

Ukrainian Scientific and Technical Terminology Formation and Development Peculiarities

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Abstract

Terminological vocabulary of Ukrainian language has ancient history which starts since the tenth century. The first attempts to collect and arrange Ukrainian scientific and technical terminology started since the second half of the nineteenth century. Lviv scientific community by T. H. Shevchenko leads terminology work systematically since the nineties. The aim of the community was to create science in Ukrainian language which foresaw formation of national scientific terminology. Ukrainian scientific and technical terminology developed most intensively in the twenties of the twentieth century. Creation of the Institute of Ukrainian Scientific Language contributed to this process. Its scientists compiled and published more than forty terminological dictionaries in different branches of science and technique. The main task and research topic of Ukrainian terminologists during the thirties-eighties in the twentieth century was ultimate approaching of Ukrainian and other national terminologies to Russian one. In the article the authors pay attention to the fact that nowadays not all branches of science and technique have perfect Ukrainian terminology. Creation and unification of necessary terminology is a primary task for terminologists.

Keywords: *terminology, term, term formation, Ukrainian scientific and technical terminology.*

1 Introduction

None of societies can exist without a language: every nation and every separate person live in a language sphere. The level of scientific language development influences on intellectual evolution of society. It also testifies the state of language self-disclosure of the nation. The formation of the Ukrainian language in Ukraine was performed under unfavorable conditions that are why branch terminological systems did not develop naturally. The absence of the state made it difficult to create scientific and technical, natural, humane and art terminology systems.

Scientific terminology – is the highest result of human thought. It reflects achievements of science and technique at every stage of mankind's development. Panko T. I. mentions that history and culture of a folk is exactly encoded in terminology [1]. The basis of every terminological system (naturally formed) is made by national words which came into scientific usage. Ukrainian scientific language has got deep roots about which we can speak in accordance with the data which is given by “the oldest samples of document's language and juridical terminology of pre-Christian Rus of the 10th century.” (I. Franko). Accordingly terminological vocabulary was being formed for centuries.

The history of Ukrainian terminology formation is a separate part of the history of the whole lexical language system's development. The first attempts to collect and arrange Ukrainian scientific terminology were made in the second half of the 19th century. The article “The item about Rusyn terminology”, written by M. Levchenko in the magazine “Osnova”, tells for the first time about the necessity to create scientific terminology which will be

comprehensible for ordinary people. M. Levchenko offers to use Ukrainian words, ignoring foreign borrowings especially those which turned out to be difficult for folk speech, as the basis of scientific terminology. As a response the opinion written by P. Yefymenko came out. The principles of approach towards creation of Ukrainian terms are also considered in it. The author supposes that terms have to be formed from stems of the words which are available in native language. Besides, P. Yefymenko accentuates that the endings of terms which have got foreign origin have to correspond with forms of national language. The main thought which is expressed in the article concerns the necessity of creation of Russian-Ukrainian scientific terminology dictionary.

The first attempt to realize this idea concerning such dictionary became the publication “Russian-Ukrainian Dictionary's Experience” written by M. Levchenko (Kyiv, 1894). Only a few professional terms of foreign origin were taken into this dictionary. Besides, they were translated by Ukrainian neologisms, which were not always felicitous and able to replace words of international usage. “German-Ukrainian dictionary” written by O. Patrytskyi, which came out shortly before in Lviv, had appreciable influence upon that publication. The words of foreign origin were conveyed by Ukrainian words in this dictionary. Almost all neologisms did not remain in our language but some of them remained though not with a narrow terminological meaning. The idea of dictionary's creation, but now terminological one, was supported by I.H. Verhratskyi in Western Ukraine who published “Pochatky do ulozhenia nomenklatury i terminologiji prurodnoji» in six issues during 1864-1879. This scientist is considered to be

the founder of Ukrainian scientific terminology. His works are of great interest now.

Lviv scientific society named after T. H. Shevchenko started to fulfill terminological work systematically since the 90s. Its aim was to create science with help of Ukrainian language which expected formation of national scientific terminology. The materials which concerned Ukrainian scientific terminology started to appear in notes of this society regularly. Moreover the authors of these articles were specialists in technical and natural branches as far as the society did not have philologists [2]

The next period of investigation of Ukrainian scientific terminology was connected with creation of scientific societies in Eastern Ukraine (1913 - Kyiv, 1918 - Luhansk). After 1905 operation of statutes, which concerned prohibition of the Ukrainian language, was limited in Russian empire. Societies, which had an aim to create national terminology, started to appear everywhere (in Kyiv Polytechnic Institute, society named after H. Kvitka-Osnovianenko in Kharkiv, Luhansk scientific society).

