

The study of the lexeme "water"

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Abstract: This article presents thoughts on the lexeme "water" and its characteristics. During the research, studies related to the lexeme "water" were classified into three groups according to the research direction, with each group examined separately. Research on the lexeme "water" in both global linguistics and Uzbek linguistics has been analyzed.

Keywords: Water, lexeme, paradigm, method, system-structure, comparative, comparative-historical, linguistic, linguistic, linguoculturological, Devonu Lug'otit-Turk, language families.

Introduction: Water is considered a vital resource for life, and its properties have been studied within the framework of natural sciences. While the aggregate states, physical and chemical properties, and role of water in agro-systems are among the core topics in natural and exact sciences, interpretations of water in social sciences, particularly in philosophy, literature, and linguistics, are closely linked to its physical states and characteristics. In the socio-humanitarian fields, there are widespread views on the interrelation between water and human traits, temperament, disposition, and behavior.

In the exact and natural sciences, water is analyzed as a tangible substance and chemical material, whereas in the socio-humanitarian disciplines, it is examined as a concept, notion, or lexeme. Today, nearly a hundred research methodologies have been identified in global linguistics, aimed at determining and substantiating various aspects and characteristics of linguistic objects. Most of these methodologies can be grouped into three paradigms:

Comparative-historical paradigm

Structural-system paradigm

Anthropocentric paradigm

The sequence of these paradigms can be observed in the study of every lexeme and linguistic category. Based on this approach, research on the water lexeme can be classified into three groups according to the direction of study.

1. Research based on the comparative-historical

paradigm.

2. Research based on the system-structural paradigm.

3. Research based on the anthropocentric paradigm.

Literature Review

The development of linguistics as a distinct field has enabled the linguistic analysis of lexemes. In recent years, lexemes have been studied based on the anthropocentric paradigm. The study of the lexeme "water" in global linguistics dates back to the late 19th and early 20th centuries. Scholars such as N.V. Grishina, I.G. Vrajnov, M.A. Sedova, T.V. Mirzayeva, M.I. Zakirov, D.D. Khayrullina, M. Aychichuk, and O.V. Starostina have contributed to this research. [1] In their research, the comparative-contrastive aspect of a specific lexeme has been studied from a linguoculturological perspective. The linguoculturological characteristics of the lexeme "water" and its place in the national linguistic landscape have been described through theoretical perspectives. U. Galdin examined the verbal representation of the concept of "water" from the viewpoint of the linguoculturological field dimension [2]. T. Badmayeva analyzed the English word water from the perspective of its use in 30 different nominative functions, its paradigms, word formation processes, and its role in phraseological units. [3]. In Y. Shmelyova's research, 1,600 lexical units related to the sea (mope) concept, collected from 20th-21st century English literary works, and 944 units from The Times newspaper issues from 2004 to 2009 were analyzed. The earliest and most extensive linguistic research paradigm in global linguistics is the comparative-

historical paradigm. Until the early 19th century, this paradigm served as the primary research method in linguistics, focusing on studying world languages by examining phonetic, lexical, and grammatical similarities and differences. Through the comparative-historical paradigm, world languages were classified into large and systematic branches, forming the concept of related and unrelated language families.

Even today, comparative-historical paradigm methods, particularly comparative and contrastive methods, are widely used in philological research. Specifically, studies on the water lexeme in global linguistics have also presented conclusions based on comparative and contrastive methodologies. For instance, research has examined the ancient world languages, their classification into common families, and the presence of universal cultural word forms. The widely used English water and Russian вода lexemes have been analyzed from a comparative perspective. It has been argued that in general language families, the water lexeme exhibits both phonetic and linguistic similarities, with its linguistic and lexical composition originating from a common root. The universal nature of the English lexeme water and the Russian voda has been noted, with both deriving from a common root—wetV. During the transition across major language families, these lexemes underwent structural and grammatical changes. These perspectives are based on the Nostratic hypothesis, which acknowledges similarities among various languages.

