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LINGUOCULTURAL INTERPRETATION OF SOIL SCIENCE TERMS IN UZBEK PROVERBS AND IDIOMS: A LINGUISTIC MODEL OF FOLK AGRO-ECOLOGICAL THINKING

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Abstract.
The article examines, from a linguocultural perspective, soil-science lexemes used in Uzbek folk proverbs and phraseological units: yer (land, earth), tuproq (soil), loy (mud), gil (clay), qum (sand), sho‘r (salt, saline), kesak (clod), chang (dust), shudgor (ploughed fallow), go‘ng (manure), qo‘riq (virgin land) and taqir (takyr). These units within paremias are classified into agrotechnical-pragmatic, axiological, anthropocosmic, moral-didactic and ecological-warning groups. By comparing folk agricultural experience with the concepts of scientific soil science (fertility, salinization, erosion, soil structure), the study substantiates the existence of a distinctive linguistic model of “folk soil science” in the paremiological fund. The mechanism by which the lexeme sho‘r shifts from denoting a soil property to expressing human fate is revealed, as is the status of the lexeme tuproq as a cultural code of the cycle of life and death.

Keywords: soil science term, linguoculturology, proverb, phraseological unit, cultural code, concept, folk agricultural experience, determinologization, agro-ecological consciousness.

Аннотация.
В статье в лингвокультурологическом аспекте исследуются лексемы почвоведческой тематики - ер, тупроқ, лой, гил, қум, шўр, кесак, чанг, шудгор, гўнг, қўриқ, тақир - в составе узбекских пословиц и фразеологических единиц. Данные единицы классифицированы по агротехнико-прагматической, аксиологической, антропокосмической, морально-дидактической и экологически-предостерегающей группам. На основе сопоставления народного агроопыта с научными понятиями почвоведения (плодородие, засоление, эрозия, структура почвы) обосновывается наличие в паремиологическом фонде особой языковой модели «народного почвоведения». Раскрывается механизм перехода лексемы шўр («солёный, засолённый») от обозначения свойства почвы к выражению человеческой судьбы, а также статус лексемы тупроқ как культурного кода жизненного цикла.

Ключевые слова: почвоведческий термин, лингвокультурология, пословица, фразеологизм, культурный код, концепт, народный агроопыт, детерминологизация, агроэкологическое сознание.

Аннотация.
Мақолада ўзбек халқ мақоллари ва фразеологик бирликлари таркибида қўлланган тупроқшуносликка оид лексемалар – ер, тупроқ, лой, гил, қум, шўр, кесак, чанг, шудгор, гўнг, қўриқ, тақир – лингвомаданий аспектда тадқиқ этилади. Паремиялар таркибидаги мазкур бирликлар агротехник-прагматик, аксиологик, антропокосмик, ахлоқий-дидактик ва экологик-

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огоҳлантирувчи гуруҳларга таснифланади. Халқ агротажрибаси илмий тупроқшунослик тушунчалари (унумдорлик, шўрланиш, эрозия, тупроқ структураси) билан қиёсланиб, паремиологик фондда «халқ тупроқшунослиги»нинг ўзига хос лисоний модели мавжудлиги асосланади. Шўр лексемасининг тупроқ белгисидан инсон қисматини ифодаловчи маънога ўтиш механизми ҳамда тупроқ лексемасининг ҳаёт ва ўлим циклини ифодаловчи маданий код сифатидаги мақоми очиб берилади.

Калит сўзлар: тупроқшунослик термини, лингвокультурология, мақол, фразеологизм, маданий код, концепт, халқ агротажрибаси, детерминологизация, агроэкологик онг.

Introduction. The attitude towards soil is reflected in the language of every people, especially in its system of proverbs and idioms polished over centuries. For the Uzbek people, whose farming culture has developed continuously for millennia, the notions of yer (land) and tuproq (soil) are not merely economic objects but central concepts in their views on sustenance, homeland, lineage, and life and death. In this sense, the paremiological fund serves as a linguistic archive of a distinctive “folk soil science” that took shape long before the emergence of scientific soil science.

