

HPEPA 2019**Humanistic Practice in Education in a Postmodern Age 2019****THE PRICIPLES OF SYNERGETICS IN STUDYING THE ALTAY
FAMILY ETYMOLOGICAL LANGUAGE NESTS**

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Abstract

The complex lexico-semantic system of a language is currently being studied on the basis of different principles. This article analyzes the principles of synergetic in the study of etymological nests, which represents a combination of lexical units with a common root base. The aim of the research is to trace, based on the principles of synergy, the ordering of the relations of semantic motivation and word-forming production of words that make up the chosen etymological nest. The research is carried out on the material of the etymological nest of the root base *toy* – "to born → to develop (to improve) → to complete" in the languages of the Altai family. The material is selected according to the work "Turkic Ural-Volga region in the context of the Altai language community (lexical-semantic dictionary)" compiled by us on the basis of comparative, explanatory, bilingual, etymological and other dictionaries. The research is based on continuous selection from dictionaries, component word analysis, semantic reconstruction, comparative historical analysis of the lexical material of the Turkic, Mongolian, Tungus languages. As a reflection of synergism, the etymological nest content of the root base *toy-* is a complex hierarchical structure represented by numerous genetically related lexical units that represents the root base in phonomorphological variants and received a semantic development according to the scheme "рождаться (born) → развиваться (совершенствоваться) (develop (improve)) → завершаться (to be completed)". The research results have the practical value in carrying out etymological, linguocultural research, compiling diachronic ideographic dictionaries.

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Keywords: Etymological family of words, lexical system, reconstruction, root stem, the Altai family of languages.



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1. Introduction

Synergetic problems become a topical issue in connection with a number of linguistic, philosophical, psycholinguistic problems, such as reconstruction of the root bases of the Altai language family (whose genetic similarity remains unproven up to the present moment), the syncretism of etymological root bases, the development of the lexical system of related languages and the reflection of the native speaker's worldview in speech.

The principle of circularity in the organization of living play an important role in understanding the language as a natural (mental-biological) sign system. Pyatayeva (2006) confirms this fact saying:

Any object (thing, property, attitude, phenomenon, process, law of the material or spiritual world) is an object-system and any object-system belongs to at least one system of objects of the same kind; all systems have emergent attributes; they are necessarily polymorphic, disseminative, contradictory in some respects, and isomorphic, symmetrical, consistent in others. All or part of the changes, development, conservation, action, relationship of matter are always implemented in them. (p. 65)

The etymological nest of the root base *toy-* in the languages of the Altai family is characterized by high relevance and exceptional richness of vocabulary, similarity and intersecting components of the meanings of all elements.

2. Problem Statement

To date, there are a number of significant works on the historical description of lexical material, united by a common historical root. It is important to note that some scientists such as Bertagaev (1974), V. Cincius (as cited in *Sravnitelnij slovar tunguso-manchzhurskikh jazykov*, 1975, 1977), Kazhibekov (1985), Kaidarov (1986), Kormushin (1971), Pyatayeva (2006), Shaykhulov (2013) develop in their studies the theoretical problems of reconstructing the composition of etymological nests based on the material of representatives of the languages of the Altai family, Indo-European languages for the first time in Russian linguistics.

3. Research Questions

The etymological nests that are the subject of our study serve to store knowledge of reality in a specific way. The root is hierarchically surrounded by word-forming and semantic derivatives, that reflect the ability of the language to modify the semantic structure of the root word and form new names of objects, signs, actions and phenomena, which in their nuclear meaning are closely connected with the semantics of the non-derivative vertex of the nest by means of a set of morphemes. An etymological nest is a collection of lexical units with an identical root base, i.e. a minimum significant unit, ordered in accordance with the relations of semantic motivation and derivational derivation.

Motivational relationships serve as a basis for detecting the continuity of the semantic space of the root foundations. Motivational relations are manifested in the unity of the meaning and form of a motivating lexical unit. Typically, the meanings of a small number of words are included as components in the

semantics of a significant lexeme corpus. These are dominants, nuclear centers of lexical fields, words with great word-building activity. Such lexemes partially motivate and thereby systematize a large number of secondary words around themselves.

4. Purpose of the Study

The purpose of the study is to present the composition of the etymological nest of the root base *toy-* "born → develop (improve) → end" in the languages of the Altai family and to analyze the lexical material of this etymological nest in the systemic aspect.