Linguistic theory sources elaborate on the essence of the Nostratic hypothesis:

"...It has been proposed to classify language families that extend beyond traditional linguistic groupings and whose relatedness is not fully established as 'macro language families.' The Nostratic hypothesis, reflected in V.M. Illich-Svitych's research (where 'noster' means 'ours' in Latin), aims to unite language families under a broader genetic framework. The Nostratic macro-family includes Indo-European, Uralic, Altaic, Kartvelian, and Dravidian languages."

G.M. Telezhko, analyzing the lexeme water within the framework of the Nostratic hypothesis, identified its variations across major language families:

Indo-European: dō(w)-

Altaic: t`uja

Uralic: toye

Dravidian: ta-

The researcher also argues that in ancient times, the semantic structure of the root meaning water and rain contained the notions of giving and gift. This aspect of the lexeme is also considered in other major linguistic

paradigms, where derivative meanings are analyzed in relation to the lexeme's core semantics [4].

METHODOLOGY

Research Methodology Descriptive, classificatory, and comparative research methods were used in analyzing the topic of the article.

RESULTS

Analysis results Studies have also been conducted to highlight the common features of lexemes expressing the concept of water among related languages. These studies have noted similarities in both the external (phonetic) and lexical-grammatical features of the word. A. Borisova, in comparing the Russian and Polish words вода/woda, classifies the correlating semantic features that unite them into five major groups:

1. Water – a liquid, transparent, clear element composed chemically of hydrogen and oxygen. This semantic feature represents the primary meaning of the word in both languages and serves as the dominant sema, forming the basis for its derivative meanings.
2. Water as a place – names of locations where water accumulates or exists, such as puddle, lake, stream, ditch, canal, river, sea, ocean, etc. These units originate from the semantic feature of water's existence in a specific place and are categorized into primary and derivative semas based on their structure.
3. Water as air – this group is associated with one of the aggregate states of water, namely its gaseous state, reflecting natural phenomena related to this condition: steam, vapor, fog. These units can also be classified into primary and derivative semas.
4. Water as a solid – this group also represents one of the aggregate states of water in the atmosphere, specifically its solid state: ice, snow, snowflake, frost, hail. The composition of these lexemes can be classified into primary and derivative semas.
5. Water as a drop – phenomena in which water falls to the ground in the form of droplets from the atmosphere: rain, downpour. A. Borisova's classification is significant for studying any language family in a comparative and contrastive aspect.

Comparative-historical paradigm-based research also focuses on analyzing the meanings of lexemes in historical sources.

In our nation, water has been equated with life, and knowledge about rivers and springs has been preserved in the collective memory of the people for centuries [6].

Geographers emphasize that Central Asian scholars have made significant contributions to the global development of hydrology, recognizing it as a distinct scientific field from ancient times to the present.

F. Hikmatov categorized the formation and development of early hydrological concepts in Central Asia into the following stages:

From ancient times to the 9th century AD.

From the 9th century to the early 13th century (before the Mongol invasion) – the Eastern Renaissance period.

From the mid-14th century to the first half of the 16th century – the Timurid era.

From the second half of the 16th century to the second half of the 19th century.

Until the early 20th century.

The Soviet period.

The independence period. [7].

Waterways have been a widely used concept among encyclopedic scholars and have been utilized in hydrological studies.

Ahmad al-Fargʻoniy created the "Miqyosi Jadid" manual, which consists of tables, guidelines, and recommendations for the practical use of the water-measuring structure known as the "Nilometer." He applied the achievements of mathematics and geodesy to hydrology [8]. Encyclopedic scholars have explored the meaning of words, the social functions of language, word classification, and the linguistic representation of the worldview. These aspects have been analyzed in various linguistic studies [9].

The 10th-century manuscript **Kitobi Hudud al-Olam minal Mashriq ilal Magʻrib** (The Book of the Boundaries of the World from the East to the West), authored by an unknown writer, stands out for its rich hydrological and hydrographic information. The work provides descriptions of major rivers worldwide, detailing their sources, courses, and usage for irrigation and navigation. It also records historical names of water bodies.

