

## **FRAME SEMANTICS AS A COGNITIVE METHOD FOR THE ANALYSIS OF NEW KAZAKH TERMS**

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**Abstract.** The article deals with the frame structure forming the basis of concepts as illustrated by new Kazakh terms appeared due to the need for nominating certain phenomena in the scientific field, which is considered as a logical result of the development of Kazakh terminological systems. The article's authors analyze the relation between terminology and cognitive linguistics based on new terms frequently used both in the scientific and common languages. Terms created on the basis of current nominative units are considered as a part of the frame structure that includes all possible information about an object. The article investigates the mental bond between a term as a linguistic fact and its expression reflected in the speaker's mind as a concept in the cognitive structure. The article is aimed to show the relation between a concept as a mental unit and a term as its linguistic representation based on conceptual analysis resulting in a certain frame model formation.

**Key words:** frame, Kazakh language, concept, cognitive structures, term formation.

### **Introduction**

The beginning of the 21st century can be characterized by a particular boom in Kazakh terminology, i.e. an abundance of new terms requiring careful study from the point of view of cognitive linguistics has contributed to the dynamic development of this branch of Kazakh linguistics. The Kazakh language belongs to the Nogai-Kipchak group of the Turkic languages. Besides, it is an agglutinative language having its own phonological system as well as inflexion and derivation system based on affixes. It should be noted that when Kazakhstan was a part of the USSR, the Russian language had made a significant impact on the Kazakh language: a great number of Russianisms and borrowings from Russian entered the Kazakh language. The revision of the language policy both in Kazakh linguistics and in terminology was made due to the attempts aimed to preserve Pure Kazakh language, reflecting the national identity of Kazakh people. Well-known Kazakh terminologists and scientists such as O. Aytbaev, B. Kaliuly, Sh. Kurmanbaiuly, K. Aydarbek, E. Abdrasilov, S.Issakova and others published their works devoted to the problems of terminologization, terminological nomination and cognitive terminology studies, which became widely available. Furthermore, the work of the State terminology commission of the Republic of Kazakhstan became more active, and terms borrowed from other languages were revised. Today we have a huge amount of new concepts in various fields of science and professional fields of technology and production, science and education, medicine and culture, information technology and social life borrowed from other languages and then adapted for use by term formation in the Kazakh language.

There is only one reason why new terms appear: in the age of globalization and scientific and technological development, the emergence of a new object, phenomenon or idea requires its obligatory linguistic denotation or nomination. If a new object or phenomenon is used, its name will also be adapted for use in another language. That's called the process of borrowing a word.

Borrowing as one of the main ways of enriching vocabulary, made due to language contacts, is equally typical for all developed national languages. The Kazakh language is no exception, and its vocabulary has a wide range of words, terms, word-building elements borrowed from Russian and through Russian from English, German and other languages at different times. The main part of borrowed

Әлеуметтік-гуманитарлық ғылымдар-Социально-гуманитарные науки-Social and humanities sciences vocabulary consists of innovations being mainly terminological units (according to research, more than 90% of all borrowings are the terms). Unlike other borrowed words, terms retain their sounding and graphic forms, thereby representing generally comprehensible semantic meanings. The internationalisms (what was formerly known as «internationalisms» is now called «international words») such as officer, computer, Internet, radio, management, marketing or terminological elements *air-*, *aqua-*, *aero-*, *micro-*, *macro-*, *nano-*, *tele-*, *bio-*, etc. have the similar sounding in many languages, and consequently their meaning is also clear to different speakers of national languages. Terms previously existed in the Kazakh language in various branches of science and production, particularly the ones having foreign roots (English, French, German, Latin, etc.) - machine, automation, aspect, definition, agriculture, aviation, medicine, abstract, biology, mathematics, etc. and also relatively new borrowed terms: diskette, computer, flyer, marketing, management, file, etc. – are still being used in the Kazakh language.