Kyiv Ukrainian scientific society was also engaged in studying terminology. It published the first book "Digest of natural-technical section" in May 1911. It included articles of Ukrainian scientists and engineers from different spheres of technology and natural science. The evidence of the fact that the authors of the digest had an aim, without regards to other tasks, to produce Ukrainian scientific, in particular technical, terminology, was "Dictionary of technical expressions". It was put at the end of every digest.

After proclamation of Ukrainian National Republic in 1917 the Ukrainian language became the official language of legislation, administration, the army. The demand on Ukrainian textbooks, dictionaries increased abruptly. "The explosion of terms creation in Ukrainian" was noticed at that time [3]. Terminological dictionaries were being created by societies, sections and separate authors. During 1918-1919 over 20 terminological dictionaries for different branches (medicine, physics, chemistry, mathematics, geography, justice and etc.) were published in Eastern Ukraine.

The Terminological commission was created by Kyiv scientific society in August 1918. The gaining of Halychyna was its essential foundations. The commission had a goal to unite all scattered societies, commissions and separate people who were engaged in working with terminology. The Orthographical-terminological commission was also created by Academy of Sciences. The sphere of its work was not limited by compiling and publishing of dictionaries. Great work was done in different directions: compiling, arranging, elaboration of the term theory [4].

The 20s of the 20th century became a new stage of Ukrainian scientific terminology development. Exactly these years became a fruitful period for creation of national terminology due to emergence of multidisciplinary terminological dictionaries which was the result of cooperation between eastern and western Ukrainian schools. Two terminological commissions by Kyiv scientific society and Academy of Sciences joined and created a joint one with the name The Institute of Ukrainian Scientific Language in 1921. It was an institution by Academy of Sciences which consisted of six departments and they consisted of 84 sections. The main aim of every section was creation of appropriate dictionary. In order to gain this goal every section collected live material among people, from old books and ancient manuscripts with help of its numerous reporters [5]. Highly skilled specialists of naturalistic and technical sciences and philologists grouped round this institution. They compiled and published over 40 terminological dictionaries in different branches of science and technology.

"Directions for compiling dictionaries in IUSL" came out in 1928. Immediately after several terminological works, which specify general instructions for every particular terminology, appeared (O. Yanata "What principles should be used for compiling Ukrainian natural terminology", Ya. Lepchenko "The rules which are observed for compiling Ukrainian natural terminology by the

Institute of Ukrainian Scientific Language", T. Sekunda "About principles of compiling Ukrainian technical terminology"). These works had a great significance as far as they testified that development of Ukrainian scientific and technical terminology was made on scientific basis created by linguists. The principle of terminological system creation on national foundation taking into consideration achievements, made by European terminological thought, was maintained in particular.[6]

Theoretical foundation of terms creation was given in "Directions for compiling dictionaries in IUSL". Special attention was paid to the necessity to use lexical material of a certain language and literary sources; necessity to create a new term of lingual stems; in case of need to produce a foreign term, borrowing should be created of terminological material of another foreign language in which, evidently, this demesne is independently and completely developed [7].

Tendencies of Ukrainian scientific and technical language creation in the 20s-30s of the 20th century were a logical continuation of researcher's groundwork of the end of the nineteenth century. The whole work of the Institute was grounded on the foundation made by investigations of Ukrainian linguists, writers, scientists who united round Scientific Society named after T. Shevchenko.

The task of building the Ukrainian scientific language was suspended in 1933. The fight against "national harm on the linguistic front" began. After the liquidation 1930 the most authoritative scientific center, which coordinated terminological work throughout Ukraine the Institute of the Ukrainian scientific language, a real war against the Ukrainian scientific and technical terminology unfolded.

The fight against "national malware" in terminology was officially supported by the "Resolution of the commission of the NGO to verify the work on the language front on terminology" (1934), put forward the requirements: "to reconsider the personal composition of the workers", "to expel from the enemy's linguistic area elements ", "take appropriate measures for the organization and preparation of proletarian personnel vocabulary "[165; 20].

The new, "purified" Institute of Linguistics issues supplementary terminology dictionaries - "Terminology Bulletins" (1934-1936 biennium), which "fixed" 14.5 thousand lexical terms of Ukrainian terminology, ranged from 50 to 80 percent original Ukrainian terms [133; 31].

