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## Genesis and Lexico-Grammatical Features of the Tatar Language Terms

Génesis y características léxico-gramaticales de los términos del lenguaje tártaro

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### ABSTRACT:

The article is devoted to the description of tatar vocabulary terminological layer genesis and lexico- grammatical peculiarities. Semantical, morphological, syntactic, morphological-syntactic ways of terms formation are pointed out. Origin sources of tatar terminological vocabulary are Turkic, actually Tatar words, Arab-Persian borrowings, Russian and western European borrowings.

**KEYWORDS:** Genesis, words morphology, semantics, syntactics, syntactic-morphology..

### RESUMEN:

El artículo está dedicado a la descripción del génesis del nivel terminológico del vocabulario tártaro y las peculiaridades léxico-gramaticales. Se señalan formas semánticas, morfológicas, sintácticas, morfológico- sintácticas de formación de términos. Los orígenes del vocabulario terminológico tártaro provienen del turco, en realidad palabras tártaras, préstamos árabes- persas, préstamos rusos y europeos occidentales.

**PALABRAS CLAVE:** Génesis, morfología de palabras, semántica, sintáctica, sintáctico-morfología..

### INTRODUCTION

The study of terminological vocabulary related to different scientific fields, ensuring its use is one of the most relevant topics in Tatar linguistics. There is an increased interest in the problems of industry terminology, to issues in the field of terminology, terminography, etc in modern linguistics of the last decade. Technical and terminological vocabulary is also actively investigated in this context. In the Tatar linguistics' terms of

many technical branches (terms of mathematics, chemistry, physics, jewelry) are investigated, terminological dictionaries are published: «Russian-Tatar dictionary-minimum for oil industry workers» (1996), «Russian-Tatar dictionary for chemical industry workers» (1996), «Russian-Tatar medical dictionary», «Russian-Tatar oilfield dictionary» (2004), «Management dictionary» (2006). It is well known that despite the existing system of terminological vocabulary of the Tatar language its practical application is experiencing some difficulties associated with extralinguistic, sociolinguistic factors (Govindasamy and Kwe, 2020; Tarman, 2016; Newton et al., 2020; Abulhanova et al., 2019; Lehoux et al., 2019; Nureeva et al., 2019; Saifullova et al., 2018).

Numerous studies of the Tatar language's terminological layer (Akhmetyanov: 2015, p.543; Galieva et al.: 2016, pp.36 – 37; Sagdieva et al., 2019; Galimyanov & Suleymanov: 2013, pp.61-69; Musina: 2012, p.25; Nikolaeva: 2005, p.25; Tezina: 2006, pp.208-210; Khairullin: 2006, pp.43 – 46; Tsvetkova et al.: 2019, pp.598- 612; Humbatova & Hajiyev: 2019, pp.1704-1727; Lysytsia, et al., 2019; Ivanova et al., 2019; Shamseeva: 2009, pp.147-151; Saenko et al.: 2019, pp.332-345; Saenko et al.: 2020, pp.88-103; Wildes, 2020; Gapsalamov et al.: 2020, pp.874-883; Akim:2019, pp.1408-1428; Shamsutdinova: 2000, p.219; Gorovaya et al.: 2017, pp.1201-1210; Volchik & Maslyukova: 2019, pp.1444-1455) confirm that the Tatar language has a coherent terminological system. This is especially important, since "terms define the essence of scientific discoveries, reflect the content of developing areas of knowledge, convey recreated and already existing concepts in science and technology, serve as the name of new objects and phenomena" (Shamseeva: 2009, Villalobos et al.: 2018; Rincón et al.: 2019; Annia et al.: 2019). The study of terms can be multifaceted, multidimensional. This work examines word-formation possibilities of the Tatar language, the significance of this area is determined by several factors, including the fact that "there is a certain relationship between the structure of terms and time of their appearance, as well as between the degree of knowledge's field development and means of formation her terms" (Grinev-Grinevich: 2008, p.122).

