

The Interoceptive Model of the Human Body: Linguistic Expression and Cognitive Process

Feruza Namozova

PhD Applicant, Navoi State University

(DSc) R. H. Davlatova

Doctor of Philological Sciences

Abstract. *The article explores the types of sensations, focusing primarily on the linguistic expression of interoceptive sensations. The interoceptive process is characterized not only by the presence of a physiological signal but also by its reflection in consciousness and subsequent semantic processing. Although sensations arising within the internal environment of the body have a biological nature, their conceptual content is formed through human cognitive and sociocultural experience. To gain a deep understanding of the sociocultural and psychological factors of interoception, it is essential to study how a person verbalizes internal bodily sensations.*

Key words: *exteroception, proprioception, interoception, sensation, sensory cognition, physical and mental state, body models.*

In linguistics, human sensory activity — that is, the perception and experience of the external and internal world, as well as the linguistic expression of such perception — is regarded as one of the central mechanisms of human cognition. Sensation is not only a physiological process but also a social and cultural phenomenon. It forms a person's conceptualization of the world, and through language these conceptualizations are transmitted to the collective consciousness. Therefore, the phenomenon of sensation has become one of the crucial objects of study in modern anthropocentric linguistics.

In linguistic research, sensations are generally studied in three main directions:

1. **Exteroception** – external sensations (sight, hearing, smell, taste, touch);
2. **Interoception** – internal sensations (pain, heartbeat, breathing, hunger, internal tension, etc.);
3. **Proprioception** – muscular and movement sensations (friction, tension, stretching, and movements within muscles, ligaments, tendons, and joints).

Although the field of sensory linguistics has long attracted scholarly attention, the majority of studies have focused on *external bodily sensations* such as hearing, olfaction, tactile sensitivity, taste, and vision. Meanwhile, internal bodily sensations — that is, *interoceptive phenomena* — remain underexplored due to their complex, multidimensional, and somewhat ambiguous nature. Thus, the study of internal bodily experiences constitutes one of the most pressing and promising research areas in modern linguistics.

The concept of internal or interoceptive sensations first emerged in physiology at the turn of the 19th–20th centuries. Over time, the topic of interoception has become an interdisciplinary object, being actively explored in neurology and psychology, and more recently in linguistics. The “inner world of

the body” functions primarily according to biological laws and therefore belongs to the realm of physiological science. However, this internal world, just like the external one, is reflected in human consciousness and finds its material expression in language. From this perspective, the phenomenon of interoception consists of at least two components:

1. the actual existence of a sensation within the internal environment of the body; and
2. the subject’s awareness and interpretation of this sensation.

A. Damasio (1999) distinguishes two levels of this process: “*To have a feeling is not the same as knowing a feeling.*” In other words, interoception is characterized not only by the presence of a physiological signal but also by its reflection in consciousness and its semantic reinterpretation. Hence, although the sensations within the body have a biological nature, their meanings are shaped through human cognitive and socio-cultural experience.

The sensation itself, its subjective perception, and its cognitive interpretation have become key research directions in modern psychology (A. Sh. Tkhostov, G. Ye. Rupchev, S. P. Yelshanskiy, G. A. Arina, and others). Studies show that “non-emotional factors of emotional processes” exist, and interceptive sensations cannot be explained solely by physiological or affective influences. Rather, they depend on how a person evaluates what happens inside their body — on the subjective meaning this experience acquires in consciousness and on the individual’s personal attitude toward it.

Consequently, interoception is determined not only by biological but also by socio-cultural, experiential, and psychological factors. Therefore, it is essential to analyze interceptive phenomena within the context of each specific language and culture. To achieve a profound understanding of these socio-cultural and psychological aspects, one must examine how people verbalize their inner bodily sensations. From this perspective, the “*interceptive lexicon*” within linguistic sensory studies constitutes a purely linguistic phenomenon — one of the promising directions in contemporary theoretical linguistics.

The importance of this area of study lies in the growing scholarly interest in “*the human factor in language.*” In general, bodily experience — particularly interceptive experience — is an inseparable part of human subjectivity. It directly influences the formation of consciousness and finds its reflection in language. The linguistic expression of internal bodily states represents a unique form of discourse in which every individual chooses their own mode of expression, since no universal patterns exist for all. Consequently, languages do not have ready-made templates for expressing interceptive states — they are shaped individually according to each person’s perception and bodily experience.

THEORETICAL MODELS OF BODILY PERCEPTION: “I AM MY BODY” VS. “I HAVE A BODY”

In modern cognitive linguistics and philosophy of language, the notion of the “**embodied mind**” (Lakoff & Johnson, 1999) emphasizes that human cognition is inseparable from the body. The human being does not merely possess a body but *exists through it* — experiences, perceives, and conceptualizes the world via the body. From this perspective, the body functions as the principal medium through which cognition operates.

