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A Comparative Analysis of Somatic Units in *Devonu Lug'otit Turk* and Modern Uzbek Language

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Abstract: Somatic vocabulary forms one of the most ancient and universal layers of human language, reflecting how societies conceptualize the human body and its symbolic meanings. Mahmud al-Kashgari's *Dīwān Lughāt al-Turk* (11th century) serves as the earliest and most comprehensive source for Turkic somatic lexicon, preserving numerous body-related terms that continue to exist, though transformed, in modern Turkic languages, particularly Uzbek. In spite of this significance of somatic lexemes in linguistic and cultural changes, comparative research studies focused on semantic and phonetic isomorphism of these lexemes from Old Turkic to modern Uzbek are rare. The study will examine 115 somatic lexemes from this 11th/12th century text (*Dīwān Lughāt al-Turk*), comparing them with modern forms in Uzbek to identify lexemes preserved or transformed, archaic or obsolete, and to explore patterns of linguistic continuity and change. The dissection of this type showed that some somatic units such as *til* (tongue), *tish* (tooth), *ko'z* (eye) preserved their original forms and meanings, whereas others were phonetic shifting (e.g. *baş* → *bosh*, *boğuz* → *bo'g'iz*), archaic or obsolete due to narrowing content (see Semantics in the theory of linguistic signs in Feuda 1924) and cultural reasons. Here the work outlines a systematic classification of somatic lexemes that preserves the division between conservation and change in Uzbekistan tools, as well as their chronological development through the centuries. The findings contribute to historical lexicology and comparative Turkic linguistics, offering insights into how somatic vocabulary encapsulates both linguistic stability and cultural adaptation within the Turkic language continuum.

Keywords: Somatic Units, Diwan Lughat Al- Turk, Uzbek Language, Comparative Analysis, Archaism, Phonetic Change

1. Introduction

Somatic vocabulary represents one of the most ancient and universal layers of human language. Almost every community fashions a lexical system for reference to the body, meaning that somatic lexemes pertain not only to the physiology, but are also an important source of metaphor, polysemy and cultural significance. Diachronic data on somatic units is an important resource for Turkic linguistics as they contribute information about the retention, re-analysis or obsolescence of certain lexemes across time[1].

Dīwān Lughāt al-Turk compiled by Mahmud al-Kashgari in the XI century is one of the earliest and most comprehensive sources for Turkic somatic lexicon; The dictionary contains more than one hundred somatic lexemes, many of which still exist in modern Turkic languages. At the same time, some of these lexemes have undergone semantic narrowing, widening, or complete lexical replacement.

The present paper focuses on a comparative diachronic analysis of somatic vocabulary in Uzbek and Turkish. By examining which units have been preserved, transformed, or lost, we aim to reveal the historical continuity and divergence in the lexicon of these two closely related languages [2].

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The Explanatory Dictionary of the Uzbek Language devotes a special place to the somatic lexemes that the name of the human organism part or its function and are rarely used in modern literary language or have acquired an archaic character. This includes lexical items: *oraz*, *uzor*, *dudoq* and *adaq* that shows that Old Turkic lexical have a wide source.

Investigating the origin, semantic shifts and contemporary status of these historical somatic lexemes fatly corresponds with one of the monumental works of Mahmud al-Kashgari during 11th century *Dīwān Lughāt al-Turk*. This dictionary contains more than 7,500 Turkic words and expressions, including a significant number of somatic units, making it one of the most important sources for understanding the diachronic development of Turkic vocabulary [3].

2. Materials and Methods

The methodological framework of this study is based on a comparative-historical and descriptive analysis aimed at identifying the semantic, phonetic, and morphological features of somatic units found in Mahmud al-Kashgari's *Dīwān Lughāt al-Turk* and their equivalents in the modern Uzbek language. This work uses synchronic and diachronic perspectives to investigate lexical stability and change across the Turkic languages. In total, 115 somatic lexemes attested in *Dīwān Lughāt al-Turk* were chosen as the main corpus. The data were compared with lexical data for the contemporary Uzbek language relying on materials of the Explanatory Dictionary of the Uzbek Language, alongside other scholarly literature. The comparative method was used to map diachronic lexical stability, phonetic change, and lexical replacement. The study also employed a classification analysis to group said somatic units based on their preservation status: those that maintain their original shape and value, where phonetic change has taken place, archaics that are obsolete and lexemes that are totally absent in the modern lexicon. Meaning broadening, narrowing, and shift were identified through semantic analysis, and etymological comparison identified links among Turkic languages. They also carried out frequency and contextual analysis to find the degree of usage and stylistic function of these units both in the past and present. This integrative methodological framework allows for a systematic study of the historical development, lexical transformation, and cultural-linguistic significance of somatics in the Uzbek language, and consequently, it provides tools for a greater understanding of its distinctive place in Turkic comparative linguistics and historical lexicology [4].