5. Research Methods

This study is based on the material of the etymological nest of the root base *toy-* "born → develop (improve) → end" in the languages of the Altai family. The actual material of related languages is selected according to our work "Turkic languages of the Ural-Volga region in the context of the Altai language community (experience of lexical-semantic and ideographic dictionary)" (Khaliullina & Shaikhulov, 2004) carried on the basis of comparative, explanatory, bilingual, etymological and other dictionaries. By the root basis we mean the reconstructed, independent or non-independent lexical unit in modern related languages or written records related to the Altai language family.

6. Findings

Being an objective component of reality surrounding us, language functions according to the same laws of the universe, operates within the framework of combinatorial laws, patterns, matrices, patterns, models and paradigms. Knyazeva and Kurdyumov (1994) state that "today a new unconventional world view, a synergistic vision of the world, is being formed" (p. 4). As far as the principles of synergy are considered, the analysis of the development of the lexical-semantic system of the language is studied from new aspects.

Synergy is based on the idea of unity and coherence of the world, where everything is linked together by a global connection.

Each smallest part of the Universe is a special world, inspired by its own life and at the same time, a unified with everything else in the universe. In a sense, it is identical, equivalent to other, small and large fragments of the Universe. Each particle has a spark of the universal spirit, within it and participates in the totality of impersonal space. In philosophy this universal property is expressed as the property of the monadism of the world elements. (Knyazeva & Kurdyumov, 1994, p. 50)

In 1969 Herman Haken, a professor at the University of Stuttgart and director of the Institute of Theoretical Physics and Synergy, suggested using this ancient Greek word to designate the collective effect of the interaction of a very large, "huge" number of subsystems, leading to the formation of stable structures and self-organization in complex systems (as cited in Sinergetike 30 let, 2000).

Scientists, philosophers, psychologists and linguists note that there is a fundamental problem in the definition of synergy: synergetic studies complex, open (exchanging matter and energy with the outside

world, in other words, having energy sources and sinks) non-linear (described by non-linear equations) hierarchical systems. The subject of synergy is self-organization mechanisms, i.e. mechanisms of spontaneous occurrence, relatively stable existence and self-destruction of ordered structures.

Modern linguists interpret syncretism as "non-differentiation" peculiar to the mythological consciousness, representing the "thing" as integrity with all its attributes and functions. This also includes the "name" of a thing as its essence. Pyatayeva (2006) insists that the latter is "semantic syncretism, because the verbal sign was embodied in the appropriate form" (p. 146).

Historically the syncretism of ancient roots that are common to many related languages have been developing through the specialization of meanings in derived words. Actually, this is the history of words. The general semantic dominant remains constant and thereby contributes to word-building paradigms, namely we are concerned with etymological nests in this way. Thus dynamic trends in language are implied in semantic syncretism (Kazhibekov, 1985). The agglutinative system of the Altai family languages consistently demonstrate the phased phono-morpho-semantic development of the original roots in modern languages by striking examples. We support the view that agglutinating Altai-type languages with unchanging roots and with attached monosemantic suffixes and endings feature as a technically perfect tool. From this point of view, etymological roots are stable in the synchronous plan, and changeable in the diachronic. Thus, the syncretism of the verbal sign is its natural property.

Remaining homogeneous for many languages of the Altai family, a large number of monosyllabic root bases are known to function in these languages as phonomorphological variants or reflexes within the limits of permissible combinatorial changes and semantic differentiations. They occurred on the basis of the general laws of the structural development of these language families as a whole and the characteristics of each of their representatives individually. For example, the root base * bö is characterized by the following semantic components: 1) something whole, complete, complete, perfect; 2) bend: bend place → corner → compartment → double → split; 3) fold: shape - inclined, bent, folded in half → quantity - from double to single → quality - soft, loose, lethargic; unbalanced, unstable.

Being a unit of the ontological level, the root base underwent constant transformations. The specific values of the derived stems enable us to reconstruct the semantics of the dead root stems, which is determined by their motivation and determinism of the components of the nest with a common meaning. Observations on the semantic characteristics of the lexical units the Altai family languages demonstrate changes in the semantic structure from small fluctuations in the shades of meanings up to their rethinking which includes formation of antonymic oppositions, that are observed in all cognitive spheres that reflect basic, i.e., vital concepts.