### **Materials and methods of research**

Terminologists would agree that when the borrowed term and the term created on the basis of the native language are variable, priority is given to term formed in the native language. Some terms borrowed from the Russian language such as airplane, helicopter, digital technology, traffic lights, etc. were translated or borrowed from other Turkic languages as follows: *ushak*, *tik ushak*, *sandyk tekhnika*, *bagdarsham*. In addition, there have been terms created on the basis of native Kazakh words and word-forming parts: *kuytabak* - disk, *kuysandyk* – music player, *meyrbike* - nurse, *kagidat* - principle, *aitylym* - pronunciation, *zhazylym* - writing, *katysym* – participation, *uderis* - process, etc.

If new terms are created in a particular branch of science, or, in other words, if a term existing in the source language is created in the target language, it will be considered as borrowing - this phenomenon is not so rare. The terms *alliance* - *odak*, *adaptation* – *beimdelu*, *bilingualism* - *kostildilik*, *ekitildilik*, *polysemy* - *koptildilik*, *jurisdiction* - *hukimet*, *lawyer* - *korgaushi*, *manager* - *baskarushi*, *act* - *kuzhattama*, etc. have similar functioning in the Kazakh language, i.e. both variants are used along with the Kazakh equivalent. According to Kachru the primary motivation for lexical borrowing is to remedy a linguistic deficit in the lexical resources of a language: «for the reason the structure of the English source language term may condition the creation of new lexical units in the target language. However, a more plausible explanation is provided by Expediency Hypothesis, which states that for reasons pragmatism and convenience, a linguistic community tends to that favor loanwords simply because adopting a word (or part of a word) is less work and much quicker than creating a new one» [1, 34].

This statement applies to all languages since the process of adapting a new word for use in another language can take both short and long period of time. For example, the words referring to a political sphere called neologisms *komsomol*, *pioneer*, *communist*, *party member*, etc., have already lost both their novelty and terminological features, moving from the category of neologisms to the category of historicisms [2]. Being the neologisms used in the past, the terms *space*, *rocket*, *astronaut* existed in the Kazakh language in this sounding until their equivalents *garysh*, *garyshker*, *zymyran* had been created. New terms didn't just take their place in the Kazakh terminological system, but also became the basis for the creation of other derived words: *garyshtyk* (adj.) - spacial, *zymyrandai* (adv.) - like a rocket. All possible combinations with the term *space* are used by the term *garysh* in the Kazakh language: *spaceship* - *garysh kamesi*, *zymyran*, *space research* - *garyshtyk zertteuler*, *spaceport* - *garysh aylagy*.

In our research we considered new Kazakh terms formed by artificial nomination as the results of linguists' term-formation focused efforts based on the words existing in the Kazakh language: *bagdarlama*, *zhahandanu*, *uderis*, *urdis*, *tagylymdama*, *kagidat*, *tuzilim*, *aitylym*, *zazylym*, *okylym*, *katysym*, *tyndalym*, etc. from the point of view of their structural feature as an element of mental activity - a particular cognitive structure. This interest is caused by the fact that the choice of certain terminological components when creating new terms must somehow have a certain justification.

We assume that such a choice is associated with cognitive and mental processes that form a particular frame structure in the speaker's mind. Moreover, the frame is characterized by the features of

Let's consider the following example: @ sign-symbol, which exists in all languages and have therefore different designations among different peoples. It is used to state an email address in communication via email to separate the username from the domain name. @ has its «official» name – «commercial at». But almost all peoples translated this sign into their own language, and it means different things in different languages: the Russians call it «little dog», the Poles – «little monkey», the Taiwanese – «little mouse», the Greeks – «little duck», the Hungarians – «little worm», the Swedes – «elephant's trunk», the Finns – «cat's tail», the Israelites – «strudel», the Czechs – «herring», the Chinese – «A in a circle», the Belarusians – «snail», the Danes and Norwegians – «pig's tail», etc. In the Kazakh language this symbol is called «aikulak» which means «snail» in translation. We think that the name is given as a result of an associative approach based on the similarity of the sign with the snail. We can say that such variants as «pig's tail» or «monkey's tail» would hardly have elicited a response from the Kazakhs as a sign designation, since in Kazakh people's worldview these animals are characterized by a negative emotional-expressive assessment.