The Strategy for the Development of Agriculture of the Republic of Uzbekistan for 2020–2030, approved by Presidential Decree No. PF-5853 of 23 October 2019, sets improving the reclamation status of land and increasing soil fertility as priority tasks, while Decree No. PF-6084 of 20 October 2020 sets the task of regulating and enriching sectoral terminology in the state language. At the intersection of these two directions, the study of the national and cultural nature of soil science terms emerges as a pressing scientific issue.

The theoretical foundations of linguoculturology were developed in the works of V.V. Vorobyov, V.N. Teliya, V.A. Maslova and V.I. Karasik, who regard phraseological units and paremias as the densest carriers of cultural information [3; 2; 1; 18]. In Uzbek linguistics, the relationship between language and culture has been examined within the anthropocentric paradigm in the studies of N. Mahmudov, D. Khudoyberganova and Sh. Usmonova [7; 8; 17]. The national foundations of terminology have been analysed in the works of A. Madvaliev [13]. However, the status of soil science terms in folk paremias and the conceptual relationship between the scientific term and folk experience have not yet been the subject of a dedicated study.

Research material and methods. The research material was drawn from the collection “Uzbek Folk Proverbs” [10], Sh. Rahmatullaev’s “Explanatory Phraseological Dictionary of the Uzbek Language” [12], Sh. Shomaqsudov and Sh. Shorahmedov’s “Treasury of Meanings” [9], the “Explanatory Dictionary of the Uzbek Language” [11], and relevant material from Mahmud al-Kashgari’s “Diwan Lughat al-Turk”. The selected units were sorted according to the criterion of their connection with the basic concepts of soil science: soil composition, texture, fertility, salinization, tillage, fertilization and degradation.

The analysis employed conceptual analysis, componential analysis, etymological analysis, linguocultural interpretation and comparative-typological methods. Similar units in Russian and related Turkic languages were drawn upon for comparison. In addition, when comparing the content of paremias with the concepts of scientific soil science, we used the triadic model “term – folk experience – cultural code”. According to this model, each unit is analysed at three levels: 1) the scientific-terminological level (the content of the object denoted by the lexeme in soil science); 2) the empirical-pragmatic level (the practical conclusion consolidated in folk experience); 3) the symbolic-cultural level (the meaning of the lexeme associated with values, beliefs and worldview).

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Analysis and results. In the Uzbek language, the lexemes yer and tuproq form the core of soil science terminology. The "Explanatory Dictionary of the Uzbek Language" records such meanings of the word yer as "planet", "dry land", "arable field", "territory" and "place" [11]. Tuproq, in turn, denotes the loose upper layer of the earth's surface in which plants grow. Whereas tuproq is the central term in scientific soil science, the lexeme yer predominates in folk thinking: in proverbs, land is embodied as a source of sustenance, property, homeland and the basis of livelihood.

Etymologically, the word tuproq is attested in Old Turkic sources in the form topraq and was widely used in the Old Uzbek literary language in the form tufroq. In addition, the lexeme xok, borrowed from Persian-Tajik, has been preserved in Uzbek mainly in symbolic and moral meanings: xokisor ("humble", literally "as low as dust"), xokipoy ("dust of the feet", an expression of the highest respect), xok bo'lmoq ("to die", "to perish"). This indicates that the concept of soil developed in Uzbek on two layers: an everyday economic layer (tuproq, yer) and a spiritual-moral layer (xok).

The paired word yer-suv ("land and water") also deserves special attention. In this unit, soil and water are perceived as an inseparable whole, since in the arid climate of Central Asia unirrigated land yields no harvest. The entry of the name of the "land and water reform" (yer-suv islohoti) of the early 20th century into official legal texts shows that this unit was elevated from the vernacular to terminological status. Terms of modern scientific soil science such as water-physical properties and soil water regime are, in fact, the scientific continuation of this folk conceptual unit.

The analysis of the research material made it possible to divide paremias and phraseological units related to soil into five semantic-cultural groups (Table 1).