Unfortunately, after liquidation of the most authoritative scientific centre, (The Institute of Ukrainian Scientific Language), which coordinated terminological work in the whole Ukraine, development, further study and standardization of Ukrainian scientific terminology stopped in 1930. The main task and subject of further research of Ukrainian terminologists was ultimate approaching of Ukrainian and other national terminologies to Russian one. Publishing of scientific periodicals and monographs in Ukrainian was stopped. As a result our terminology abounded with language hybrids, loan translations, and infelicitous borrowings; a new generation of scientists (even those for who the Ukrainian language was a mother tongue) did not have a sufficient level of knowledge of scientific Ukrainian language [8].

It was a difficult period in the development of Ukrainian scientific terminology, because many years search results and creative work of Ukrainian scholars have been overcome, dictionaries and Ukrainian-language textbooks have been abandoned.

This period is characterized by a complete stagnation in the development of Ukrainian terminology. Despite the fact that Ukrainian science was developing, the Ukrainian terminology in that industry was not used, since there was no need for textbooks or dictionaries in Ukrainian. For more than 40 years only a few works (monographs, textbooks) have been published in Ukrainian. Even the "Khrushchev thaw" did not shake the fundamental principle of terminological policy in the USSR, dictated by the Resolution of the NPO" 1934: "... it is only possible to speak about Ukrainian terminology since the time of the Soviet power in Ukraine."

The Dictionary Commission was created by Academy of Sciences of USSR in 1957. It was headed by an academician I. Shtokalo. Its task was to publish 18 Russian-Ukrainian and Ukrainian-Russian dictionaries. However, the result of the Commission's work was publishing of 16 Russian-Ukrainian terminological dictionaries. None of Ukrainian-Russian ones was published.

Special "Recommendations of the All-Union Meeting on the Development of Terminology in Peoples of the USSR Literary Languages" were adopted, which prompted "nations confluence" policy and "friendship of peoples" in the language issue in 1961.

In the 70s, all specialized scientific journals of the USSR Academy of Sciences on natural and technical sciences were translated into the Russian language edition, which led to further Ukrainian scientific and technical terminology Russification.

During the 70s- 80s several conferences were held (Zhytomyr, 1976; Kyiv, 1978, 1980 and others). The problem which was discussed was scientific and technical terminology. The participants of the conferences mentioned in their speeches that the main source of development and replenishment of Ukrainian terminology was the Russian language. It was considered to be positive and the only possible way. As a result a part of Ukrainian terms was replaced by Russian ones. Those borrowings which were not represented in the Russian language were removed. Loan translations were actively supported.[9]

Such terminological policy of the Soviet Union caused the loss of individual features of Ukrainian terminology. The latter almost turned into a copy of Russian terminology. During several decades Ukrainian scientists were in a conceptual field of the cognate Russian language. This language penetrated the consciousness of Ukrainians so strongly that sometimes only a specialist can differentiate Ukrainians and Russian forms. The Ukrainian language took those terms of the Russian language which are used with an inappropriate meaning. Loan translations built with deviation from norms of Ukrainian word formation.[10], [11].

New possibilities of solving terminological problems appeared since the time when Ukraine was proclaimed an independent state in 1991. New branch terminological dictionaries for translation were published. Nevertheless not all branches of science and technology have thorough Ukrainian terminology. Creation and unification of necessary terminology is a top-priority task for terminologists.

For the first time in Ukraine, own state standards for terms and definitions began to create. To achieve that goal the Technical Committee for Standardization of Scientific and Technical Terminology was established by the State Standard of Ukraine and the Ministry of Education of Ukraine at the National University "Lviv Polytechnic" in 1992. Due to self-sacrificing specialists work and the participation of scientists of expert philologists scientists participation, it became possible, in spite of global experience, that more than 600 State Standards of Ukraine (DSTU) were developed in the "Terms and Definitions" for the period from 1992-1996.

An important achievement of terminology development is organization of various terminological conferences, particularly "Ukrainian terminology and, modernity" (Kyiv, 1996, 1997, 1998, 2001, 2003, 2005, 2007, 2009, 2011), "The problems of Ukrainian scientific and technical terminology" (Lviv, 1993, 1994, 1998, 2002, 2004, 2006, 2008) etc. The results of work of the conferences testified insufficient orderliness of terminology which makes it difficult to make prepared and professional communication between scientific and scientific and technical workers. It also causes mistakes in compiling technical documents. Thus the top-priority task of linguists is standardization of available terminologies.