Thus, we believe that the choice of a specific name for a new concept will be determined not only by the derivational features of the target language, but also by the peculiarities of the national linguistic worldview reflecting the culture, traditions, beliefs and other values of the society and people.

In this study, we consider the conceptual peculiarities of new Kazakh terms within a frame structure that can retain basic information about an object. Our research is aimed to develop the conceptual frame model, based on some Kazakh terms, as a cognitive structure that can become the basis for creating other nominative units.

### **Results and discussions**

A *frame* – in the most general case, this word denotes a structure containing some information, however a frame came into use as a term in various branches of science in the second half of the 20<sup>th</sup> century.

In linguistics a frame is used to express a descriptive structure of the relation between language and thought. Ch. Fillmore first introduced the concept of frame or frame semantics in linguistics in the mid-1970s. He considers the frame as stable cognitive structures expressed through linguistic units that are subsequently used to create new speech situations. Ch. Fillmore describes the frame as a mental structure that has cells (slots) filled with information and implemented through speech facts in the process of scenes or scenarios. Ch. Fillmore presented the frame semantics (frame-and-scene analyses) as a research program in the field of empirical semantics, which provides a way to characterize the principles of creating new words and sentences, adding new word meanings as well as «assembling» meanings of text elements into a whole one. He also notes that using a frame as a cognitive structure correlates with a concept expressed through linguistic units [3].

«Frame concepts allow to model understanding. The latter is treated as a set of the following actions: frame activation, candidate frame highlighting and frames competition. Starting to interpret the text, we activate a certain contour scheme in which many positions («slots») haven't been occupied yet. Later text episodes fill these gaps, introduce new scenes combined into various relationships - historical, cause-and-effect, logical ones, etc.» [4, 189-191].

N.N. Boldyrev notes that a frame is a universal structure of knowledge: «Generally, a frame can include any episode of knowledge, no matter how bizarre it may seem, if only a sufficient number of people share it. Accordingly, a full understanding of certain words becomes possible as a result of involving several cognitive contexts» [5, 88].

A famous scientist M. Minsky described the frame concept as a unit of our knowledge representation required to form artificial intelligence. According to Minsky, the frame model cannot exclude certain differential features from its description: if at least one of the features is excluded, the meaning of a concept will be distorted or its representation in the human mind will be completely changed

[6]. For example, the concept of «*chair*» gives the listener or reader an object image: «*a piece of furniture with a horizontal inclination for sitting, etc.*». Thus, the human mind reflects an object on which one can sit, it also has legs and a surface made of wood (metal, plastic) in different sizes, etc. If we add or exclude at least one of the above features from this description, we will get a completely different object. For example, if it is a *stool*, a new feature will be added: *a hard seat without a back*. If we indicate the size or shape, the representation of the «*chair*» image will be subsequently changed: having acquired a new feature, a *bench* will be defined as *a narrow seat for several people*. An *armchair* is also *a piece of furniture for a seat*, but its features are distinguished by the presence of *a palm rest for comfort, soft upholstery, etc.*

Therefore, reflecting all the features of the object in the human mind, the frame structure has the ability to complement the object characteristics with the speaker's knowledge. That's why, some common categorical features (hyperonym) as well as specific features (hyponym) of the object can be displayed. The specificity and accuracy of the object features, reflected in the human mind as frame elements, allow us to talk about its similarity with the term concept, which has the same specific and exact verbalized description of the object features, expressed in terms of definition.

One of the famous terminologists P.Faber says the following about frames: «...frames are a type of cognitive structuring device based on experience that provides the background knowledge and motivation for the existence of words in a language as well as the way those words are used in discourse. However, frames have the advantage of making explicit both the potential semantic and syntactic behavior of specialized language units. This necessarily includes a description of conceptual relations as well as term's combinatorial potential.» [7, 32].

