



LINGUOCULTURAL REPRESENTATION OF HUMAN SENSORY PERCEPTION AND PHYSIOLOGICAL RESPONSES IN BABURNAMA

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Abstract: *This article examines the linguocultural representation of human sensory perception and physiological responses in Zahiriddin Muhammad Babur's Baburnama. As one of the most significant autobiographical and historical works of classical Turkic prose, Baburnama contains extensive information concerning geographical space, natural environment, social relations, military campaigns, everyday life, physical conditions, illness, medical practices, and the author's personal observations. Within this broad textual framework, descriptions of human sensory perception and bodily reactions constitute an important layer through which individual experience is transformed into linguistic and cultural meaning.*

The principal purpose of the study is to investigate the ways in which visual, auditory, tactile, thermal, and pain-related experiences are represented linguistically and how these representations interact with the historical and cultural context of the work. Particular attention is given to descriptions of cold, heat, physical exertion, fatigue, injury, pain, bodily parts, environmental influence, and medical treatment. The study also examines the relationship between external stimuli, bodily sensations, physiological responses, emotional reactions, and their verbal expression.

The research is based primarily on textual, contextual, semantic, descriptive, comparative, and linguocultural methods. The analysis takes Baburnama as the primary literary-historical source and uses relevant linguistic and translation studies as secondary sources. Previous scholarship has already examined particular lexical fields of Baburnama, including medical terminology, phraseological units,



measurement vocabulary, and translation problems. Z. Q. Teshaboyeva, for example, has specifically investigated medical terminology occurring in Baburnama and its English translations, while her 2023 multilingual dictionary provides a systematic resource for the study of phraseological units and their Uzbek, Russian, and English representations.[1][2] The present research develops a related but more narrowly integrated perspective by bringing sensory perception, physiological response, linguistic representation, and cultural interpretation into a single analytical framework.

The findings indicate that sensory and physiological descriptions in Baburnama perform several functions simultaneously. They document concrete bodily experience, strengthen the autobiographical character of the narrative, establish the narrator's direct relationship with the environment, contribute to characterization, preserve elements of historical medical culture, and transmit culturally significant information through lexical and phraseological forms. The human body consequently appears in the text not merely as a biological object but as a point of interaction between individual experience, geographical environment, social relations, historical circumstances, and cultural knowledge.

The article does not claim that sensory perception as a general phenomenon has never been addressed in Babur studies. Instead, it proposes a specific analytical perspective based on the systematic relationship among external stimulus, sensory perception, bodily sensation, physiological response, linguistic representation, and cultural interpretation. This approach may contribute to further research in historical linguistics, linguoculturology, literary stylistics, translation studies, and the study of classical Uzbek prose.

Keywords: Baburnama, Zahiriddin Muhammad Babur, sensory perception, physiological response, bodily sensation, linguoculturology, historical prose, autobiographical narrative, medical culture, somatic vocabulary, cultural semantics, classical Uzbek language, translation studies.

INTRODUCTION



Zahiriddin Muhammad Babur's Baburnama occupies a distinctive position in the literary and cultural history of Central Asia and South Asia. Written by a ruler, military leader, poet, and intellectual who personally participated in many of the events he described, the work combines autobiographical narrative with historical observation, geographical description, cultural documentation, and personal reflection. Its significance therefore extends beyond the conventional boundaries of historical writing. The text represents political events and military campaigns while simultaneously recording landscapes, settlements, natural phenomena, customs, social relationships, material culture, food, clothing, illness, physical hardship, and individual experience.

One of the most important characteristics of Baburnama is the author's close attention to observed reality. Babur frequently records places that he visited, people whom he encountered, natural conditions that he experienced, and events in which he personally participated. Such observations create a distinctive relationship between the narrator and the world represented in the text. The external environment is not presented as an abstract background. It is experienced through the human body, interpreted through consciousness, and subsequently expressed through language.

This feature is particularly significant from the perspective of linguocultural research. Linguoculturology studies the relationship between language and culture and investigates how cultural knowledge, values, historical experience, and collective conceptualizations are reflected in linguistic units. In a historical literary work such as Baburnama, culturally meaningful information is not restricted to explicitly cultural terms. It may also be encoded in descriptions of ordinary human experience: seeing a landscape, hearing a sound, experiencing severe cold, suffering an injury, becoming physically exhausted, receiving medical treatment, or observing the bodily condition of another person.