A modern stage of terminology development, as linguists mention, is similar to a certain degree to the period of the 20th. The similarity consists in the search of the ways to unite the best achievements of terms creation of the past, which was orientated not only to foreign sources but also to the internal resources of the Ukrainian language, with a modern practice of general usage of

international terms in scientific and technical language. These terms were borrowed due to mediation of the Russian language. As many terminologists consider, the way out can be seen in temporary parallel usage of both traditions with a perspective to choose the only norm after approbation of variants in a scientific circulation.

Terminological problems which concern scientific principles of Ukrainian equivalents creation for terms to denote new concepts, returning of terms which were prohibited in the 30th, keeping native ones in active functioning- are the most important points in realization of language ecology. It is wrong to think that making terminology international will make the way to economic progress easier. The presence of proper equivalents for borrowings proves the wealth and originality of scientific language. Unfortunately nowadays Ukrainians also translate Russian words and expressions in order to create a proper term in different branches of knowledge. It leads to artificiality of many terms and terminological constructions and causes certain discrepancy between separate terms and a designated concept.

Quite a few special dictionaries, reference books which facilitate settlement of term formation processes have appeared in Ukrainian terminography recently.[12]. The aim of many of such Ukrainian editions is testifying convincingly that the Ukrainian language is totally able to translate flexibly and exactly, reproduce, comprehend and process this or that borrowed concept with its own phonetic and morphological means in its own way. When authors record a real state of a modern terminology they try not to violate content of concepts, correct separate terms and term combinations, make agree with word-formative means of the Ukrainian language, avoid inappropriate Russianisms or other foreign influences. At the same time they leave an opportunity for users, who are interested in development of Ukrainian technical thought, to experiment and improve terminology on our own language foundations, introduce new equivalents more boldly, look for intelligent dialectics between borrowed and our own.

Nowadays we are witnesses of thoughtless and mass usage of foreign (mainly English) terms even in those cases when it is not difficult at all to find simple and exact equivalents for them in a native language. It is necessary to admit that the problem, which is being discussed, worries not only the Ukrainian language. However, other states (e.g. France and Poland) protect their languages from excessive foreign impacts much more actively. If we want to pre-serve our unique colour on a world's palette, we don't have a right to be indifferent towards a new threatening attack which is directed at our native language.

There are several approaches to terminology systems systematization and standardization. Some researchers seek to fully revive the national terminology developed by the T. Shevchenko Scientific Society and the Institute of the Ukrainian Scientific Language, while others try to introduce as much borrowing from western European languages as possible in Ukrainian scientific and technical terminology, especially from English. Artificial restoration, the imposition of dialects, outdated terms, and their own preferences lead to the self-isolation not only the scientific language, but also the science itself, while excessive enthusiasm in foreign languages will lead to the loss of national linguistic identity loss.

The Ukrainian language vocabulary is an open, dynamic lexical units system, diverse in sources and time terms formation. Terminology as a Ukrainian language lexical system subsystem is also heterogeneous in origin.

Almost no natural language in the terms creation cannot do its own resources, therefore many branches knowledge different languages terminology is used by lexical and means highly developed literary languages word-creation. Consequently, from the genetic point of view, the scientific and technical terms are divided into linguistic, borrowed and those consisting of national and foreign elements.

Own-term terms form any national terminology basis. The structure of Ukrainian scientific and technical terminology

includes, in the first place, national terms of Slavonic origin, Old Russian descent and actually Ukrainian ones. Common words, entering into the terminology, can acquire another terminological meaning.

As the history of Ukrainian terminology testifies, the controversy over what the terms national or borrowed- should have been, have existed since the end of the XIX century. "The Remnant of the Rusyn terminology," article 1861 M. Levchenko claims that the terminology should be created in the "spirit of the folk language" [13], so that the terms were clear to ordinary people. The author emphasizes: it is necessary to avoid borrowed words that are difficult to perceive or those that contain sounds that are not typical for the Ukrainian language.

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After "Zametki " publishing on the pages of the magazine "Osнова" there was a lively discussion of the question based on Ukrainian terminology both national or international. Ye. Jelekhovsky published the "Malorussian-German Dictionary", where the materials of oral folklore were taken as the basis In 1886. Since the 90s of the XIX century. terminological issues fell within the scope of the interests of the Taras Shevchenko Scientific Society. Ivan Gorbachevsky adhered to the international orientation in terminology, who stated it in his article on chemical terminology. According to A. Vovk, the merit of I. Horbachovsky is that he was one of the first to come to an "understanding that it is superfluous to show national patriotism or pride in the way of nationalizing the nomenclature in science, when world unification can bring more benefits to the nation" [14].