Table 1. Semantic-cultural classification of paremiological units related to soil

Group	Examples	Predominant cultural content
Agrotechnical-pragmatic	Dehqon bo'lsang shudgor qil, mulla bo'lsang takror qil ("If you are a farmer, plough; if you are a scholar, revise"); Nima eksang, shuni o'rasan ("You reap what you sow"); Yerni boqsang, yer seni boqar ("Feed the land, and the land will feed you")	The cause-and-effect relationship between tillage, fertilization, labour and yield
Axiological	Kindik qoni tomgan tuproq ("the soil where one's navel blood was shed", i.e. native land); ona tuproq ("mother soil"); tuproqdan oltin undirmoq ("to grow gold from soil")	Land as homeland, property, wealth and a sacred value
Anthropocosmic	Tuproqqa topshirmoq ("to commit to the soil"); tuproq bo'lmoq ("to become soil"); qora yerga kirmoq ("to go into the black earth"); bir loydan yaralgan ("created from the same clay")	Man's creation from soil and return to soil; the cycle of life and death

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Group	Examples	Predominant cultural content
Moral-didactic	Odamning ko‘zini bir hovuch tuproq to‘ydiradi (“Only a handful of soil will satisfy a man’s eyes”); yerga kirgudek bo‘lmoq (“to wish to sink into the ground”); xokisor (“humble”)	Condemnation of greed; humility, shame and conscience
Ecological-warning	sho‘ri qurimoq (“to be ill-fated”); sho‘rpeshona (“luckless”, literally “salty-browed”); qumga suv quygandek (“like pouring water on sand”); changiga ham yetolmaslik (“not even to reach someone’s dust”)	Transfer of the signs of soil degradation to human condition and fate

Agrotechnical-pragmatic group. The paremias in this group were formed as a result of centuries of folk observation and fully correspond to the conclusions of scientific soil science. For example, in the proverb Dehqon bo‘lsang shudgor qil, mulla bo‘lsang takror qil (“If you are a farmer, plough; if you are a scholar, revise”), the word shudgor expresses the agronomic notion of “autumn ploughing”, i.e. deep ploughing of the land in advance. Modern soil science evaluates autumn ploughing as a method of increasing soil porosity, accumulating moisture and reducing weeds and pests. In the proverb, however, this agrotechnical rule is elevated to the level of a moral norm that equates the farmer’s labour with a scholar’s repeated study. Thus, within the proverb the agrotechnical term becomes a general symbol of professional skill and consistency.

In the proverb Yerni boqsang, yer seni boqar (“Feed the land, and the land will feed you”), the verb boqmoq (“to feed, to tend”) expresses an attitude towards soil as a living being. This proverb is a folk expression of the scientific notions of restoring soil fertility, organic fertilizers and humus balance. In folk consciousness, soil is a being that not only gives but must also receive, one that needs to be “nourished”. This anthropomorphic approach is notable for its consonance with the concept of soil health, widely used in modern science. Consequently, Uzbek folk paremias show that the modern ecological paradigm, which interprets soil as a “living system”, has national linguistic roots.

The proverb Nima eksang, shuni o‘rasan (“You reap what you sow”) originally reflects a simple agronomic relationship between sowing and harvest. Its generalized meaning, however, has turned into a moral law concerning human actions and their consequences. Here soil participates as an implicit component: it is imagined as a just medium that “keeps” and “returns” what has been sown. Accordingly, in folk consciousness soil functions as a natural symbol of justice.

Axiological group. In this group, soil appears as a spiritual value rather than as material wealth. The unit kindik qoni tomgan tuproq (“the soil where one’s navel blood was shed”) is considered one of the most condensed expressions of the concept of homeland in Uzbek linguoculture. In its structure, physiological (kindik qoni, “navel blood”) and soil science (tuproq, “soil”) components combine to form an ancient notion of the inseparable bond between a person and a place. In the unit ona tuproq (“mother soil”), the soil’s qualities of giving birth, nourishing and protecting are transferred to the image of the mother. Comparison with the Russian мать сыра земля (“Mother Moist Earth”) confirms that this model has common Turkic and universal human roots; in Uzbek, however, it is used mostly in connection with homeland and lineage.