The primitive roots (i.e. the root bases) have changed and developed through interconnection and interaction with grammar. Due to a logical connection in the development of root words, the word-building abilities of the language are gradually expanding: new semantically close lexical units form from root morphemes (for example, * qa "enclose in a shell, close"; ka + m (a) -: "surround" (t., b.), ka + t -: "double; fold; add" (t., b.); "floor" (t., b.); border "surround, entwine" (t., b.), Khazhikh "sheathe edging, edging" (Mong.), hai- "entwine" (Khaliullina & Shaikhulov, 2004, pp. 228-229).

The parameters of the synergetic system are complexity, non-linearity and self-organization.

One of the key concepts of synergy is chaos, "a complex, irregular (aperiodic) change in the state of a physical system in space and / or in time" (Pyatayeva, 2006, p. 72). It is in the chaotic evolutionary phase that information can be obtained from a holistic source, synchronization and harmonization of the system in accordance with cosmic principles. This is the creative beginning of chaos. A macroorganization is built thanks to chaos at the micro level.

The meaningful role of chaos in the processes of self-organization is following: 1) chaos enables the system to reach one of the possible structures; 2) chaos is a base for mechanism of combining simple structures into complex ones, the mechanism of coordinating the pace of their evolution; 3) chaos may serve as a mechanism for switching, changing various modes of system development, transitions from one relatively stable structure to another. Therefore, observations on identical root-bases, which in the semantic plan have absolutely disparate, "chaotic" characteristics, are noteworthy.

The nonlinearity property can be explicated by means of multivariance, alternativeness, irreversibility of evolutionary processes.

Self-organization is a spontaneous complication of the form, or in the more general case this applies to the structure of the system, when it comes to a slow and smooth change in its parameters. Self-organization processes take place in the environment along with other processes, in particular, of an opposite orientation, and in separate phases of the system's existence they can either prevail over the latter (progress) or yield to them (regression). Moreover, the system as a whole can have a stable tendency or undergo fluctuations towards evolution or degradation and decay.

From this point of view, an interesting example is the designation of concepts that are semantically close to each other, such as "light", "drown", "burn", "light, light", "flame", "shine", "lightning", "lightning" in a group of the studied languages with derivative words etymologically going back to the same root basis - *ja (with phonological variants of ms, zu, yə, jā, jo, çă): *jašin tjs, ya + k- "burn, light a fire, light, drown" (t., b.), çu + t- "to burn, to light" (chuv.); ya + n- "burn" (t., b.), ěн- "scorch, burn" (chuv.), ya + k (you) "light; bright, bright" (t., b.); *ja + š (in) "lightning", ð + w (en) "lightning" (t., b.), jo + κ (tarū) "thunderstorm", jā + κ (ectuse) "northern lights"; ya + l (agay) "lightning" (t.), yalt- "flare up" (t., b.), ya + l (tylda) - "sparkle" (b.), ya + l (tyra) - "shine, sparkle" (t., b.), çă + l (tăr) "star, planet" (chuv.); ja + n (dram) "bonfire", chisēm tjs (chuv.), jas "brightly", zusene- "sparkle" "flaming, sparkling" (Evenk); chagym, sagym "haze, mirage" (t., b.) sahilgan "lightning" (bur.), helkin "lightning", "sparkle" (Evenk), sahil "lightning" (sol.) (Khaliullina & Shaikhulov, 2004), etc. This means that as and when the needs of the language collective require designating new concepts and their nuances in related languages, new words are created by using primarily the original material elements of the language such as the root foundations and grammatical formants. The concept indicated by the root is a node that collects in one general idea the values of related root bases or the center to which the radii from the values included in its orbit converge.

Synergy has its own inherent principles. Pyatayeva (2006), analyzing the genetic paradigm of «давать // дать – брать – взять – иметь – нести – давать» ("give // give - take - grab - have - bear – give)" in the history of the Russian language, based on the study and generalization of currently available scientific research in the field of synergy, examines in detail the following principles of synergy: 1) the principle of homeostaticity 2) the principle of dynamic hierarchy, which characterize the phase of stable

functioning of the system, 3) the principle of nonlinearity, 4) the principle of instability, 5) the principle of non-closeness, 6) the principle of observability, 7) the principle of complementarity.