A discussion continued on the expediency of borrowing in terminology on magazines pages in 1917. That time the participants of the discussion became O. Yanat with the article "Immediate Business in the Development of Ukrainian Science and School", which stated that the terminology should be based on

the scientific language, collected from the people, and M. Hrushevsky, who emphasized on need the abdication of the principle of extreme ethnographicism in his article, the only true in the middle of the XIX century.

Only with the creation of the Institute of the Ukrainian scientific language was adopted base, which reigns in other Slavic peoples to have its own national terminology. It does not indicate, however, the complete absence of foreign language borrowings in terminology, the main thing is that their appearance coincided with the requirements of terminology, since the international is not opposed to the national, but is embodied in it.

The problem of choosing between the own-language and borrowed name for the denotation of scientific concepts remains relevant today, as already ten years ago, the proportion of terms of foreign-language origin was on average about forty percent.

The reasons for the borrowed terms to appear in the language are intral and extralinguistic. Alternate factors affecting borrowing are:

1) High level science and technology development in the countries of Europe and America, the integration processes in science led to the borrowing of terms together with the concepts that they denote;

2) General influence of a certain nation, which language is the bearer of the prevailing culture at that time. According to T. Secunda, the development of Ukrainian terminology has a specific character in comparison to the terminology of other European languages. Ukrainian terminology was created under the influence of Russian and Polish, as well as German [15]. This was also due to the long-term stay of Ukraine in conditions of not only cultural but also economic and socio-political dependence on neighboring states;

3) Borrowing can be objectively not conditioned, caused by "linguistic mode" or other socio-psychological factors. For example, in our time, the number of borrowings from the English language (reforming, monitoring), which function without proper phonetic and grammatical adaptation, has sharply increased, instead of the already established own language terms.

Concerning intra-language borrowing reasons, it is primarily the natural limitations of the lexical resources in each language and the lack of its own adequate means of word-formation for the transfer of a new concept at this time in the language. In addition, the word of the native language should still become a term, while the word foreign language is already a ready term, because it is more a sign than the word of the native language. Thus, the term foreign-language origin has its advantages, namely: the borrowed term is characterized by unambiguousness, the complete absence of emotionally-expressive connotations, even at the initial stage of functioning.

Among the borrowings are international terms that operate with the same value in at least three non-closely related languages. In the research terminology we observe a large number of such borrowings, for example: помпа – eng. - pump, french. pompe, italian pompa, spanish -pompa, polish- pompa; газ – poc., eng.- gas, french gaz and others.

In the research borrowing terminology fell into different periods and had varying intensity. Especially active was the penetration of borrowing into Ukrainian scientific and technical terminology in the second half of the XIX century. It is primarily due to the birth of Ukrainian science and the fact that at that time, scientists began to write their research in Ukrainian. In addition, contacts with European scientific thought took place, which led to borrowing from the national terminology of the finished linguistic units together with the concepts and realities they are named.

Borrowed terms may be directly originated from the source language (such borrowings are called direct) or through an intermediary of another language (this is indirect borrowing). For Ukrainian, such languages are most often Polish and Russian.

Some researchers call such direct borrowing term units penetrating directly investigated terminology and indirect borrowings to

include name, falling to some other industry terminologies Ukrainian language and sometimes even rethinking their values.

Most of foreign-language origin terms in the Ukrainian terminology are borrowed from the so-called classical languages - Latin and Greek. The Latin language played a special role in medieval Europe, since it practically immaculately dominated science, education, jurisprudence and other spheres of life. From that time on, Latinisms became replenishment source of scientific terminology in all European languages. Since the classic Latin was filled with Greek borrowings, then the Greek language became a lexical reserve for the construction of new terms. The terminologists point out that "the very term elements of Greek-Latin origin are genuine internationalisms, because they do not belong to any of the living languages, therefore they are equally alien and at the same time native to any language" [16]. Borrowings that function in the terminology studied are both old and up-to-date.