Moreover, the description of terms' formal types is a traditional component of most terminological studies. The study of terminology sources of the Tatar language, the justification of its antiquity contributes to the confirmation of the historical process duration of language formation as a scientific one. Thus, the purpose of this study is the potential of the Tatar language as the language of science; as a language, with its ancient sources of term formation and actively using borrowings from other languages; as language, having a huge word-formative opportunities in the area of terminology that is impossible not to appreciate today, when "as a result of "information explosion" and accelerate the growth of scientific knowledge has occurred "terminological explosion" – a sharp increase in the number of terms" (Grinev-Grinevich: 2008, p.6). It should be remembered that the terminological vocabulary is subject to very high requirements, including, according to S. Grinev-Grinevich, such as:

«-value requirements:

1. Consistency of semantics;
2. Unambiguity;
3. Full meaning;
4. Lack of synonyms.

- Requirements to the form:

1. Compliance with language standards;
2. Lexical and formal brevity;
3. Derivational ability;
4. Invariance;
5. Motivation.

- Pragmatic requirements:

1. Introduction (acceptance, use);
2. Internationality;
3. Modernity;
4. Euphony;
5. Esotericity» (Grinev-Grinevich: 2008, pp.36-37).

At the same time, scientists believe that to a small extent deviation from these requirements can be observed, and this should be considered acceptable. Some requirements are relevant to a particular technical or scientific field and are not relevant to others. For example, esotericity, that is, the deliberate inaccessibility of medical terminology is due to the purpose of setting a barrier to self-treatment.

As a result, the above confirms the relevance of Tatar terminology's study.

## METHODS

The subject of this study is the terminological vocabulary of the Tatar language. The terminology of the language is presented in different dictionaries, belongs to very different scientific fields. We considered biological, mathematical, psychological and pedagogical, chemical, legal and other terms. It was important to present the terminological layer of the Tatar vocabulary as an illustration of its genetic roots, the term-forming potential of the language during the selection of language material.

## RESULTS

The first official text on the ordering and systematization of the Tatar language term-making appeared only in 1920, at the all-Russian conference of East journalists (Galimyanov & Suleymanov: 2013). Since then, attempts to systematize term formation in different scientific, technical and other fields have been made repeatedly.

Such methods of word formation as semantic, morphological, syntactic and morphological-syntactic are actively involved in the generation of Tatar terminology.

As a semantic method, scientists consider the terminologization of a common word, borrowing foreign lexemes and term elements, metaphorization of a common word's meaning, etc. (Grinev-Grinevich: 2008). Such a way as the terminologization of a common word generates the ancient terms, such as балчык – clay, алтын – gold, туфрак – soil etc. Terms formed by metaphorizing a common word are not as frequent, but occur in different areas. For example, the anatomical term snail is formed in this way – эКЭМ-Т#КЭМ (part of the inner ear responsible for the perception of sounds).

The generation of terminological vocabulary of the Tatar language becomes possible because of different word-forming means of the language. A number of terms are formed in a lexico-semantic way, that is, in such a way that a new term is formed as a result of the word disintegration into homonyms. Таким способом образованы географический термин The geographical term is formed in this way бугаз (strait), grammatical terms рәвеш (adverb), тартым (possessive case), ия (subject), zoological term саулык (young ewe), medical term т#че (lupus) etc.

E. Akhunzyanov in his work "Russian borrowings in the Tatar language" notes the great role of calculus in the replenishment of the modern Tatar language vocabulary (Akhunzyanov: 1968). In terminological vocabulary this statement is fully confirmed, in the language abound and complete calques (#скорма – superstructure, орлыгашар – megastigmus, умырткаара дисклар – intervertebral disc) and half calques (фотокаршылык – photometer, кристаллашу – crystallization, серкә к#пшәсе – pollen tube).

The morphological method of term formation in the Tatar language is advisable to see in the example of terms formed by affixation and conversion. Affixation is one of the most active ways of word formation. Active word-forming models of term-making in different scientific fields are:

- Stem + -ча/-чә: кисәкчә – particella (ling.), сызыкча – hyphen (ling.);
- Steam + -чы/-че: гоминьданчы – member of the Kuomintang (hist.), нефтьче – oilman;
- Steam + -ма/-мә: әремә – solution (chem.), орынма – tangent (math.); а#латма – formula (math.);
- Steam + -гыч/-геч, -кыч/-кеч: оксидлаштыргыч – oxidant (chem.), йоткыч – absorbent;
- Steam + ач/-әч/-ч: серкәч – тычинка (bot.);
- Steam + -лар/-ләр: ауксоторфлар – auxotrophs (biol.); тозлар – salt (chem.)
- Steam + -лык/-лек: семьялык – family (biol.), бердәйлек – identity (math.);
- Steam + -гыч/-геч, -кыч/-кеч: оксидлаштыргыч – oxidant (chem.), йоткыч – absorbent;
- Steam + ач/-әч/-ч: серкәч – тычинка (bot.);
- Steam + -лар/-ләр: ауксоторфлар – auxotrophs (biol.); тозлар – salt (chem.)
- Steam + -лык/-лек: семьялык – family (biol.), бердәйлек – identity (math.);
- Steam + нигез + -ландыр/-ләндер: к#кертсезләндер# – desolforazione (chem.)

Steam + -ыш/-еш/-ш: к#ренеш – phenomenon, ясалыш – formation, тигезләнеш – balance (phys.);  
 Steam + -ым/-ем: сыем – tank, утырым – residue (chem.); Steam + -выч/-веч: ялгавыч – commutator, сакавыч – fuse; Steam + -лы/-ле: газлы – gassy (chem.), галогенлы – haloid (chem.), селтеле – alkaline (chem.); Steam + -ла/-лә: хлорла – chlorinate, рафинадла – refine etc.

It is worth noting: the activity of an affix in term formation sometimes depends on the terminological field. So, M. M. Nikolaeva emphasizes that in the field of criminal law term formation is possible only by means of affixes -лык/-лек, -чы/-че, -ма/-мә (Nikolaeva: 2005, p.21).

Part of the Tatar language terminological vocabulary is formed by conversion. These are such units actively used in the chemical field: алтын (gold) – алтын (golden), in the mathematics: б#л#че (dividing) б#л#че (divider), in the economy: кулланучы (using) – кулланучы (user).

Let us consider morphological and syntactic ways of term formation.

Addition of bases is a productive way of word formation in many scientific areas: botany, geography, etc. For example: агаалтын (lit. white + gold) – platinum, #имешкортыч (lit. fruit + pest) – Appledore, сыеклык#лчәгеч (lit. liquid + meter) – pitometer, #згәреш#лчәгеч (lit. variation + meter) – variometer etc.

The peculiarity of word formation in the Tatar language are paired words. The researchers note: "Paired words are a very interesting and at the same time specific phenomenon for Turkic languages. In Russian and other European languages this category of words is fragmentary and its use is limited to purely colloquial speech" (Mannapova: 2008, p.188). In the Tatar language paired words can also form a terminological layer of vocabulary. For example: оксидлашу-кайтарылу (рекциясе) – redox (reaction), керем-чыгым – debit- credit etc.

Abbreviation is also a way of generating new terms, most often it is a calque of Russian terms- abbreviations. For example: ЭЭО (Эчке эшләр органнары – Department of Internal Affairs DIA), ЭЙК (Электр й#рт#к#че – electromotive force EMF). Of course, the main task of abbreviations is to save oral speech and written text. While pronouncing the abbreviation, the sound time is five times shorter than the corresponding phrase, and when writing, the savings are even more impressive. Tatar terminology contains both graphic and lexical types of structural abbreviations. Graphic abbreviations in written text are represented as symbols, abbreviated words or phrases, in oral speech they are used in full form. Let's give an example: β-кисәкчекләр (β-particles) – full name бета-кисәкчекләр (beta particles). Lexical abbreviations are formed by simultaneous reduction and addition. When pronouncing the abbreviated form is preserved. For example, abbreviation Д# (DP) formed from the term диэлектрик #ткәр#чәнлек (dielectric permittivity), in writing and in oral pronunciation preference is given to the short form of the term.