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The idiom tuproqdan oltin undirmoq (“to grow gold from soil”) exhibits an opposition between soil and gold: a material substance that seems worthless is turned into the most precious wealth through labour. This idiom reveals the cultural basis of the notion of soil bonitation in scientific soil science, i.e. the qualitative assessment of land: in folk perception, the value of land is determined not by its natural properties but by the labour invested in it.

Anthropocosmic group. The units in this group are based on religious and mythological beliefs about man’s creation from soil and return to soil. In euphemistic units such as tuproqqa topshirmoq (“to commit to the soil”, i.e. to bury), tuproq bo‘lmoq and xok bo‘lmoq (“to become soil/dust”, i.e. to die) and qora yerga kirmoq (“to go into the black earth”), death is perceived as a stage of the natural cycle. The idiom bir loydan yaralgan (“created from the same clay”) expresses the idea that humankind originated from a single material basis and is therefore equal. What is significant here from the standpoint of soil science is that the lexemes loy and gil (a plastic mass consisting of clay particles and water) were chosen as the primary material of the human body: in folk perception, it is precisely plasticity, i.e. the capacity to take shape, that is associated with the idea of creation.

The idiom tuprog‘i tortmoq (“to be drawn by one’s soil”), found in folklore, is also noteworthy. It expresses the belief that wherever a person dies, their “soil” has “drawn” them to that place. Soil here appears as a substance endowed with a mysterious power that determines fate. The Kazakh condolence formula топырағы торқа болсын (“may their soil be like silk”) and the Russian expression пусть земля будет пухом (“may the earth rest lightly on them”, literally “may the earth be as down”) likewise show that the interpretation of soil as a “living medium” that enters into a relationship with the deceased is common to Turkic and Slavic cultures.

Moral-didactic group. In the proverb Odamning ko‘zini bir hovuch tuproq to‘ydiradi (“Only a handful of soil will satisfy a man’s eyes”), the unit bir hovuch tuproq (“a handful of soil”) serves as a metonymy for death and condemns greed and worldliness. The proverb’s force lies in portraying the cheapest and most widespread substance (soil) as the means that puts an end to boundless human passions. In the idioms yerga kirgudek bo‘lmoq (“to wish to sink into the ground”) and yerga qaramoq (“to look at the ground”), the space beneath the earth’s surface is conceptualized as a place to hide from shame and embarrassment. The idiom yer ostidan qaramoq (“to look from under the ground”) expresses hidden hostility or distrust. In these units, soil forms the lower pole of the vertical spatial model (sky – earth’s surface – underground) and is associated with negative evaluation.

Ecological-warning group. Distinguishing this group is one of the important results of our study. In these units, the signs of soil degradation – salinization, sanding, dust formation and desiccation – are used as a source domain for describing the human condition. In other words, the people have turned the “illness” of soil into a symbol of human misfortune.

The shift of the lexeme sho‘r from a soil property to the meaning of fate

The word sho‘r is originally an adjective of taste meaning “containing a great deal of salt”. In soil science terminology it has given rise to terms such as sho‘r tuproq (saline soil), sho‘rxok (solonchak), sho‘rlanish (salinization), sho‘rxoklashish (solonchak formation) and sho‘r yuvish (salt leaching). Salinization is the most dangerous type of degradation for irrigated farming areas: on salinized land most crops either fail to grow or suffer a sharp decline in yield.

In Uzbek, units such as sho‘rlik (“poor, unfortunate”), sho‘rpeshona (“salty-browed”, i.e. ill-starred), sho‘ri qurimoq, sho‘ri qurg‘ur and sho‘rini quritmoq have been formed on the basis of the lexeme sho‘r. In our view, the experience of irrigated farming played an important role in the semantic development of these units: saline land is land that bears no harvest and on which labour is wasted, while a sho‘rpeshona person is one on whose “brow” (i.e. fate) barrenness has been written. Thus, a physico-chemical property of soil has become a cultural concept that evaluates human destiny. The conception of the word peshona (“forehead, brow”) in Uzbek culture as the place where fate is

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written (peshonaga yozilgani, "what is written on one's brow") further reinforces this metaphorical transfer.