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From Greek and Latin language, a lot of terms of general nature that also includes several industry terminological, such Grecians - analysis (analysis - decomposition, dismemberment) system (systema - formation, drafting), theory (theoria - review study) anomaly (anomalía - deviation) method (methodos - way to study the way knowledge), period (periodos - detour, rotation, rotation), energy (energeia - activity), phase (phásis - appearance), cycle (kyklos - circle circle, twist), diameter (diametros - circle diameter), synthesis - connection, assembly), diagnostics (diagnosticos - able to recognize), hypothesis (hypóthesis - basis, assumption), atom (atomos - indivisible); latinisms - the device (apparatus - equipment), amplitude (amplitudo - spacious), item (elementum - the original substance), car (machina - device, tools, structures), principle (principium - beginning, base), process (processus - passing, moving forward, mass (massa - piece, block), moment (momentum - movement, shock, moment), contact (contactus - touch), line (linea - risk, band), form (forma - appearance, device).

Some terms Latin and Greek origin entered into the terminology through the French language, for example: petrol (benzine <Lat. Benzoe - aromatic juice), ejector (ejecteur - outer <Lat. Jacto - throw), a filter (filtre <Lat. Filtrum - felting), relief (relief <lat. relevo - raise), reservoir (reservoir <lat. reservo - save).

Part of borrowing from classical languages has a combined character, that is, terms consist of Greek and Latin elements. For example, gasoline (fr. Gaz <gr. Shaos - chaos + lat. Oleum - oil) Hydraulic (gr. Hydor - water + lat. Elevare - lift, elect), destructive testing (lat. Defectus - lack bug + g. skopeo - watch); strain gauge (lat. tensus - tension + fr. metre <gr metron - measure), etc.

From the XVII century. there are many notions unknown to antique and medieval science, so the Greek -Latin source of borrowing has almost run out, the influence of Latin has weakened. The second stage of borrowing begins, the main ones being French, German and English.

Borrowings from the German language are the oldest. As the researchers point out, the ancient Germanic dialects of the Gothic and Scandinavian languages from the XII-XIV centuries entered the Old Russian dialects. [17]. Borrowings from the German language in the scientific and technical terminology belong to later ones. Among them are the following terms: mufte - a device for the longitudinal connection of cylindrical parts of machines (eg shafts) or pipes, ropes, cables, etc.; hose (Schlange, literally - snake) - a flexible sleeve or pipe; Slag (Schlacke) - molten or hardened mass of various impurities, ashes and fluxes, which is a by-product of melting and welding of metals; washer (Scheibe - ring, disk) - a metal ring or a plate with an opening, which is laid under the nut or head of the bolt to prevent damage to the surfaces; rod (Stange, letters - rod, rod) - a metal rod, which is used as a part in many tools, mechanisms.

French words began to noticeably penetrate into the Ukrainian language relatively late (XVII - XVIII centuries) through the mediation of Russian and Polish languages (montage, letters - lifting and lifting) - installation of the product or its parts at the place of application; localization (localization) - limitation of the place or action of something connected with a certain place fixation (fixation, fixing) - fixing in a certain position anything, a cuff (manchette <manche - sleeve) a sealing or insulating part of a machine, a pipeline in leather or rubber (exploitation <exploiter - use, work) - systematic human use of mineral deposits, buildings, industrial equipment, products, means of transportation, etc.)

The terminology of Anglicisms in scientific and technical terminology is quite common. Lexical borrowings from the English language in the Ukrainian language appeared later than in the French language, mainly in the 19th and 20th centuries. and they were absorbed mainly through the language. Most of these terms are related to the technique: block (block)- structurally and schematically finished part of the device that performs separate (separate) functions and is a set of nodes or groups of elements and parts; bulldozer (bulldozer <bulldoze - split into large pieces) a building earth moving machine for leveling, cutting and moving the soil; gasholder (gas - gas + holder - holder) - stationary steel structure for receiving, storing and supplying gas to gas pipelines, etc.

Part of the borrowing has been so adapted in the Ukrainian language, which has a tendency to word-building activity. Some borrowed terms are capable creating whole word-building families. Thus, the borrowed term takes place in the speech-recipient's phonetic, semantic and formal adaptation. The term can acquire the ability to semantic evolution under the influence of the lexical-semantic system of the Ukrainian language. The meaning of a term can be transformed (narrowed or expanded

2 Conclusion

Consequently, the establishment of Ukrainian scientific and technical terminology is a long and multi-stage historical process, which became especially activated after Ukraine gained independence in 1991. The development of the terminology system was carried out through a steady increase in the number of scientific and technical subjects that are selected from the national language, which is the basis of terminology. The influence of intra and extralinguistic factors has resulted in a significant quantity of borrowings from English, German, French and other languages as part of Ukrainian scientific and technical terminology.

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