elektrode (15)</i>	<i>komandim (15)</i>	<i>control (15)</i>
<i>element (10)</i>	<i>element (10)</i>	<i>kon (10)</i>	<i>cone (10)</i>
<i>energji (29)</i>	<i>energy (29)</i>	<i>kondensor (10)</i>	<i>condensor (10)</i>

As an illustration, we are giving examples of units of mechanical engineering with minimal word-combination (word-group):

<b>Shqip (Albanian)</b>	<b>Anglisht (English)</b>	<b>Shqip (Albanian)</b>	<b>Anglisht (English)</b>
<i>aftësi absorbuese</i>	<i>absorbing capacity</i>	<i>aftësi oksiduese</i>	<i>oxidation power</i>
<i>aftësi bartëse</i>	<i>bearing capacity</i>	<i>aftësi prerëse</i>	<i>cutting ability</i>
<i>aftësi fikatëse</i>	<i>damping capacity</i>	<i>burmë arkimediane</i>	<i>Archimede's screw</i>
<i>aftësi ftohëse</i>	<i>refrigerating capacity</i>	<i>burmë evolvente</i>	<i>involute worm</i>
<i>aftësi lidhëse</i>	<i>binding power</i>	<i>burmë globoidore</i>	<i>hour-glass worm</i>
<i>aftësi lyrësuese</i>	<i>lubricating power</i>	<i>burmë njëfillesëshe</i>	<i>single-thread worm</i>

### **Albanian with other languages in lexicography**

Contacts of the Albanian language with other languages are historically known. The lexicon area recognizes lexical layers borrowed from Greek (old, middle and new), Latin, Slavic, Turkish, Neolatine languages (Italian, French), English and few words from any other language (Thomas 2015: 144).

During the years 1963-1965, Albanian-Russian-French terminology dictionaries (series 1-15) were published in Tirana for: botany, mathematics and theoretical mechanics, atomic energy, optics, acoustics, electromagnetism, mechanics, electronics, chemistry, architecture, geology mining, plumbing and literature.

The total number of bilingual and multilingual dictionaries published is over 450. The number of authors is over 560, of whom more than 50 are foreigners (Thomaj 2015:146). Secondary dictionaries have been compiled and published largely over the last three decades.

### **Conclusions**

To date Albanian terminology was studied in the form of special terminologies, starting from terminologies of more or less broader fields, like: economy, medicine, mechanics, agriculture and any other within them, such as agronomy, or even narrower. From terminologies of wider areas fundamental generalizations were achieved, but also from the narrower ones it was possible to undertake a thorough study of their specific issues. Partial generalizations discovered more detailed aspects of problems, especially specific aspects of synonyms, antonyms for specific areas, like for example, problems of polysemy for a limited field, when it appears as hybrid like the terminology of agricultural tools, the terminology of the field of mechanism theory etc.

Starting from the state of research to date, where, as mentioned above, there are no observing studies of the terminology in the realm of the history of their formation, it would be useful to precisely undertake a study on a monographic level for the research and study of this area of terminology. On the other hand, this problem could be linked in a particular way with the formation in the course of the times, of the technical terminology built on the basis of words of the native language, which are raised to the level of terms for the nomination of specialized concepts of this field. Thus, for example, a range of words can be brought forward, which we come across as early as in Buzuk's creation "Meshari" ("Missal") (1555), which today are used as terms also, not only directly in today's technical fields, like: *fuqi*, *forcë*, *bosht*, *rrotë*, *rrotullohet* (*rrotulluem*), (Engl. power, strength, axle, wheel, spinning (spinned) etc. As is evident, on this basis primarily Albanian terminology formations are created, alongside formations originating from foreign languages, as well as those built on the basis of authentic Albanian and of word formative models and types (term formative) thereof: *boshtor*, *i rrotullueshëm* (Engl. axial, rotating) etc.

The type and period of publication of the dictionaries are indicative of the historical significance of their time. Thus, mastering a foreign language-Albanian dictionary means that most bilingual dictionaries are designed for Albanians.

Finally, the drafting of a coordinated plan seems necessary, for the technical terminology with the three basic Centers dealing with terminology in Tirana, Pristina and Skopje, as well as International Terminology Centers (Infoterm, Vienna, etc.).

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