Accordingly, the human body may be regarded as an important linguistic and cultural interface in Baburnama. Through the body, the individual encounters geographical space, climate, food, travel, warfare, illness, social interaction, and



emotional experience. The resulting descriptions preserve not only physiological information but also historical attitudes toward the environment, suffering, endurance, medical knowledge, professional expertise, and interpersonal relations.

The study of sensory perception is particularly productive in this respect. Human sensory experience is ordinarily associated with physiological processes such as sight, hearing, touch, temperature perception, and pain. However, when such experiences enter a literary text, they acquire additional semantic and pragmatic dimensions. A description of cold, for example, may communicate much more than temperature. Depending on its context, it may indicate geographical conditions, physical hardship, danger, endurance, collective experience, or the narrator's personal participation in an event.

Existing scholarship confirms that the vocabulary of Baburnama has considerable potential for such research. Ziyodaxon Qodirovna Teshaboyeva has specifically examined medical terminology in Baburnama and its English translations, drawing attention to the historical and translation-related significance of terms connected with medical practice.[1] Her later multilingual dictionary, published in 2023, focuses on phraseological units in Baburnama and compares their Uzbek, Russian, and English representations.[2] The catalogue description of the work explicitly identifies its cognitive-conceptual orientation and its use of the 2002 Baburnama edition together with later Uzbek, Russian, and English versions.[2]

These studies are especially important for the present research because they demonstrate that the language of Baburnama contains culturally marked lexical and phraseological material whose meaning cannot always be reproduced through direct lexical equivalence. Medical terms, somatic expressions, phraseological units, and culturally specific descriptions require interpretation within their historical and textual contexts.

At the same time, the sensory dimension of Baburnama can be approached from a broader perspective. Rather than studying medical terminology alone, it is possible to examine how sensory perception and physiological response participate



in the construction of the narrative itself. In such an approach, the body becomes connected with geography, climate, movement, warfare, social interaction, and autobiographical memory.

The present study therefore focuses on the interaction of six analytical components:

external stimulus → sensory perception → bodily sensation → physiological response → linguistic representation → cultural interpretation.

This sequence should not be understood as a modern medical model. It is an analytical model designed to explain how an external event or environmental condition is transformed into a textual representation of human experience.

For example, a severe environmental condition may first be presented through natural phenomena such as snow, wind, or cold. The narrative may then describe the effect of that condition on the human body. The bodily effect may subsequently be connected with fatigue, danger, endurance, decision-making, or social solidarity. Finally, the entire experience becomes part of the narrator's autobiographical representation.

This relationship between environment and body is especially important in a work shaped by extensive travel and military movement. Mountains, valleys, rivers, cities, gardens, roads, and climatic conditions are not merely geographical objects in Baburnama. They are spaces inhabited and experienced by people. Consequently, geographical description and physiological experience often intersect.

Another important dimension is the autobiographical character of the work. Because Babur frequently presents himself as a participant in the events he narrates, bodily experience contributes to the credibility and immediacy of his narrative voice. The statement that the narrator personally saw, heard, experienced, suffered, or observed something creates a form of experiential evidence within the memoir.

This characteristic makes sensory vocabulary significant for literary stylistics as well. The representation of bodily experience contributes to characterization because it shows how the narrator responds to his environment. Physical hardship



can be associated with perseverance; observation can demonstrate attentiveness; medical knowledge can indicate intellectual curiosity; and descriptions of landscapes can reveal aesthetic perception.

It is therefore possible to argue that sensory and physiological descriptions operate on several levels simultaneously:

1. physical level — representation of bodily sensation or condition;
2. narrative level — organization of personal experience;
3. historical level — preservation of information about the period;
4. cultural level — representation of culturally meaningful concepts;
5. linguistic level — realization through lexical, phraseological, and syntactic structures;
6. pragmatic level — communication of the narrator's attitude and evaluation.

The combination of these levels forms the principal theoretical basis of the present study.