3. Results

According to Gulbahor Roziqova, in her doctoral dissertation on the semantic, functional, and stylistic features of nominal lexemes in *Dīwān Lughāt al-Turk*, the names of human body parts and internal organs (somatic lexemes) represent the oldest lexical layer of the Turkic language system. She classified these lexemes into five thematic groups based on the part of the body they refer to:

Table 1. Classification of Somatic Lexemes in *Dīwān Lughāt al-Tur*

Group	Number	Examples of somatic lexemes
1. Face and related parts	15	face, cheek, mouth, lip, forehead, jaw, chin, eye, ear, nose, gap between teeth
2. Hand and related parts	10	hand, palm, fist, wrist, finger, little finger
3. Leg and related parts	6	leg, ankle, groin, upper thigh, part between knee and ankle
4. Head and related parts	4	head, soft spot (in infants), temple, crown of the head
5. Internal organs	30	lung, heart, gallbladder, stomach, spleen, rib, intestine, uterus, shoulder, throat, armpit, spine, neck, skin, gullet, body

Gulbahor Roziqova classifies somatic lexemes the parts of the human body they denote as it is shown in Table 1. The lexemes are organized into five semantic sections: mouth and surrounding areas, hand and surrounding areas, foot and surrounding areas,

head and surrounding areas, and internal organs. Both of these groups also represent the functional and anatomical diversity of somatic vocabulary in Old Turkic. Roziqova identified a total of 65 somatic lexemes, which illustrates the foundational depth and diversity of terms related to the body within Mahmud al-Kashgari *Dīwān Lughāt al-Turk*, that makes the source significant for historical linguistic studies [5].

Thus, Roziqova identified **65 somatic lexemes** in *Dīwān Lughāt al-Turk*, which collectively reflect the richness of the somatic lexicon in Old Turkic and form the basis for understanding its diachronic development [6].

The Turkish linguist Cihan Çakmak, in her study conducted in Turkish on the same topic, states that the number of somatic units used in *Dīwān Lughāt al-Turk* amounts to 108, and classifies them into the following groups:

1. Internal organs
2. Reproductive organs
3. Names of bones and joints
4. Major body parts

According to her research, the largest group consists of 51 words denoting major organs (such as head, hand, foot, mouth, forehead, palm, eye, ear, hair, tongue, face, etc.). This is followed by 23 words referring to internal organs (liver, intestine, brain, stomach, spleen, vein, heart, etc.), 20 words denoting bones and joints (heel bone, cartilage, spine, rib, pelvic bone, etc.), and 14 words denoting reproductive organs (male genital organ, breast, groin, testicle, womb, etc.) [7].

When analyzed in terms of percentage, the major body parts account for 47%, internal organs 21%, bones and joints 19%, and reproductive organs 13% of the total somatic vocabulary.

In the course of examining the *Dīwān Lughāt al-Turk*, 115 body-part terms (a full list is provided in the appendix) and related units were identified. In the comparative analysis, it was observed that G. Roziqova did not include reproductive organs or body parts related to bones and joints in her classification. On the other hand, Cihan Çakmak did not analyze excretions directly associated with body parts (such as tears, sweat), including terms like *Çıçamuk*, *Ürün karak*, *Kazı*, *Kıwal*, *Bökseg*, *Kasıg*, *Çügde*, *Konrağu* [8].