For instance, the book mentions the "River Sabz" (Green Sea) at the easternmost region, referred to by the Greeks as **Okeanos Mashriqi** (Eastern Ocean) and by the Arabs as **Bahr al-Azhar**. This is an early reference to the Pacific Ocean. Similarly, it describes the Atlantic Ocean, its geographical location, water color, taste, and smell. The manuscript also contains significant hydrological insights about the Indian Ocean, the Mediterranean Sea, the Caspian Sea, and the Black Sea, making it a valuable historical source on water geography [10].

The 10th-century manuscript *Kitobi Hudud al-Olam minal Mashriq ilal Magʻrib* (The Book of the Boundaries of the World from the East to the West) provides valuable hydrological insights, distinguishing between two types of rivers: Natural Rivers – These originate

from the melting of snow and ice or emerge from mountain springs, flowing over the land. As they carve their own paths, they may widen or narrow until they reach a sea or a marsh. Artificial Rivers – These are man-made channels dug to supply water for urban development or agricultural irrigation.

The manuscript also contains extensive descriptions of oceans, seas, and lakes, offering significant hydrological data relevant to its time [11].

The 10th-century historian Narshakhi's *Tarikh-i Bukhara* (History of Bukhara) is also noteworthy from a hydrological perspective.

Abu Rayhan al-Biruni's works, such as "Memorial of Past Generations", "India", "Al-Tafhim", "Qanun al-Mas'udi", "Geodesy", and "Mineralogy", contain valuable insights into oceans, seas, rivers, lakes, and springs, making significant contributions to the field of hydrology. His scientific discussions cover various bodies of water, including oceans, seas, gulfs, inland waters, rivers, streams, springs, lakes, glaciers, ice formations, swamps, and even underground water sources.

In his book "India", al-Biruni presents important information related to oceanography. He describes the Pacific Ocean (referred to as the "Eastern Sea" or "Eastern Environment") and the Indian Ocean (known as the "Great Sea"). Additionally, he provides descriptions of the Pontus (Black Sea), Sham (Mediterranean Sea), Khazar (Caspian Sea), Khorezm (Aral Sea), Issyk-Kul Lake, as well as major rivers such as the Etil (Volga), Nile, Jayhun (Amu Darya), and Oksart (Syr Darya).

Al-Biruni's contributions to the study of oceans and seas were so profound that European scholars later referred to his work as the "Biruni's Theory of the Seas." [12].

There are also studies comparing the Turkic word **"su"** (water) with its equivalents in other languages. These works analyze linguistic connections and historical relationships between different language families, shedding light on the evolution of water-related terminology across cultures [13]. In "Devonu Lugʻotit-Turk", 22 water-based lexemes are recorded: *suw* 1) water; 2) river; *yer suw* – "continent" (E.46-6). *Etil mürrännüñ quzi* – the water of the Volga (Itil) River. (DLT, 19).

In "Devonu Lugʻotit-Turk", the lexeme *suw* and the following derived words are found:

syw – *cuv* (III, 142), *cywaldi* – *suğorildi* (II, 142), *sywladı* – *suv ichdi*, *suv qoʻydi* (III, 312), *sywlandi* – *suv boʻldi*, *namlandi* (II, 288), *sywsadi* – *suvsadi* (III, 299), *cywğardi* – *sugʻordi* (II, 218), *sywğardachi* – *sugʻoruvchi* (II, 298),

sywğarimsindi – sug'orayotgandek ko'rindi (II, 234), sywğarĩldĩ – birgalikda sug'orishdi (II, 234), sywğartti – birov orqali sug'ortirdi (II, 297), sywğarğučĩ – sug'oruvchi (II, 55,298), syzyndĩ suw – tindirilgan suv (I, 420), syzyk suw – tiniq suv (I, 370), sywlağ – mollar suv ichadigan joy (I, 431), sywsatti – suvsatti (II, 388), sywsidĩ – suv xususiyatini o'ziga oldi (I, 279), sywsylb – suv qo'shilgan sharob yoki ayron (I, 428), sywğarĩlg'ĩ – sug'oriladigan (II, 209), sywğariğsaq – sug'orishga kirishadigan (II, 298), erkin syw – suv to'plami (I, 132), syw sawryldĩ – suv ko'pirib mavjlandi (II, 269), sywlandĩ – suv bo'ldi (II, 288), aqindi syw – oqar suv (I,158), batruib syw – loyqa suv (I,428), syw qaqlandi – suv yig'ildi (II, 299), syw qoğũblandi – suv shovulladi[14].