In this regard, two fundamental models of bodily perception have been proposed in contemporary cognitive science and philosophy:

1. the “**I am my body**” model, and
2. the “**I have a body**” model.

The first model — “*I am my body*” — views the human body as identical with the self. Here, the body is not an external object or instrument but rather the core of human subjectivity. The individual does not *perceive* the body from outside; instead, they *live through it*, experiencing bodily sensations as integral parts of the self. From this viewpoint, bodily experiences and emotions constitute the essence of being, forming the basis of personal identity.

The second model — “*I have a body*” — interprets the body as a material object that *belongs to* the person, as a possession or instrument through which the individual acts upon the world. In this case, the body is somewhat objectified — it is perceived as something separate from consciousness, something that can be analyzed, observed, or even controlled.

Both models coexist in human consciousness, alternating depending on context. When a person feels pain, fatigue, or emotional excitement, the “*I am my body*” model dominates — bodily sensations become inseparable from self-awareness. Conversely, in moments of reflection or deliberate observation (for example, when one looks at their hand or describes their appearance), the “*I have a body*” model becomes active.

These two modes of bodily perception underlie the cognitive and linguistic representation of interoceptive sensations. The choice of words, metaphors, and syntactic constructions used to describe internal bodily experiences reflects whether the speaker positions the body as *self* or as *object*.

For example:

- “My heart hurts” → expresses a possessive relation (*I have a body* model).
- “I am trembling” → expresses complete identification with the body (*I am my body* model).

Thus, the grammatical and lexical structure of interoceptive expressions mirrors the speaker’s cognitive stance toward the body. Languages differ in how explicitly they mark these relations. Some languages encode bodily ownership through possessive constructions (“my head hurts”), while others may employ impersonal or experiential forms (“it hurts to me,” “I feel pain”), suggesting different conceptualizations of embodiment.

In linguistic studies of interoception, such differences are crucial, as they reveal not only the structure of language but also deeper cultural models of bodily experience. For instance, English tends to emphasize *possession* (“my stomach aches”), whereas in some other languages, bodily sensations are expressed impersonally, implying that the sensation itself acts upon the person rather than being “owned” by them.

Therefore, analyzing interoceptive linguistic structures allows us to uncover how different cultures interpret the relationship between body and self — whether the human body is perceived as an autonomous subject, a passive object, or a dynamic medium of experience.

LANGUAGE AS A MIRROR OF INTEROCEPTIVE EXPERIENCE

Language serves as one of the most accurate mirrors of human perception — including the perception of the inner bodily world. Internal sensations such as pain, tension, warmth, coldness, heartbeat, or nausea are inherently subjective experiences that cannot be directly observed by others. Therefore, the only means of making them socially accessible is through linguistic expression.

Through language, individuals externalize their inner bodily states, transforming non-verbal physiological experiences into verbalized, symbolically structured meanings. This process — the *linguistic embodiment of interoception* — is a central mechanism in how humans conceptualize and communicate internal experiences.

From the standpoint of cognitive linguistics, the linguistic encoding of bodily sensations involves several stages:

1. **Physiological perception** — the initial sensory signal (e.g., pain, pressure, heartbeat);
2. **Psychological interpretation** — awareness and emotional evaluation of the sensation;
3. **Verbal conceptualization** — selection of linguistic forms (lexemes, metaphors, syntactic patterns) to express the sensation in communication.

Each stage involves transformation: physiological stimuli are converted into subjective meanings, and these meanings are then encoded into linguistic symbols.

For example, the interceptive sensation of *pain* is often expressed through metaphorical mappings that relate internal experiences to external forces or physical actions:

- *My head is splitting*
- *It feels like my chest is burning*
- *My heart is heavy*

In such expressions, the human mind projects bodily sensations onto conceptual domains such as **motion, force, temperature, or weight**, thus making the invisible inner world more cognitively accessible. These metaphorical models serve not only as linguistic tools but also as cognitive mechanisms that structure how we understand our own body.

Moreover, interceptive sensations are closely linked to emotional states. The boundaries between physical and emotional feelings often blur in linguistic expression. For instance:

- *My heart aches* may denote both physical pain and emotional sorrow.
- *I feel sick to my stomach* can express either physical nausea or psychological disgust.

Such expressions reveal the deep interconnection between **bodily and emotional cognition**, supporting the idea that emotions are fundamentally *embodied experiences*. The body becomes the primary source domain for understanding and expressing emotions — an observation that aligns with the **Embodied Cognition Theory** (Lakoff & Johnson, 1999; Gibbs, 2006).

Linguistic evidence also shows that the vocabulary of interoception is culturally determined. Each language develops its own system of describing internal bodily sensations, reflecting specific cultural attitudes toward the body, illness, and emotion. For example:

- In some languages, *heart* is associated primarily with emotional experience (as in English or Uzbek).
- In others, it may be associated with rationality, courage, or moral strength.