Thus, the frame is a reflection of an object and its full information in the speaker's mind, the term is its representation as a linguistic unit describing all features in the form of a definition.

### **Term**

There has been a lot of debate among scholars about the role and essence of a term in a linguistic system. On the one hand, the term as a lexical unit belongs to the lexical-semantic system of a language. On the other hand, being a designation of a certain scientific concept, the term belongs to the field of science and technology. Due to the attempts to combine the term as a linguistic unit of scientific and national languages, many researchers identify the following term definitions: 1) a term is a linguistic unit of a special sphere of use; 2) a term is a name given for a special concept; 3) a term is a concept that has the definition accurately and clearly reflecting the content of the given concept as well as highlighting the features that make it possible to distinguish one concept from another and at the same time make it possible to put this concept into a certain category.

According to B.N.Golovin, a term is “a word or a subordinate combination that has a special meaning, expresses and shapes a professional concept and is used in the process of cognition and development of scientific and professional-technical objects and the relationships between them” [8, 15].

We support the point of view of V.M.Leichik, who describes the term as «a complex, multi-layered formation consisting of linguistic elements, logical content, defined by the features of a special concept, denoted by the term, and terminological essence, that includes the conceptual, functional and formal structures presented by terminological elements» [9, 14].

According to scientists and terminologists, the term has a set of certain differentiated features: ambiguity/unambiguity, systematicity, motivation and definitiveness. In this study, we indicate the most striking features that are verbalized in terms when they are described. We pay a special attention to the issues of ambiguity/unambiguity, since we must take into account that new terms in the Kazakh language are created on the basis of existing words that have their lexical meaning and are essentially ambiguous. The problem of ambiguity/unambiguity is one of the important problems in terminology, and it has two fundamentally opposite points of view. The ones who support the first point of view on this problem cannot agree that a term can have a lot of meanings, but they admit the possibility to use a term in related

Әлеуметтік-гуманитарлық ғылымдар-Социально-гуманитарные науки-Social and humanities sciences terminological systems. They believe that the term should be unambiguous in its definition, and express the meaning of a special concept. For example, R.G. Piotrovsky writes the following: «The term polysemy is a real disease of special terminology. Theoretically, the term should be unambiguous» [10, 26]. R.A.Budagov does not recognize the ambiguity of a term: «A term tends to unambiguity, monosemy. Each scientific term usually has one specific meaning» [11, 226].

In solving this problem, we agree with the opinion of L.M.Alekseeva, who proposes to consider the term ambiguity/unambiguity within the dynamic approach: «The term unambiguity is not considered as one of the variants for a language sign equivalent to a certain interpretation of the phenomenon. In this respect, the concept of term unambiguity can be constant. The time frame for the term unambiguity is artificial, illusory, they coincide with the context boundaries that generates the given term, that is, they do not extend beyond the framework of the term generating base» [12, 38].

Thus, we assume that the term ambiguity/unambiguity feature may depend on the context and functioning of the linguistic unit being considered as a term.

Another important feature of the term - its motivation - is related to the fact that any word comes into use to denote a specific object (phenomenon). The term, unlike other words, is created to denote a special concept. First, a concept appears, then there is a sign for its nomination. In this respect, the term is always secondary, i.e. it is motivated in relation to the concept.

The main feature of the term is a definition that distinguishes a given word from common words.

In ISO a definition is defined as «a statement which describes a concept and permits its differentiation from other concepts within the system of concepts» [13, 4]. Two types of definition are recommended for terms, intensional and extensional definitions. The intensional definition describes a term in terms of its superordinate and the characteristic(s) which distinguish(es) it from its superordinate. ISO stipulates that «it is necessary to state the closed generic concept that has already been defined or can be assumed to be generally known, and to add the restricting characteristic that delimit the concept to be defined» [13, 4].