"Studying the words in "Devonu Lug'otit-Turk" allows us to determine that it contains more than 1,200 hydrological terms. In the 1st volume, there are 218, in the 2nd volume, 447, and in the 3rd volume, 562 words describing hydrological phenomena and processes. For example: alĩb – the place where water flows into a pool; aqin – flood; munduz aqin – sudden flood; ɛzɛk – groundwater seeping to the surface and forming a pool; eyrim – water-accumulated area; qizĩğ – shore of a sea, canal, valley, sand – water wave.

"Devonu Lug'otit-Turk" contains the names of water sources – seas, rivers, lakes, streams, and springs. The names of water bodies mentioned in the map attached to the "Devon" include Abisgun – Caspian Sea, Ertĩb – Irtysh River, Jayxun – Amu Darya, and Dykol – name of a lake, among others. Additionally, names of water sources listed alphabetically in the dictionary include Azğiraq suw – name of a river, Etĩl (Volga) – name of a river, Isĩğkol (Issyk-Kul), and Taman – name of a stream. Overall, more than 100 names of water bodies appear in "Devonu Lug'otit-Turk." [15].

"Devonu Lug'otit-Turk" also includes the name "Qazmish ariq" (dug canal). [16].

"Devonu Lug'otit-Turk" encompasses terms and concepts related to water and its components. The Devon contains a vast amount of information about water, irrigation, and agriculture. Additionally, the explanation of certain words in the dictionary helps clarify their etymology. In the Uzbek language, the verb qaqramoq is used in the sense of thirst. Qaqramoq means to dry up due to the loss of moisture or lack of water, to wither from thirst. For example, qaqragan cho'l (parched desert) (O'TIL, V, 270).

The root of this word traces back to the base qaq. A lake formed by rain or floodwater was referred to as qaq [17]. In our language, the word qoqsuv also originates from this root. Qoqsuv refers to a shallow, expansive water collection in deserts and steppes formed by rainwater, accumulating in lower areas. This term

appears in V. Radlov's dictionary as qaq/qoq – qaq su [18]. In spoken language, it is used in forms such as qoq suv, qoq, qox, suvloq, obxona. Qoq suv is considered one of the ancient water reservoirs in the life of Central Asian peoples. Compare: qoq – meaning dried, hardened, and referring to extremely solid ground [19]. The word qoq/qaq, initially meaning a collection or accumulation of water, later came to signify lack of water, as in parched deserts.

"Devonu Lug'otit-Turk" contains the following water-related terms: suvoldi (was irrigated), ol suvug' tamuladi (he reinforced the water dam), tuzun (village elder, irrigation official), chatba (a tax collected by the village elder – tuzun – from those who did not participate in digging canals or building dams), bandi (blocked, waterway obstructed), chig'ri (water mill paddle, water-lifting mechanism – a waterwheel that raises water to a certain height), borung (erosion channels formed by water flow), qardi (water overflowing on ice), qir, tug' (dam), yo'l, mingar (spring source), kengas, sayram (shallow water reaching the ankles)[20].

The water-related units in "Devonu Lug'otit-Turk" have been analyzed from a terminological perspective[21].

In Yusuf Khass Hajib's "Qutadg'u Bilig", the phrase "So'zum uksumadi, suvi uksudi" is used in the sense of taste or flavor. The work also includes terms such as suvsamishqa (when thirsty), yashil suv (pure water), suv ichar (drinks water), ko'z suvi (shame, modesty), and tiriklik – obi rahmat (life-giving water, blessing) [22].

In 14th-century Old Uzbek language sources, the following water-related terms are found: suvar (to irrigate), suvaril (to be irrigated), suvsuzluq (lack of water, drought), suvla (a place for drinking water), suvlug' (having water, water-rich), suvsu, susa (to be thirsty), suvsat (to make someone long for water), suvg'ar (to water, to irrigate), and suvsaliq (thirst)[23].