The etymological nest as an open hierarchical system of the root base is characterized by the following properties: the janus effect (hierarchically organized dichotomy of the whole and the part), decomposability into branches, nodes - holons, rules and strategies, integration and self-assertion, branching and networks, mechanization and freedom, balance and disorder, regeneration, attractor (stability) and entropy (disorder), nuclear element and periphery, development mechanism, rhythm laws, evolutionary processes.

The nuclear, most generalized meaning of the etymological nest with the vertex *toγ-* is recorded in The Ancient Turkic Dictionary (Drevnetyurkskij slovar, 1969): *toγ-* I. 1. be born, arise, appear. 2. ascend (about the luminaries) (cf. in the Turkic, Mongolian, Tungus-Manchu groups of languages: *tuy* banner - "something waving; rising"); *toγ-* II. rise, heave (about dust); *tuy-II.* obstruction, blockage, dam; shutter, shutter → *tuy + la-* "close, close up". The etymological nest of the root base *toγ-* <to (with phonetic variants *tī ~ tu ~ tū ~ tō ~ tā*) is represented by three nodes, each of which is represented in the following groups the Altai family languages:

1. *tu-*, *toouge*, arise, appear (t., B.), *Goof-appear*, appear, arise (chuv.), Mong. *tərə-x* "give birth" <*tyrich* "throw out, throw away", cf. : *tyrs* "caviar" (Bertagaev, 1974); *tu + gan* relative; native (i.e., b.), then + generation; breed (t., b), *ta + wan* native, close (chuv.), then + *hm* genus, origin (calm.), *tu + g* (ulah) - give birth (about animals), *tu + γ-* calve; remove chicks (Evenk.), *tu + wen* cousin *tu + neither* cousins (sol.), *tu + wen* the same meaning and children of women from the mother clan; one genus (neg.), *tu + ruler* relative, rebirth (salt) (Sravnitelnij slovar tunguso-manchzhurskikh jazykov, 1977); * *tu + run* grandson (mong.), then + *ron* kinship, relatives (mong.); *tu + macha*, then + *machi* relatives (i.e. dia.).

2. mong. *Too sir. too-hon* "dust (dusty fog, dust raised)", cf. : *too-ro-g* "dust" <to "surround", surround around" (Bertagaev, 1974); *du + ve* end, *du + be* end, top, tip, top, mouth (ma.) (Sravnitelnij slovar tunguso-manchzhurskikh jazykov, 1975);

3. Türk *Tok-ta ~ Tukta*; *tygyl* - "blocked, blocked; covered, covered"; "Karshylyk is the opposite, contradiction; "Pristine, perfect, absolute; "Closed, closed", *tygərək* - "isolation, circle"; *tu + gar-* straighten (t., b.); then + *kan* (b.), *ta + va* (chuv.) knot, loop; then + *hohse* saddle, put on a potnik (mong), *tu + saddle*, then + *x* (o) - harness; sheathe net (ma.); *tu + gong* knot, *tu + ng* sewing on the dress, breakdown, staple (mong.), *tu + n* tie; *tuhi-* satisfy (beats) (Sravnitelnij slovar tunguso-manchzhurskikh jazykov, 1977).

The hierarchy of meanings of each lexeme is distinguished by its volume both within one language and as part of micro- and macro-families of languages. For example, as a reflex of the analyzed root base of the Turk. *Tygərək*. Here you can see the movement of semantics in a circle: birth, development, growth (*təgəri, tygərəklənə*), degradation (*təkməchli*), completion (*tygərəklə*), etc.

7. Conclusion

Based on the results of the study, the following conclusions were formulated:

1) The new synergetic worldview focuses on the formation, co-evolution, cooperativity of the elements of the world. In a synergistic ideology, the world appears not only substantively - in the form of objects, substances, processes, but is also defined as shaping, self-organization, self-development. A

synergetic worldview represents the world as a kind of dynamic unity of chaos and order, while the world is seen as a self-developing trinity of Nature - Society - Human Spirit in their universality, synchronism, identity and diversity.

2) In the context of synergy the etymological nest, includes all reflexes of a particular root reconstructed for the main parent language that has ever existed throughout the history of the Altai family languages . The etymological all-Altai root bases were the embodiment of general, abstract, idiomatic concepts, ideas that, as individual families and groups of languages had been developing, split into the direction of concretization, the emergence of particular meanings, revealing to some extent their meaning, and formed derivatives in form, nests based on homogeneity.