LITERATURE REVIEW

The scholarly study of Baburnama has developed across several interconnected fields, including literary criticism, historical studies, linguistics, translation studies, cultural studies, and textual scholarship. The diversity of these approaches reflects the complexity of the work itself.

From a literary perspective, Baburnama is generally recognized for its autobiographical character, detailed observation, and direct narrative manner. Its historical significance is strengthened by the author's participation in many of the events he describes. The text consequently combines retrospective memory with immediate observation and evaluation.

From a linguistic perspective, researchers have examined the vocabulary, phraseology, stylistic characteristics, terminology, and translation of the work. Of particular relevance to the present study is research into medical terminology. Teshaboyeva's study "Tibbiyot terminlarining 'Boburnoma'da aks etishi va



inglizcha tarjimalari” specifically investigates medical terms occurring in the work and their English translations.[1] The study identifies the continuing scholarly relevance of Baburnoma and notes its translation history, including the English versions associated with John Leyden and William Erskine, Annette Susannah Beveridge, and Wheeler M. Thackston.[1]

The significance of this research for the present article is twofold. First, it demonstrates that bodily and medical vocabulary forms a recognizable lexical layer of the text. Second, it shows that translation of such vocabulary involves interpretive problems. A historical medical term cannot always be reproduced adequately through a modern equivalent because its semantic structure may include cultural and professional information that is absent from the target-language equivalent.

Teshaboyeva’s 2023 Boburnomadagi frazeologik birliklarning o‘zbekchalaruscha-inglizcha lug‘ati provides another important scholarly resource. The catalogue records the work as a 264-page publication issued in Tashkent by the Innovatsion rivojlanish nashriyot-matbaa uyi, with ISBN 978-9910-735-70-7.[2] The description explains that the dictionary is devoted to cognitive-conceptual analysis of phraseological units in Baburnama and compares the original with its modern Uzbek interpretation, Russian translation, and several English translations.[2]

This research is directly relevant to the study of bodily vocabulary because somatic terms frequently occur in phraseological constructions. Words denoting the eye, ear, hand, head, heart, face, foot, bone, and other body parts may function literally or figuratively. In a phraseological context, their cultural meaning may not be predictable from their individual dictionary definitions. Therefore, a linguocultural analysis must distinguish between anatomical reference, contextual bodily experience, and phraseological meaning.

The existence of research on medical terminology and phraseology also demonstrates that the present study should not be formulated as an absolute claim of novelty. It would be methodologically inappropriate to state that human bodily



experience or sensory vocabulary has never previously been discussed in relation to Baburnama. Rather, the present research identifies a specific intersection that can be developed systematically: sensory perception, physiological response, somatic vocabulary, and linguocultural interpretation.

Another important research direction concerns translation. Baburnama has been translated into several languages, and the English translation tradition is particularly significant for international Babur studies. The existence of several English versions makes the text suitable for comparative research into how culturally marked vocabulary is reconstructed in another linguistic system.

The literature reviewed here therefore suggests that three major research directions are already well established:

- medical terminology and medical culture in Baburnama;
- phraseological and somatic expressions;
- translation of culturally marked lexical material.

The present article brings these directions into contact with sensory perception and physiological response. Its purpose is not to replace existing approaches but to connect them within a broader model of embodied linguistic representation.

RESEARCH AIM AND OBJECTIVES

The principal aim of this study is to identify and interpret the linguistic and linguocultural mechanisms through which human sensory perception and physiological responses are represented in Baburnama.

The study pursues the following objectives:

1. to identify major semantic groups associated with human sensory perception in Baburnama;
2. to examine the linguistic representation of visual and auditory perception;
3. to analyze descriptions of thermal and tactile sensations;
4. to investigate the representation of pain, injury, physical exhaustion, and bodily discomfort;



5. to examine body-part vocabulary as a linguocultural resource;
6. to determine the relationship between sensory experience and geographical environment;
7. to investigate the connection between bodily experience and medical culture;
8. to analyze the narrative and stylistic functions of physiological descriptions;
9. to consider translation problems associated with culturally marked sensory and bodily expressions;
10. to formulate a systematic analytical model for the study of embodied experience in historical Uzbek prose.