#### ***Conceptual model of Kazakh term bagdarsham (a traffic light).***

The logical connection with the concept takes a major role in scientific terms, while the correlation with an object is crucial for technical and other types of terms. Therefore, industrial, technical and other terms are semantically close to common words; moreover, using contextual analysis we can distinguish the industrial-technical term from the common word. Let's consider the term «bagdarsham» (a traffic light) - an artificially created name for a traffic light (object) related to the field of technical production, i.e. to a certain professional activity. The name itself is secondary to the simple words bagdar (a direction) and sham (a light, lamp) represented in its structure. The word-formation process created by combining two root words shows us not only the possibility of forming a term based on commonly used words through specialization, but also the process of term-formation based on ordinary word-formation by metaphorically transferring the lexical meaning of these words.

In our research we considered the term «bagdarsham» (a traffic light). According to the above authors, who suggest a peculiar way of solving the ambiguity problem, and consider the term not from the point of view of structuralism, but its functioning in a special field, «bagdarsham» is used in technical and production spheres as a designation of an object. Moreover, this unit being included in the terminological system of technical production makes it possible to recognize it as a term.

The term «bagdarsham» (a traffic light) has recently been used in a new and its definition includes the following: «an optical device that emits light signals regulating vehicle and rail traffic as well as pedestrians at zebra crossings» [14, 145]. The Russian word «svetofor» (a traffic light) is derived from the root «svet» and the Greek «foros» – a carrier. The meaning of the Kazakh term is conveyed as «bagdar» – a direction, «sham» – a light, lamp; word-for-word translation will mean - the direction of the light. The derivational analysis shows that the term is created by combining two common words such as bagdar and sham.

The frame defining the term bagdarsham (a traffic light) will include the following: an optical device [slot 1] that emits light signals [slot 2] regulating vehicle and rail traffic [slot 3] as well as pedestrians [slot 4] at zebra crossings [slot 5]:

Slot 1. An optical device

Slot 2. that emits light signals

Slot 3. regulating the traffic of

Slot 4. vehicles, trains, pedestrians

Slot 5. on roads, railway lines, zebra crossings

Nomination	Essence, object	Essence, subject	Associations with a thing or person	Location
Bagdarsham	an optical device	regulating the traffic of	road transport (automobile, car, Toyota)	on roads: motorway, highway, crossing
Railway traffic light	an optical device	regulating the traffic of	rail transport (train, suburban train, railway train)	on railway tracks, rails
Traffic light	an optical device	regulating the traffic of	pedestrians	at the intersections of roads, streets

Let's examine the frame «bagdarsham» (a traffic light) from the point of view of its origin. Bagdarsham consists of two elements: bagdar and sham. The choice of these elements is determined by their lexical and semantic meaning associated with the conceptual meaning of the term. The lexical-semantic meaning of each of the roots in words has its own designation: bagdar – a natural (the sun, moon, stars, hill, etc.) or an artificial sign used to determine the direction of movement, the location of the object; direction: 1) determination of location by orientation for world directions; 2) to understand the surrounding situation; 3) to take any action. A course, direction, focus: durys bagdar (a right course), zhalaky ushin bagdar (an orientation for salary), kasibi bagdar (a professional orientation), madeni kasiptik bagdar (a cultural professional orientation), radiolocatsialyk bagdar (a radar reference point), sayasi bagdar (a political orientation). Route (in figurative use a direction), (a silver inlay), bagdar kongan sakina (an inlaid ring), kara bagdar (a blackened silver jewelry). Synonyms bagyt, betbetalys (a direction), zhol (a road). [15,75].