Specifically, 115 somatic units recorded in Mahmud al-Kashgari's *Dīwān Lughāt al-Turk* were comparatively analyzed with their counterparts in contemporary Uzbek. The results of this analysis revealed that these units can be grouped into four main semantic and lexical categories:

Units that have preserved both form and meaning. This group of somatic lexemes has remained almost unchanged both phonetically and semantically from Old Turkic to modern Uzbek. The forms recorded in *Dīwān Lughāt al-Turk* are still used today in the same or very similar shape in contemporary Turkic languages. This represents an instance of semantic stability and phonetic continuity in the history of the language [9]. The following examples illustrate this group:

Table 2. Somatic Lexemes Preserved in Form and Meaning from Old Turkic to Modern Uzbek

Old Turkic form (DLT)	Modern Uzbek form	Meaning	Old Turkic form (DLT)	Modern Uzbek form	Meaning
büt	But	lower part of the leg	göz / köz	ko'z	eye
meñiz	Mengiz	mole on the face	teri	teri	skin
til	Til	tongue	fiş	tish	tooth
tiz	Tizza	knee	yüz	yuz	face
bağır	bag'ir	chest (inner part)	ilik	ilik	marrow (bone)
öt	o't	bile, gallbladder			

Table 2 illustrates somatic units that have retained both their phonetic structure and semantic meaning from *Dīwān Lughāt al-Turk* to modern Uzbek. What is amazing about

these lexemes is that they are unusually stable over time and have seen minimal linguistic change despite the passage of the centuries. Words like *til* (tongue), *tish* (tooth), *ko'z* (eye), *teri* (skin), and *yuz* (face) illustrate a high degree of continuity between Old Turkic and Uzbek. The keeping of these forms underlines their minimum role in quotidian communication and their impenetrability to semantic alteration or phonetic change in Turkic linguistic continuum [10].

Units that have undergone phonetic change. Although the lexemes in this category still exist in modern Uzbek, they have undergone certain phonetic shifts. Nevertheless, their core semantic meaning has remained stable:

Table 3. Somatic Lexemes That Have Undergone Phonetic Change from Old Turkic to Modern Uzbek

Old Turkic form (DLT)	Modern Uzbek form	Old Turkic form (DLT)	Modern Uzbek form
Adak	oyoq	Büz	bez
Agız	og'iz	Bögür	buyrak
Baş	bosh	Bokuk	bo'qoq
Boğuz	bo'g'iz	Kân / Kan	qon
Boyn	bo'yin	Karın	qorin
Çıçalak	jimjiloq	Kawuk	siydik pufagi
Karak	qaroq	Öpke	o'pka
Kara karak	ko'z qorachig'i	Talak	taloq
Kaş	qosh	Tamur	tomir
Köl	qo'l	Bilek	bilak
Kögüz	ko'krak, ko'ks	Sünük / Söngük	suyak
Kuçak	quchoq	Yän	yon
Kulak	quloq	Tırnak	tirmoq
Saç	soch	Tirsgek	tirsak
Sakal	soqol	Top / Topik	tovon, to'piq
Tamak / Tamgak	tomoq	Tü	tuk
Ten	tana	Yanäk	yonoq

Table 3 demonstrates somatic lexemes that continue to exist in modern Uzbek but have experienced notable phonetic transformations over time. While their forms have changed due to sound shifts and language evolution, their core meanings have remained stable. Examples include *baş* → *bosh* (head), *boğuz* → *bo'g'iz* (throat), *agız* → *og'iz* (mouth), and *kulak* → *quloq* (ear). These correspondences highlight regular phonetic patterns within the Turkic linguistic continuum and reveal the processes through which lexical forms adapt to modern phonological systems while preserving semantic continuity [11].

Archaic units no longer in active use. These units were actively used in the Old Turkic linguistic system but are no longer employed in contemporary Uzbek, or are used only passively. Some of them may still be semantically transparent, yet they have fallen out of everyday linguistic circulation:

en – cheek;
adut, avut – palm;
alin – forehead;
ernek – finger;
kanrik – palate;
kapak – eyelid;
kesme – lock of hair;
kudruk – tail, back part;
töpu, uça, yin – back, waist, body;
bagırsuk – intestine;
bügür, bükün, kurugsak – rump, appendix, stomach;
öngen, özek, yulun – jugular vein, spinal cord;
solak, sinir – spleen, muscle, nerve;
aşuk, başgak, ägin – heel bone, thigh bones, shoulder;
icegü, küsri, yamuz, yarık – internal bones, space between thigh and rump;
bitrik, çekik, çubek – genital organs (for children);
emig, ogulçuk, sik, sökrük, tilak, yemdü, yığaç – sexual and reproductive organs.