Phraseological activity of the lexemes qum, chang, kesak and taqir

In soil science, qum (sand) is the name of the textural fraction consisting of particles 0.05–1 mm in size and of the soil type dominated by this fraction (qumli tuproq, qumloq – sandy soil). Sandy soils are characterized by poor water retention. The vernacular idiom qumga suv quygandek ("like pouring water on sand") is based precisely on this physical property and denotes useless labour that vanishes without a trace. This example shows that scientific notions of soil permeability and water-holding capacity have been preserved in figurative form within paremias. The simile qumdek ("like sand") denotes countless abundance.

Chang (dust) denotes the finest soil particles, easily lifted by the wind. In soil science, the dust fraction and dust storms are regarded as the main indicators of wind erosion. In the idioms changiga ham yetolmaslik ("not even to reach someone's dust", i.e. to be unable to match someone far superior) and changini chiqarmoq ("to raise someone's dust", i.e. to beat or criticize severely), dust is perceived as a trace of movement and force. In these units, the rising of soil particles into the air has become a symbol of dynamic force.

Kesak is a dried and hardened clod of soil and is regarded in agronomy as a sign of poor soil structure. Whereas good-quality soil has a granular structure, cloddy soil makes tillage difficult. The vernacular idiom kesak otmoq ("to throw clods", i.e. to accuse someone, to slander) is based on the perception of a clod as a "rough, harmful" fragment.

The word taqir originally means "flat, smooth, hairless" (cf. taqir bosh, "a bald head"). In soil science, however, it denotes a vegetation-free, heavy-textured soil type of the desert zone whose surface is crusted and cracked (takyr). In the vernacular, taqir is also used in the sense of "having nothing, utterly empty" (taqir-tuqur, taqirda qolmoq – "to be left with nothing"). Thus, the barrenness of takyr soil has become a symbol of material and spiritual poverty.

The results of the analysis show that knowledge about soil is preserved in the Uzbek paremiological fund not randomly but according to a certain system. We propose to call it "the linguistic model of folk soil science". This model consists of the following components: 1) soil classification (qora yer – black soil, bo‘z yer – grey soil, sho‘r yer – saline land, qumloq – sandy soil, taqir – takyr, qo‘riq – virgin land); 2) soil properties (unumdor – fertile, hosildor – productive, och – "hungry", i.e. depleted, sho‘r – saline, qattiq – hard, yumshoq – soft); 3) tillage (shudgor qilmoq – to plough, yer haydamoq – to till, go‘ng solmoq – to apply manure, sho‘r yuvmoq – to leach salts, yerni dam oldirmoq – to let the land rest); 4) the place of soil in human life (sustenance, homeland, property, grave); 5) the moral attitude towards soil (yerni boqmoq – to feed the land, yerni asramoq – to protect the land).

A distinctive feature of the model is that scientific and cultural knowledge are not separated within it. For example, although the idiom yerni dam oldirmoq ("to let the land rest") denotes the agrotechnical practice of leaving land fallow, the soil in it is imagined as a living being that becomes tired and needs rest. The term soil fatigue, which appeared later in scientific soil science, is based on precisely the same anthropomorphic notion. This points to a two-way relationship between terms and paremias: on the one hand, folk experience prepares the conceptual basis of scientific terms (terminologization); on the other hand, scientific terms enter wide use and give rise to new figurative units (determinologization).

The results obtained also have practical significance. First, taking into account the cultural-semantic potential of vernacular units such as bo‘z, sho‘rxok, taqir, qumloq and qo‘riq in regulating soil science terminology in Uzbek will ensure their rapid and stable adoption. Second, the ecological-warning content of proverbs can serve as a means of environmental education in agricultural training.

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Third, the use of paremiological material in compiling a linguocultural explanatory dictionary of soil science terms will increase the dictionary's educational value.