Bagdar as a metaphorical component is one of the basic spatial metaphors. According to the classification made by G. Lakoff, the concepts forming the basis of our worldview are divided into certain types, among which “orientation metaphors” occupy a separate place. «Most of our fundamental concepts are organized using one or more spatial metaphors,» the scientist writes defining the meaning of metaphorical space [16,41]. Bagdar is just such a fundamental concept, since spatial orientation and the linguistic units associated with it are one of the primary, almost unconscious, but constantly presented in conscious experience, cognitive units. Thus, this is a basic concept being a designation for determining the location of a speech presenter in the objective world and orientation with the intention of making movement (to go, to leave, to come, to move, etc.) There are the following expressions in the Kazakh language: zhol bagdarlau (to determine a road direction), bagdar nysany (an object of orientation), bagyt-bagdar беру (to give a direction), bagdarsyz ketken (not having its own way – phraseol.), etc. It is worth noting the diversity of the expressed meanings of this word: from the objective (designation of the area) to the abstract (as a phenomenon - ideological, political, philosophical direction). The second element of the bagdarsham frame – sham is characterized by even more full semantic content.

Sham - zharyk kushinin birliginin eskirgen atauy, birlikterdin halykaralyk zhuyesinde bul birliktin ornyna kandela alyndy [Light is an old name for a unit of light measuring, in the international system this unit is called candela]. (Kazakh Soviet Encyclopedia. Vol. 9, Edition 18).

Sham – a light, candle 1. Balauyz sham (a wax candle); sham koygysh (a candlestick); 2. Figurative meaning. Sham – a lamp (lighting device), electricity; aspaly sham (a hanging lamp, chandelier); zhaidak

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sham (a wick lamp, lamp without glass); kabyrga sham (a bracket, wall lamp); ustel shamy (a table lamp); sham biltesi (a wick for a lamp); sham zhagu (to light a lamp, to turn on electricity); elektr shamy (a light bulb). 3. Sonyna sham alyp tusti (to pursue, not to leave alone (phraseol. unit)); sham zhamyrady (the night came when the lights lit up (phraseol.unit.)); sham songen kez (late hour, when the lights went out (phraseol.unit)); shamnyn zharygy tubine tuspeydi (the light of the lamp does not reach (saying) – to do good to others, not noticing the close loved ones); kaskyrga sham (like light on a wolf (saying)); shamyna tiyu (to hurt smb' feelings, offend, cause anger (phraseol.unit)).

In addition, there are special terms used with the word *sham* in the field of electrical engineering:

Elektrodyk sham (an electronic lamp), kok sham (a blue lamp, the Minin reflector), kerosin sham (a kerosene lamp), eki zhipty sham (a two-core lamp), shtepseldy sham (a plug lamp), sham-fara (a floodlight lamp), kyzdyru shamy (a heating lamp), ustap zhuretin sham (a flashlight), etc.

The meanings of phraseological and idiomatic units prevailing in the second element “sham” show an expanded conceptual field where there is an explicit connection between the meaning of the words *light, brightness, shining, day*. Thus, it should be noted that this linguistic unit has as a cognitive structure not just an object designation, but generally, the concept of light. The conceptual field of the *sham* concept will include the following units as a particular object designation: *lamp, night lamp, candlestick, flashlight, lamp, chandelier, minion, etc.* The term *bagdarsham* has a broad semantic meaning - i.e. the presence of light is laid in the frame. Each of the structural elements of the frame *bagdarsham* can be used (and are used) as concepts expressing certain words and word-forming elements: *bagdar - bagdarlama, bagdarlau, bagdar; sham - maysham, kol sham, shamshyrak, aspaly sham*. A common semantic meaning of the root words *bagdar* and *sham* has the following structural conceptual components: *bagdar* - not only the direction of movement, but also a certain orientation, life position, principles; *sham* - a concept related to the notion of light, path illumination.

We believe that the usage of such concepts that are conceptually significant for the Kazakh people in the process of new terms formation contributed to the acceptance by the Kazakhs of the created new terms as an equivalent to borrowings from other languages.