Very frequent in the Tatar language terms-phrases, which are considered by us as terms, formed syntactically. Terms, as words, naming special objects and phenomena are very complex and diverse, so they have code units not only in the form of words, but also in the form of phrases. The researchers note the dominance of terminological phrases (compound terms) over one-word terms in all terminology of European languages (Nikolaeva: 2005). Let us focus on the component composition of such phrases. Regular models of binary compound terms are:

- Izafet-constructions of II type. For example: нерв системасы – nervous system, атом энергиясе – nuclear power, #инаять эзләре – traces of the crime, кер# т#ймәсе – access key, исәп язмасы – account etc;
- Izafet-constructions of III type. For example: тугракны# ярлылануы – soil depletion, елганы# туенуы – the power of the river, шәхесне# кагылгысызлыгы – inviolability of the person etc;
- Adjective + noun. For example: берсоставлы ##млә – mononuclear sentence, органик химия – organic chemistry, ялган #эвәслек – imaginary propensities, кыска ялганыш – short circuit, к#ләмлә график – the volume chart, абсолют сылтама – absolute reference etc.
- Noun + action noun. For example: фонемаларны ишет# – phonemic hearing, #аваплылыкка тарту – bringing to justice, кисәкчәкләрне# бәрелеш#е – collision of particles, к#чләрне берләштер# – bringing the forces etc.
- Numeral + noun. For example: беренче инстанция – first instance etc.
- Pronoun + noun. For example: #загач – wood etc.
- Adverb + noun. For example: #тә зарурлык – extreme necessity.

Multicomponent compound terms can have the following component composition:

1. N+N2+N3: яшь чорлары #зенчәлекләре – age features;
2. N+N2+V: нефть калдыкларын газлаштыру – gasification of oil residues;
3. N + V + N2: авыртуны тою нокталары – pressure point;
4. A+N+N2: гомуми тел белеме – general linguistics; социаль инстинктлар теориясе – theory of social instincts;
5. A+N+V: шартлы рефлексны# с#н#е – extinction of conditioned reflex;
6. A+ A+ N: тере органик матдә – living organic matter;
7. N +A+ N2: функцияне# критик нокталары – critical points of the function;
8. Adv + A+ N: кышын яшел #семлекләп – winter green.

In the terminological system of the Tatar language there are also multicomponent units. For example: ми зур ярымшарларыны# алгы #зәк #ыерчасы – precentral gyrus of the cerebral hemispheres.

The multiplicity of the Tatar language terminological vocabulary raises the question of their Genesis. It is inadvisable to consider the following sources:

1) General Turkic layer of terminological vocabulary. The main vocabulary of the modern Tatar literary language refers to the common Turkic language for all Turkic languages, which is associated with the centuries-old history of Turkic tribes and peoples living on a huge territory. At this time formed such terms as сан (number), к#керт (sulfur), акча (money), сары (jaundice) etc. It is interesting to consider the root of the linguistic term басым – stress. It is obvious that it is cognate with the verb бас-, which is characterized as one of the main and most ancient Turkic words in etymological dictionaries (Akhmetyanov: 2015, p.163). Its grammatical and phonetic meaning is formed only in the twentieth century. The study of the etymology of another grammatical term – бәйләк (postposition) it also allows us to say that it has its roots back to the common Turkic word. Akhmetyanov also notes that the Turkic parallels of this grammatical term are the Kyrgyz term байламча, a term in the Komi language байлавуч, Kabardino-Balkar term байлав etc. (Akhmetyanov:2015, p.172). It is noteworthy that in the old Tatar language postpositions and similar words were called әдат (lit. – instrument).

2) Actually, the Tatar layer of terminology consists of terms formed on the basis of lexical and word-forming means of the Tatar language itself. For example, these are lexical units such as эшсезлек (unemployment), к#ндэшлек (competitiveness) etc.

3) Arab-Persian borrowings. The Muslim culture that penetrated into the Volga region and the basic Turkic culture in their synthesis formed a new type of culture, different from other local cultures that developed in similar conditions. Tatars through Islam joined the Arab-Persian artistic and musical culture, that is why quite a large number of terms in the field of arts have Arab-Persian roots. As examples it is possible to fix such words as дастан (genre), мэдхия (laudatory poem), мәрсия (хвалебное стихотворное произведение, посвященное уже умершему человеку). Of course, through the Arab-Persian languages, many scientific, economic and legal terms entered the Tatar language (висак – contract, дэгъва – claim), natural (#исем – body), humanitarian (х#кем – judgment, ##млэ – sentence, кабият – abilities, фикерлэ# – thinking).