3) In this research we have chosen an etymological nest with the dominant toy- and phonetic variants as an illustrative material for two reasons: firstly, it is a closed, interdependent, highly complex, nonlinear dynamic system, an image-scheme of "birth - development - completion" - birth ... ". It is a semantic universal for all groups of the Altai macro-family languages. Secondly, the lexical-semantic system of the elements of this etymological nest is homogeneous with the laws, characteristics of the Universe, Nature, man as a physical and biological being and society (cf. Turk: Tat.: *dnya tygærak* - lit.: "the world is round") . It represents the dynamics of everything in a circle through a system of genetically identical, homogeneous, syncretic lexical units of the nest. The circular motion is demonstrated by the presence in each unit of the nest of the nuclear semantic component "circle - round -to spin".

In the light of modern cognitive approaches to semantics, we can say that this etymological nest is an image-scheme of "birth - development - completion".

The era of globalization emphasizes the synergy of information processes most. The language implements the highest forms of information-semiotic exchange, therefore, the systematization of the vocabulary of the Turkic, Mongolian, Tungus-Manchu languages in the framework of the synergetic paradigm remains very promising.

References

- Bertagaev, T. A. (1974). *Leksika sovremennykh mongolskikh literaturnykh yazykov* [The vocabulary of modern Mongolian literary language]. Moscow: Nauka.
- Drevnetyurkskij slovar [The Ancient Turkic dictionary]. (1969). Leningrad: Nauka.
- Kaidarov, A. T. (1986). *Struktura odnoslozhnykh kornei i osnov v kazakhskom yazyke* [The structure of monosyllabic roots and stems in Kazakh language]. Alma-Ata: Nauka.
- Kazhibekov, Y. Z. (1985). *Glagolno-imennaya korrelyatsiya gomogenykh kornei v tyurkskikh yazykakh (yavlenie sinkretizma)* [Verbal-nominal correlation of homogeneous roots in Turkic languages (the phenomenon of syncretism)]. Alma-Ata: Nauka.
- Khaliullina, N. U., & Shaikhulov, A. G. (2004). *Tyurkskie yazyki Uralo-Povolzhya v kontekste altaiskogo yazykovogo soobshchestva* [The Turkic languages of the Ural-Volga region in the context of the Altai language community]. Ufa: Vostochnyi universitet.
- Knyazeva, E. N., & Kurdyumov, S. P. (1994). *Zakony evolyutsii i samoorganizatsii slozhnykh sistem* [The laws of evolution and self-organization of complex systems]. Moscow: Nauka.
- Kormushin, I. V. (1971). *Leksiko-semanticheskoe razvitiye kornya *qa v altaiskih yazikah* [Lexical and semantic development of *qa root in Altai languages]. *Turkskaya leksikologiya i leksikografiya*, 9-29.

- Pyatayeva, N. V. (2006). Antropotsentricheskij i sistemotsentricheskij printsipy lingvistiki v dinamičeskom issledovanii leksičeskikh gnezd [Anthropocentric and system-centric principles of linguistics in the dynamic study of lexical nests]. Ufa: Gilem.
- Shaykhulov, A. G. (2013). Struktura i ideografičeskaja paradigmatica odnosložnykh kornevykh osnov v tyurkskich jazykakh Uralo-Povolžhja i Kazahstana [The structure and ideographic paradigmatics of monosyllabic root basis in Turkic languages of Ural-Volga region and Kazakhstan] [E-reader Version]. Retrieved from https://elib.bashedu.ru/dl/read/Shajhulov_Struktura%20i%20ideografičeskaja%20paradigmatika_mon_2013.pdf/info
- Sinergetike 30 let (2000). Intervyu s professorom G. Hakenom. Provedeno E.N. Knyazevoj [Synergy is 30. An interview with prof. H. Haken. By E.N. Knyazeva]. *Voprosy filosofii*, 3, 53-61.
- Sravnitelnij slovar tunguso-manchzhurskich jazykov: Materialy k etimologičeskomu slovarju [Comparative dictionary of the Tungus-Manchu Languages: Materials for an Etymological Dictionary]. (1975). Vol. 1. Leningrad: Nauka.
- Sravnitelnij slovar tunguso-manchzhurskich jazykov: Materialy k etimologičeskomu slovarju [Comparative dictionary of the Tungus-Manchu Languages: Materials for an Etymological Dictionary]. (1977). Vol. 2. Leningrad: Nauka.