### Conclusion

The frame model is quite universal, as it allows to reflect the whole variety of knowledge about the world using the following: frames-structures used to designate objects and concepts (subject frames); script frames (description of actions - existence, definition); frames-situations (specific tasks, discursive and pragmatic ones). For example, the new Kazakh linguistic terms *aitylym* - speaking, *tyndaly* - listening, *zhazylym* - writing, *tusindirilm* – reading have one characteristic feature - they denote abstract concepts associated with the designation of an action, but not the action itself. The morphological feature of the verbal noun and the word formation way are the same for all these terms:

*Aitylym* (speaking) - a noun derived from the verb *aitu* (to speak);

*Tyndaly* (listening) - a noun derived from the verb *tyndau* (to listen to);

*Zhazylym* (writing) - a noun formed from the verb *jazu* (to write);

*Tusindirilm* (reading) - a noun derived from the verb *tusindiru* (to explain; to read).

These terms are derived from the verb stem using the derivational suffix -ym, -im. The structural slot of the concept frame, correlated with the terms expressed through the term, will include this information. The slots relating to the terminological meaning will correspond with the lexical meanings of verbs-roots, which have different features as a semantic designation. The slots, including functional features, are related to the scientific and educational field, where these frames have certain definitions assigned to them. It is worth noting that the functionality of these terms has already been expanded, as they are used in this sounding in everyday speech, although they were created namely as linguistic terms. Thus, development of the peripheral frame structure of each of these terms will take into account not only the established definition, but also the lexical meanings of the words they are derived from.

Indeed, the use of concepts and frames as well as their explanation and research, cannot be

Әлеуметтік-гуманитарлық ғылымдар-Социально-гуманитарные науки-Social and humanities sciences considered separately, they must be considered in speech situations, and this, in turn, gives reason to talk about the discursive nature of cognitive structures. Scientific discourse is characterized by abstractness, which is often expressed by using abstract and verbal nouns along with the terms.

Summarizing the above, we can conclude that frame is a constantly structured unit of knowledge, which has full structural components, similar to the semantic meaning of linguistic units, but having great flexibility and a lot of additional knowledge about an object. Moreover, the frame as a cognitive element contributes to the structuring of all information related to a certain linguistic unit (words, phrases, sentences) in the native speaker's mind. A frame is a universal structure capable of storing information (knowledge) about an object through all possible variants represented in the human mind.

In Frame-based Terminology, non-language-specific predicate frames are based on semantic near primitives or conceptual invariants that designate environmental actions, states, and processes. Such frames not only arise from single verbs but also from general configurations of verb meaning that coverage in a single semantic space. In terminology, this sounds strange because verbs are rarely considered to be terms, and thus tend not to be included in specialized knowledge resources.

The essence of the frame analysis technique is that by analyzing a certain word we establish a cognitive context, that area of knowledge underlying the meaning of a given linguistic fact; in a certain way we structure it: which sections of this area and how they are reflected in the word as a sign - in this way we shape a frame that defines this meaning and serves to use its components for other speech situations.

The frame nature of the created new terms involves the structuring in the native speaker's consciousness of a certain term-cognition image, expressed in the differentiation of data from terminological and nominative units in the human mind and their use in speech situations.

The frame structure of some new Kazakh terms is hierarchically organized with mandatory, basic and additional elements, the so-called frame nuclear and peripheral elements. The analysis of the compiled frame structures showed that all linguistic units can become elements of semantic content, regardless of their grammatical forms and meanings.

The frame model can be variable, including all possible types of information that has any significance for speech presenters. Using the frame model facilitates the choice of lexical material on a specific topic.

It has been noted above that a frame displays a stereotypical representation of an object or situation for a particular cultural community. Therefore, in addition to free unrelated lexical units, it contains a set of idioms, cliché, phraseological units related to a particular discourse in a given sociocultural context.

It has also been noted that the frame approach allows to take into account the national and cultural component while forming new terms based on the existing vocabulary.

The frame structure reflects the usage of certain categories of vocabulary, the frequent usage of units of certain lexico-semantic groups, for example, when describing a new technology or production. If the usage of one or another slot of frame structures is not active enough, the object features won't be so significant from the point of view of users in the discourse. For example, despite the creation of certain terms, the slot that is best known in a particular discourse remains as the more frequently used variant: zhumsalym, aitylym, tuzelim, tyndalym, we most often use them in scientific and educational discourse than phrases with active verbs aitu, tyndau, tuzu, zhazu.