4) A significant part of the total flow of borrowed terms are terms that go back to the Russian and European languages. For example: cardiogram, monocentrism, reminiscence, reflex, algometer, linguistics, romanticism, sentimentalism, author, character etc. It should be noted that among the borrowings from European languages, a large group consists of borrowings from the English language. For example: dumping, demarketing, dealing, engineering, consulting, leasing, listing, Liting, marketing, rating, copywriting, driver etc. A certain part of the borrowings are (bonus, denomination, calculation), Greek (monopoly, economy), French (allonge, backstage, Scam), Italian (Avista, accord, nostro-conto), German (guild, guest worker, freight) languages.

It should be noted that the language has a significant tendency to internationalize terms. This is manifested, for example, in the fact that in the presence of a native term, preference is given to its international synonym. So, instead of сизгеч more commonly used term sensor, instead of тишем – well etc.

## DISCUSSION

The Tatar language's terminological vocabulary is very numerous and becomes a prerequisite for the possibility of becoming a language not only as a spoken, but also as a scientific one. The work deals with terms related to different fields (different Sciences, technology, art). The study suggests that the terms have numerous ways of generation, they are actively formed and morphological and non-morphological ways. It is important to note that the Tatar terminology dates back to the common Turkic period, part of the terminological vocabulary is actually Tatar words. Attention is drawn to a large number of borrowed vocabulary, as noted in the work of G. Musina, K. Nasyri already provided the use of not only Tatar, but also borrowed terms such as barometer, thermometer, pressure gauge, perometer, photography, telescope (Musina: 2012, p.11). The prevalence of borrowed terms should not be considered as a consequence of the limited possibilities of the Tatar language, it is rightly noted that "it is impossible to form all scientific, technical, economic, philosophical, cultural and other terms only on a national basis. This fact is not only due to globalization, it is a natural phenomenon. The bases of this type terms are identical in many languages, they can adapt to the phonetic system of the language to some extent, but structural and morphological elements contribute to the "nationalization" of the word» (Khairullin: 2006, p.45). Replenishment and development of the Tatar terminological vocabulary is based on the following principles:

1. The principle of relying on the language's own resources;
2. The principle of terms' translation (direct borrowing, calculus);
3. The principle of association (synthesis of achievements of various scientific branches-Geology, mining, chemistry, physics, mathematics, etc).

## CONCLUSION

The study of the Tatar terminological system, ensuring its active use in science and technology is one of the priorities of our time. Only in this case, the language can confirm its status as the state language, can grow and develop. It is noteworthy that marked a breakthrough in the study of the terminological layer of the Tatar vocabulary in recent decades: studied the sources, structure, functionality of the Tatar economic, military, medical, chemical, physical, mathematical, geographical and other terminology. This study was conducted without giving priority to any particular area of terminology; on the contrary, the purpose was predetermined by the study of the genesis and possibilities of term formation in the Tatar language in general. It was found that the terms of the Tatar language can be formally expressed in one word (азканлылык, персонаж) or phrase (нерв системасы, эмоциональ интеллект), frequency and multicomponent phrases (нерв бәйләнешләрен актуальләштер#). Terms can be formed in semantic (алтын, балчык), morphological (газла, утырым), syntactic (шартлы рефлекс), morphological and syntactic (акк#бәлэк, агалтын, ЭЙК) ways. In the latter case, the abbreviation is usually represented by Russian terms: ЕМФ – ЭЙК, that is electromotive force – электр й#рт# к#че.

Considering a way of addition, it is necessary to pay attention to the terms having structure of paired words (явым-т#шем, алыш-биреш) – such units represent specificity of the Tatar terminology. Conversion as a way of term formation is also inherent in the Tatar language, in Russian it is not an active way of term formation.

Tatar terminology has ancient roots, goes back to the common Turkic language; it has a rich arsenal of Tatar words, and is actively replenished by borrowed vocabulary. In this case, there is a tendency inherent all languages.

Thus, this article argues that the Tatar language has a rich, accurate terminological vocabulary. Its semantics, and form, and functional (pragmatic) orientation meet the requirements for terminological vocabulary. We believe that under favorable extralinguistic (mainly social) factors Tatar terminological vocabulary can have a high degree of use. This study proves that it can and should be actively used for practical purposes.

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