Alisher Navoiy's works skillfully employ water-related terms such as suv, suv yil, Xizr suyi, suvor, suvsiz, suva, suy, suvol, suvar, sug'ormoq, suvor, and suchi. X. Jabborov has conducted analyses on the usage of the word suv in Alisher Navoiy's literary works[24].

In "Boburnoma", one can find valuable information regarding the hydrography of our land, including descriptions of rivers, streams, springs, and lakes. The work provides detailed accounts of water sources, river depths, freezing conditions, flow regimes, and water discharge (such as the amount of water required to power a certain number of mills). [25].

In comparative-historical research, the etymology of water-related concepts has also been studied[26].

X. Jabborov states that in Old Turkic, around 30 lexemes were formed with the participation of the "suv" lexeme, while in modern Uzbek, more than 700 words, compound words, and phrases have been derived from it [27].

The comparative-historical method and its underlying paradigm have been interpreted differently in linguistics over many years. This paradigm has served as a theoretical foundation for most research within the system-structural and anthropocentric approaches.

In Uzbek linguistics, research within the system-structural approach has focused on the analysis of domain-specific vocabulary [28], and systematic analysis. Studies based on the system-structural linguistic paradigm primarily emphasize the classification of linguistic phenomena into systems and groups, as well as their systematic categorization. Research on systematization based on semantic fields has contributed to elucidating the relationships between linguistic units. [29].

Water has been studied from a system-structural perspective in several directions. First and foremost, it is essential to highlight research related to the semantic and statistical scope of the word, as well as its morphemic and grammatical characteristics. The semantic and stylistic features of the Tajik word "ob" have been examined. In the study, water-related lexemes have been compared, analyzing the word formation process and the development of new water-related lexemes. [30].

In Russian linguistics, research of this type became widespread in the last quarter of the 20th century and the first decade of the 21st century. Specifically, frequency dictionaries related to literary sources and word usage within them were compiled.

Struktur-semantik tahlillar, first and foremost, focus on the synchronic aspect of language, encompassing studies on the semantic composition of lexemes, lexical-semantic fields and surroundings, as well as meaning characteristics. In particular, in Russian linguistics, numerous studies have been conducted on the lexeme "suv" (water) and its semantic properties, including its semantic structure. For instance, Y. Zinsova [31], firstly, it is emphasized that the existence of the property of liquidity and phenomena possessing this property in the world naturally provides great opportunities for any language and its linguistic landscape. In particular, during the process of analyzing the semantic framework of the lexeme "liquidity," the dominant meaning and key characteristic of the lexeme—its liquidity property—can completely change. The core of the lexeme "liquidity" is formed by the seme of "water."

CONCLUSION

In conclusion, it can be stated that the concept of water in various languages of the world constitutes a complex lexical system composed of multiple sememes. Within this system, the functional, natural, and aggregate states of water, as well as its location and characteristics, serve as the foundation. The interpretation of its connotative sememes, however, is considerably more complex, as they are shaped by religious factors and contain historical, social, and economic information.

As linguistic approaches and research evolve, the essence of a lexeme expands and becomes more abstract. The study and analysis of methods chosen for lexeme research in global linguistics are significant in that they can be applied to explore the essence of the "suv" (water) lexeme in the Uzbek language, its common Turkic features, its importance in the national linguistic landscape, and its poetic characteristics.

In Uzbek national mentality and moral-ethical principles, the word "suv" is associated with purity, clarity, and cleanliness. From this perspective, analyzing its linguistic, linguocultural, cognitive-semantic properties, and general linguistic aspects is highly relevant. Considering the semantics of the word "suv" and the fixed expressions it appears in as a distinct research object enhances the scope and quality of studies aimed at uncovering its linguocultural and universal linguistic commonalities. Such research plays a crucial role in highlighting national values and understanding how language speakers encode the objective world through water-related concepts.

The "suv" lexeme has been studied within the framework of system-structural linguistics in Uzbek linguistics. Some studies have analyzed the associative features and related semes of the "suv" lexeme.

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