RESEARCH MATERIALS AND METHODOLOGY

The primary research material is Zahiriddin Muhammad Babur's Baburnama. For the purposes of textual reference, the 2002 Sharq edition is treated as the principal Uzbek source. Secondary materials include documented linguistic studies of the work, research on medical terminology, phraseological dictionaries, and scholarship concerned with the translation and cultural interpretation of Baburnama.

The research applies several complementary methods.

Textual analysis

Textual analysis is used to identify lexical and phraseological units associated with sensory perception, bodily condition, physical response, and medical practice. The analysis considers each unit within its immediate textual environment rather than treating it as an isolated dictionary entry.

Semantic analysis

Semantic analysis determines the literal, contextual, figurative, and evaluative meanings of sensory and bodily expressions. Particular attention is given to cases in which one lexical item participates in several semantic domains.

Contextual analysis



Contextual analysis is essential because the meaning of a sensory expression depends heavily on the event in which it occurs. The same word may describe a neutral physical condition in one context and a significant cultural or narrative experience in another.

Linguocultural analysis

Linguocultural analysis identifies cultural information embedded in bodily and sensory descriptions. This includes attitudes toward hardship, environmental adaptation, medical knowledge, professional expertise, social solidarity, and the relationship between human beings and geographical space.

Comparative analysis

Comparative analysis is applied primarily to translation. Where documented English translations are available, their treatment of culturally marked terms is considered in order to determine whether the source meaning has been preserved, expanded, reduced, or interpreted.

Discourse analysis

Discourse analysis is used to determine the narrative function of physiological and sensory descriptions. The study asks whether a particular bodily detail establishes authenticity, characterizes the narrator, advances the narrative, explains an event, or preserves historical-cultural information.

An important methodological principle is maintained throughout the study: textual representation must not be confused with modern medical diagnosis. When Baburnama describes pain, weakness, injury, or another physical state, the researcher analyzes how that state is linguistically represented in the historical source. It would be methodologically inappropriate to impose a modern clinical diagnosis on a historical literary statement without independent evidence.

CONCEPTUAL MODEL OF EMBODIED EXPERIENCE IN BABURNAMA

On the basis of the textual and theoretical observations above, the following model can be proposed:



External environment / event



Sensory stimulus



Human perception



Bodily sensation



Physiological or emotional response



Linguistic expression



Cultural and narrative interpretation

This model demonstrates that the body occupies an intermediate position between the external world and language. The author encounters an event through perception; perception becomes bodily experience; bodily experience becomes narratively meaningful; and narrative meaning is encoded through language.

The same process can be observed in descriptions of injury and treatment. An injury is initially a physical event. It produces pain and bodily discomfort. Medical intervention follows, introducing professional knowledge and social relations. The author's description then records the event linguistically, thereby preserving information about historical medical culture.

Thus, sensory and physiological descriptions can be considered a form of embodied historical knowledge. They preserve information not only about what happened but also about how an event was experienced by a human participant.

This perspective provides the conceptual foundation for the subsequent sections of the article, which examine visual perception, auditory perception, thermal sensation, pain and injury, physical exertion, body-part vocabulary, medical culture, geographical space, emotional experience, and translation.



PRELIMINARY SCIENTIFIC FINDINGS

The preliminary analysis allows several observations to be formulated.

First, sensory perception in Baburnama is not an isolated lexical phenomenon. It is integrated into descriptions of geography, travel, warfare, climate, medicine, and social life.

Second, bodily experience contributes to the autobiographical credibility of the text. The narrator's physical participation in events strengthens the experiential character of his account.

Third, somatic vocabulary possesses both literal and culturally mediated meanings. Body-part terms may identify a physical location, express a sensation, or function within a phraseological construction.

Fourth, medical terminology constitutes an important component of the historical linguistic picture of Baburnama. Existing research confirms that medical terms and their translations deserve independent scholarly attention.[1]

Fifth, translation studies are indispensable for understanding the international reception of the work. The comparison of Uzbek source expressions with English translations can reveal which elements of bodily and sensory meaning are retained and which are transformed.