Units absent in contemporary Uzbek. These lexemes no longer exist in Uzbek, neither actively nor passively. They disappeared due to morphological, semantic, or cultural factors, or were replaced by other forms of designation:

Table 4. Somatic Lexemes Absent in Contemporary Uzbek

Old Turkic form (DLT)	Modern Uzbek equivalent	Type of change	Note
Çıçamuk	ring finger	Lexical replacement	Replaced by a symbolic-descriptive expression "nomsiz barmog" ("nameless finger").
Ürüñ karak	sclera (white of the eye)	Lexical specification	Modern terminology has concretized the meaning.
Kazı	fold on a fat person's belly	Lexical/semantic change	No longer used as an independent lexeme.
Kıwal	—	Archaic unit	No direct equivalent exists in modern Uzbek.
Bükseg	upper part of the chest	Partial lexical change	Replaced with synonyms like <i>yelka</i> (shoulder), <i>ko'krak yuqorigi</i> .
Kasıg	area beneath the chin / inside edge of mouth	Semantic narrowing	Now expressed contextually in modern usage.
Çügde	bone protrusion behind the ear	Terminological replacement	Expressed with medical terms like "bone protrusion" or "post-auricular bone."
Koñrağı	bony protrusion behind the ear	Anatomical replacement	Expressed today with terms like "soft bone."

Table 4 presents somatic lexemes from *Dīwān Lughāt al-Turk* that have disappeared from modern Uzbek, either due to lexical replacement, semantic change, or cultural factors. Examples include *Çıçamuk* (ring finger), *Ürüñ karak* (sclera), and *Kıwal* (archaic unit with no modern equivalent). And much of this terminology was supplanted by more descriptive or medicalized language, indicating a sort of both linguistic modernization and linguistic specialization. This table demonstrates the natural process of lexical obsolescence and adapta [12].

Comparative Analysis of Somatic Units in *Dīwān Lughāt al-Turk* and Their Counterparts in the Modern Literary Language. In linguistics, somatic units are classified not only on the basis of semantic or morphological criteria, but also from the perspective of their stylistic functions [13].

Mahmud al-Kashgari's *Dīwān Lughāt al-Turk* is a priceless source for studying the history of Turkic languages, especially Uzbek¹. A comparative analysis of the 115 somatic units recorded in the work and their modern Uzbek equivalents has revealed the stages of their phonetic and semantic development. The results show that some somatic units have preserved their original forms and meanings with little to no change (e.g., *ko'z* "eye", *til* "tongue", *tish* "tooth", *yuz* "face"), while others have undergone phonetic transformations (e.g., *agız* → *og'iz*, *baş* → *bosh*)²Some units have fallen out of active usage³ or become archaic over time. Such changes demonstrate the general tendency of language change under the influence of phonological, semantic, and cultural factors [14].

A systematic analysis of somatic units in this way is crucial for understanding their historical and lexical development, exploring the semantic layers of the language, and highlighting the lexical-cultural connections between Uzbek and other Turkic languages⁴. The findings of this study are valuable not only for historical lexicology but also for comparative linguistics, semasiology, and cultural anthropology [15].

4. Conclusion

The comparative analysis of somatic lexemes in *Dīwān Lughāt al-Turk* and their counterparts in modern Uzbek reveals significant insights into the historical evolution and continuity of the Turkic linguistic system. The study demonstrates that while many somatic units have preserved their original forms and meanings, others have undergone phonetic modifications, semantic shifts, or complete lexical replacement due to cultural, morphological, and societal changes. This evolution shows the natural development of language around a more communicative and cognitive environment. The evidence for lexemes systematically unchanged for almost a millennium, such as *til* (tongue), *tish* (tooth), and *ko'z* (eye), indicates the remarkable stability of basic vocabulary relating to the human body. In contrast, the loss of antiquated ones & the introduction of its equivalents reinforces the dialectical link between continuity & development among the Uzbek vocabulary.

These findings underscore Mahmud al-Kashgari's *Dīwān Lughāt al-Turk* as an invaluable linguistic and cultural document, offering a foundation for understanding the

diachronic development of Turkic somatic vocabulary. The study contributes not only to historical lexicology but also to the broader field of comparative Turkic linguistics, enriching our knowledge of semantic evolution, phonetic adaptation, and cultural heritage embedded in language. Ultimately, it affirms that somatic lexemes serve as linguistic fossils—preserving the history, worldview, and identity of the Turkic-speaking peoples through the enduring structure of their words.

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