Conclusion. The study has led to the following conclusions:

1. Soil-science lexemes such as yer, tuproq, loy, gil, qum, sho‘r, kesak, chang, shudgor, go‘ng, qo‘riq and taqir actively participate in Uzbek proverbs and idioms and function as cultural markers expressing the people's farming experience, worldview and system of values.

2. Paremiological units related to soil fall into agrotechnical-pragmatic, axiological, anthropocosmic, moral-didactic and ecological-warning groups. The ecological-warning group has been distinguished for the first time as a distinctive group based on the transfer of the signs of soil degradation to the human condition.

3. The semantic development of the lexeme sho‘r in units such as sho‘rlik, sho‘rpeshona and sho‘ri qurimoq is a linguistic trace of the culture of irrigated farming, and it makes it possible to substantiate the notion of a "linguocultural agro-ecological concept".

4. The paremiological fund contains a "linguistic model of folk soil science" corresponding to the concepts of scientific soil science (fertility, permeability, structure, salinization, erosion), which interprets soil as a living being in need of nourishment and rest. This interpretation is consonant with the modern concept of "soil health".

5. The results of the study can be used in regulating soil science terminology, in compiling linguocultural dictionaries of the field, and as a means of environmental education in agricultural training.

References

1. Маслова В.А. Лингвокультурология. – М.: Академия, 2001. – 208 с.
2. Телия В.Н. Русская фразеология: семантический, прагматический и лингвокультурологический аспекты. – М.: Школа «Языки русской культуры», 1996. – 288 с.
3. Воробьев В.В. Лингвокультурология (теория и методы). – М.: Изд-во РУДН, 1997. – 331 с.
4. Lakoff G., Johnson M. Metaphors We Live By. – Chicago: University of Chicago Press, 1980. – 242 p.
5. Арутюнова Н.Д. Язык и мир человека. – М.: Языки русской культуры, 1998. – 896 с.
6. Маҳмудов Н., Худойберганова Д. Ўзбек тили ўхшатишларининг изоҳли луғати. – Тошкент: Маънавият, 2013. – 320 б.
7. Маҳмудов Н. Тилнинг мукаммал тадқиқи йўлларини излаб... // Ўзбек тили ва адабиёти. – 2012. – №5. – Б. 3–16.
8. Худойберганова Д. Матннинг антропоцентрик тадқиқи. – Тошкент: Фан, 2013.
9. Шомақсудов Ш., Шораҳмедов Ш. Маънолар махзани. – Тошкент: Ўзбекистон миллий энциклопедияси, 2001. – 448 б.
10. Мирзаев Т., Мусоқулов А., Саримсоқов Б. Ўзбек халқ мақоллари. – Тошкент: Шарқ, 2005.
11. Ўзбек тилининг изоҳли луғати. 5 жилдлик. – Тошкент: Ўзбекистон миллий энциклопедияси, 2006–2008.
12. Раҳматуллаев Ш. Ўзбек тилининг изоҳли фразеологик луғати. – Тошкент: Ўқитувчи, 1978. – 408 б.
13. Мадвалиев А. Ўзбек терминологияси ва лексикографияси масалалари. – Тошкент: Ўзбекистон миллий энциклопедияси, 2017.
14. Маҳмуд Кошғарий. Девону луғотит турк. 3 томлик / Таржимон ва нашрга тайёрловчи С.М.Муталлибов. – Тошкент: Фан, 1960–1963.

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15. Суперанская А.В., Подольская Н.В., Васильева Н.В. Общая терминология: Вопросы теории. – М.: Наука, 1989. – 246 с.
16. FAO and ITPS. Status of the World's Soil Resources (SWSR) – Main Report. – Rome: Food and Agriculture Organization of the United Nations and Intergovernmental Technical Panel on Soils, 2015. – 650 p.
17. Усмонова Ш. Лингвокультурология. – Тошкент: ЎзМУ, 2019.
18. Карасик В.И. Языковой круг: личность, концепты, дискурс. – Волгоград: Перемена, 2002. – 477 с.