Finally, the study indicates that sensory perception can serve as a productive analytical category for connecting philology with cultural history. The human body provides a point at which environment, language, personal experience, and historical culture intersect.

The subsequent parts of the article will develop these findings through detailed analysis of individual sensory categories and representative textual contexts.

Visual Perception and the Representation of the Human Gaze

One of the most significant components of sensory experience represented in Baburnama is visual perception. The work contains numerous descriptions of landscapes, cities, gardens, military movements, architectural monuments, clothing, people, animals, and natural phenomena. However, these descriptions should not be



regarded merely as neutral visual records. Babur frequently transforms what he sees into an emotionally and culturally meaningful experience.

From a linguocultural perspective, visual perception is closely connected with the observer's cultural knowledge, emotional state, social position, and personal experience. The act of seeing in Baburnama therefore performs at least two functions: it provides information about an external object and simultaneously reveals the narrator's subjective attitude toward that object.

The author's descriptions of geographical spaces are particularly important in this respect. Mountains, valleys, rivers, gardens, cultivated areas, settlements, and cities are frequently characterized through concrete sensory details. Such descriptions demonstrate that Babur's perception of space is not abstract. Space is experienced through sight, movement, temperature, smell, physical difficulty, and emotional response.

The visual dimension of the text is also connected with the historical and cultural context of the Timurid world. A city is not represented simply as a geographical location; its appearance, architecture, gardens, population, climate, and resources contribute to its cultural identity. Consequently, visual perception becomes a mechanism through which cultural information is transmitted.

This feature is particularly relevant to the linguocultural analysis of Baburnama. Contemporary research has already demonstrated that the work contains specialized lexical layers whose interpretation requires attention to historical and cultural context. For example, research on Baburnama has examined its medical terminology and its English translations, while other studies have investigated phraseological units, natural descriptions, and culturally marked vocabulary.

The visual descriptions therefore constitute more than an artistic background. They participate in the construction of a culturally specific representation of human experience.

Pain, Injury, and the Linguistic Representation of Bodily Experience



Pain represents one of the clearest points of intersection between physiological reality and linguistic expression. Unlike general descriptions of the body, pain directly communicates a change in the individual's physical condition. In Baburnama, descriptions associated with wounds, illnesses, injuries, treatment, and recovery create a particularly rich field for examining bodily experience.

Research specifically devoted to medical terminology in Baburnama identifies lexical units associated with wounds, surgeons or healers, bones, medicines, and treatment procedures. The study also demonstrates that such terminology presents difficulties for translation because historically and culturally specific medical concepts do not always have direct equivalents in another language.

This finding is particularly relevant to the present study because physiological experience is not represented exclusively through modern medical terminology. Historical texts frequently combine specialized vocabulary with ordinary words describing bodily states.

For example, the semantic field of injury may include:

- the name of the injured body part;
- the description of the wound;
- the action performed by a healer or surgeon;
- the material or medicine used for treatment;
- the patient's physical condition;
- the subsequent process of recovery.

These elements create a complete conceptual representation of bodily experience.

The medical terminology identified in previous scholarship includes words and expressions connected with surgeons or healers, wounds, bones, medicines, and treatment practices. Teshaboyeva's comparative analysis demonstrates that these terms were rendered differently in the English translations associated with John Leyden and William Erskine, Annette Susannah Beveridge, and Wheeler Thackston.



The existence of several English translations is particularly useful for linguistic analysis. It enables the researcher to distinguish between the meaning encoded in the original text and the interpretive decisions made by translators.

Physiological Reactions as Linguistic Indicators of Inner Experience

The concept of physiological reaction occupies a central position in the present research. Human beings respond to external circumstances not only intellectually or emotionally but also physically. Changes in breathing, bodily strength, movement, pain, fatigue, appetite, sleep, temperature sensitivity, and other bodily conditions may accompany emotional or environmental stimulation.

This creates an important methodological issue: the researcher must not automatically interpret every bodily expression according to modern medical terminology. Historical language reflects the conceptual system of its own period.

Accordingly, the present study distinguishes between:

- a) physiological state — the bodily condition itself;
- b) linguistic representation — the lexical or syntactic form through which the condition is expressed;
- c) cultural interpretation — the meaning assigned to the bodily state within the historical worldview of the text.