In our study we considered the conceptual peculiarities of new Kazakh terms within a frame structure that can retain basic information about an object. Considering the terms in its relation to the concept reflected in the human consciousness, we came to the following conclusions:

Firstly, an interpretational field of a concept and a term associated with it will include cognitive features that interpret certain aspects of information content arising from it or being the basis for the production of other information content.

Secondly, clarifying and explaining structure of the term definition is similar to the frame modeling



Әлеуметтік-гуманитарлық ғылымдар-Социально-гуманитарные науки-Social and humanities sciences structure. On the one hand, the form of a term, reflecting the complicated nature of the concept, helps the speaker to model and determine certain properties of the object described. On the other hand, it becomes a kind of mental reflection of the linguistic form, which is fully shown in the frame model formation corresponding to this unit of knowledge.

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## **ФРЕЙМДІК СЕМАНТИКА ЖАҢА ҚАЗАҚ ТЕРМИНДЕРІН ТАЛДАУДЫҢ КОГНИТИВТІК ӘДІСІ РЕТІНДЕ**

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**Аңдатпа.** Мақалада қазақ тілі терминологиялық жүйесі дамуының заңды нәтижесі ретінде қарастырылатын белгілі бір құбылыстарды ғылыми айналымға ұсыну қажеттігінен туындайтын жаңа қазақ терминдері мен олардың ұғымдармен байланысының көрінісі ретінде фреймдік құрылым қарастырылады. Мақала авторлары терминология мен когнитивтік лингвистиканың байланысын ғылыми салада да, жалпы тілде де белсенді қолданылып жүрген жаңа терминдер мысалында талдайды. Қолданыстағы номинативті бірліктердің негізінде жасалған терминдер нысан туралы барлық мүмкін ақпаратты қамтитын фреймнің құрылым шеңберінде қарастырылады. Мақалада терминнің тілдің факті және оның сөйлеуші санасындағы ұғым, когнитивтік құрылым ретінде көрініс табуы арасындағы

Әлеуметтік-гуманитарлық ғылымдар-Социально-гуманитарные науки-Social and humanities sciences психикалық байланыс мәселесі көрсетіледі. Мақаланың мақсаты белгілі бір фреймдік модельдің қалыптасуына әкелетін, концептуалды талдау негізінде менталды бірлік ретіндегі ұғым мен оның тілдік көрінісі арақатынасын көрсету болып табылады.

**Түйін сөздер:** фрейм, қазақ тілі, концепт, когнитивтік құрылымдар, терминжасам.

## ФРЕЙМОВАЯ СЕМАНТИКА В КАЧЕСТВЕ КОГНИТИВНОГО МЕТОДА АНАЛИЗА НОВЫХ КАЗАХСКИХ ТЕРМИНОВ

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**Аннотация.** В статье рассматривается вопрос о фреймовой структуре, отражающейся в содержании концептов на материале новых казахских терминов, создание которых продиктовано необходимостью номинации некоторых явлений в научной среде, появившихся в результате развития терминологической системы казахского языка. Авторы статьи анализируют связь терминологии и когнитивной лингвистики на примере новых, активно используемых как в научной сфере, так и в общеупотребительном языке, терминов. Созданные на базе существующих номинативных единиц термины рассматриваются в рамках фреймовой структуры, включающей всю возможную информацию об объекте. В статье рассматривается проблема ментальной связи между термином как языковым фактом и отражаемым в сознании носителя его выражением в качестве концепта, когнитивной структуры. Цель статьи – показать соотношение концепта как ментальной единицы и термина как его языкового представления на основе концептуального анализа, приводящего к формированию определенной фреймовой структуры.

**Ключевые слова:** фрейм, казахский язык, концепт, когнитивные структуры, терминообразование