This distinction prevents anachronistic interpretation and allows the researcher to preserve the historical specificity of Baburnama.

The relationship may be represented schematically as follows:

External stimulus → sensory perception → bodily response → emotional interpretation → linguistic representation

This model demonstrates that physiological reactions in Baburnama should not be treated as isolated medical facts. They form part of an integrated representation of human experience.

Medical Knowledge and the Cultural Representation of the Body

The human body in Baburnama is represented not only as a biological organism but also as a cultural object. References to illness, treatment, injury,



physical strength, weakness, healing, and death provide information about the medical worldview of the period.

The medical vocabulary documented in previous scholarship confirms the existence of a relatively developed lexical field related to bodily conditions and treatment. Teshaboyeva's study, for example, analyzes terminology related to surgeons, wounds, bones, medicines, and specific medical procedures, while also comparing their representation in several English translations.

This material is significant for two reasons.

First, it demonstrates that Baburnama preserves valuable evidence concerning the historical vocabulary of medicine.

Second, it shows that medical knowledge is integrated into narrative discourse rather than appearing only as an independent scientific description.

The narrator's mention of medical treatment may simultaneously provide information about an individual event, reveal social practices, characterize a person possessing medical knowledge, and communicate the seriousness of a physical condition.

Consequently, the medical lexicon of Baburnama should be examined within the broader cultural system of the work.

Primary source

Bobur, Zahiriddin Muhammad. Boburnoma. Tahrir hay'ati: Abdug'afur Abdurashidov, Bobur Alimov va boshqalar. Porso Shamsiyev, Sodiq Mirzayev va Eyji Mano nashrlari asosida qayta nashrga tayyorlovchi Saidbek Hasanov. Mas'ul muharrir Vahob Rahmonov. Toshkent: "Sharq" nashriyot-matbaa aksiyadorlik kompaniyasi Bosh tahririyati, 2002. 334 b.

Important textual verification

The well-documented passage concerning Babur's experience of cold affecting his ear is reproduced in a secondary source with reference to the 1960 Tashkent edition of Boburnoma, pp. 257–258. Therefore, the page number should



not be transferred automatically to the 2002 edition without checking the 2002 physical/digital text.

Medical terminology study

Teshaboyeva, Ziyodaxon Qodirovna. “Tibbiyot terminlarining ‘Boburnoma’da aks etishi va inglizcha tarjimalari.” In: Zahiriddin Muhammad Bobur merosining Sharq davlatchiligi va madaniyati rivojida tutgan o‘rni. International Scientific-Theoretical Conference Proceedings. Tashkent, 2023, pp. 197–205. The conference contents identify the article as beginning on p. 197, and the article analyzes medical terminology in Baburnama and its English translations.

Phraseological research

Teshaboyeva, Ziyodaxon Qodirovna. “Boburnoma”dagi frazeologik birliklarning o‘zbekcha-ruscha-inglizcha lug‘ati. Toshkent, 2023. This work is based on Baburnama and its Uzbek, Russian, and English textual materials and is relevant to the analysis of phraseological and culturally marked units.

English translation corpus

For comparative translation analysis, the three English versions identified in Teshaboyeva's study are:

1. John Leyden and William Erskine, 1826;
2. Annette Susannah Beveridge, 1921;
3. Wheeler M. Thackston, 1996.

These translations are explicitly identified in the 2023 medical-terminology study as major English versions used for comparative linguistic and translation research.

Additional scholarly source

Otajonov, N.; Hoshimova, D. “Boburnoma” – sharq elchisi. Toshkent: Mumtoz so‘z, 2010. 168 b. This bibliographic information is cited in the source-literature discussion concerning English translations of Baburnama.

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6. Beveridge, Annette Susannah. English translation of Babur-Nama, 1921.
7. Thackston, Wheeler M. English translation of The Baburnama: Memoirs of Babur, Prince and Emperor. New York/Oxford, 1996.
8. Boburnoma textual material concerning Babur's experience of cold and its effect on his ear: 1960 Tashkent edition, pp. 257–258, as reproduced and cited in the secondary source Notiqlik san'ati asoslari.