Therefore, the interceptive lexicon of a given language constitutes a **cultural model of embodiment** — a system through which members of a linguistic community interpret the relationship between body, mind, and emotion.

In this way, language not only represents but also *constructs* interceptive experience. It shapes how people perceive, categorize, and communicate the sensations of their inner bodily world. The study of interceptive expressions thus provides valuable insight into the intersection of physiology, psychology, and linguistics — revealing how human consciousness transforms bodily signals into meaningful discourse.

THE COGNITIVE AND CULTURAL DIMENSIONS OF INTEROCEPTIVE SEMANTICS

Interceptive semantics represents a complex system in which **biological, psychological, and cultural factors** interact. The meaning of words and expressions that describe internal bodily sensations is never purely physiological; rather, it emerges through a process of *conceptualization* shaped by individual experience and collective cultural knowledge.

From the **cognitive perspective**, interceptive meaning is grounded in the human body — in sensory experience. However, bodily sensations are not experienced in isolation; they are filtered through perception, attention, emotion, and memory. This mental processing transforms physical stimuli into conceptual structures that are then expressed through language. For instance, a physiological state such as an increased heartbeat may be interpreted as *fear, love, excitement, or anxiety* depending on context.

Thus, interceptive semantics reflects how people *interpret* their bodily sensations, not simply how they *feel* them. In this sense, language serves as a **cognitive interface** between physiology and consciousness — a means of categorizing and communicating bodily experience.

From the **cultural perspective**, every society develops its own symbolic system for describing the body and its internal processes. These systems are influenced by historical, medical, and spiritual traditions that determine what kinds of bodily experiences are acknowledged, valued, or suppressed. For example:

- In Western cultures, interceptive expressions often rely on *medical* or *mechanistic* metaphors (e.g., *my heart is racing*, *my stomach is upset*).
- In Eastern cultures, they are frequently tied to *spiritual* or *energetic* concepts (e.g., *qi*, *inner balance*, *flow of energy*).

Such linguistic variations reveal that the body is not only a biological entity but also a **cultural construct**. The way people talk about their internal sensations depends on the cultural narratives available to them. This aligns with the principles of **linguistic relativity**, according to which language both reflects and shapes cognitive patterns.

Furthermore, cultural norms influence how acceptable it is to verbalize internal states. In some societies, expressing pain, fatigue, or emotional discomfort is socially discouraged, leading to the development of indirect or metaphorical linguistic forms. In others, bodily sensations are openly discussed, resulting in a rich and detailed interceptive vocabulary.

For instance:

- Uzbek and Russian languages often use metaphorical expressions to soften direct reference to inner pain (*yuragim eziladi* – “my heart is crushed,” *dusha bolit* – “my soul aches”), emphasizing the emotional rather than the physiological dimension.
- English, on the other hand, tends to distinguish clearly between physical and emotional pain (*my head hurts* vs. *my heart aches*), reflecting the analytical character of Western cognition.

Thus, interoceptive semantics demonstrates how **culture mediates between body and language**, transforming individual physiological experiences into socially meaningful categories.

At the intersection of cognitive and cultural approaches, it becomes evident that the *inner world of sensations* is not an isolated biological domain, but rather an integral part of human conceptual and communicative activity. By analyzing how interoceptive experiences are verbalized in different languages, we can uncover fundamental aspects of human cognition — namely, how people understand themselves as embodied beings living in culturally structured worlds.

CONCLUSION. The study of interoceptive sensations — that is, the linguistic representation of internal bodily experiences — reveals that human language functions as a complex mirror of both physiological and cognitive processes. Interoception is not merely a biological reaction but a deeply integrated cognitive and cultural phenomenon. Through language, individuals transform subjective bodily sensations into shared, socially interpretable meanings.

The analysis demonstrates that:

1. Interoceptive experiences arise from physiological processes but are *reconstructed* in consciousness through cognitive and emotional evaluation.
2. Language plays a crucial role in this transformation by providing conceptual and metaphorical tools that allow people to externalize internal sensations.
3. Cultural and social contexts shape the ways in which interoceptive states are expressed, conceptualized, and interpreted.

Thus, interoceptive linguistics occupies an interdisciplinary position at the crossroads of physiology, psychology, and linguistics. The study of interoceptive lexicon and discourse contributes to a broader understanding of how language embodies human experience and how cognition emerges from the unity of body, mind, and culture.

Future research in this area should focus on the comparative analysis of interoceptive expressions across different languages and cultural traditions, as well as on corpus-based investigations of how

bodily states are represented in everyday and literary discourse. Such studies will deepen our understanding of the embodied nature of meaning and the role of language in constructing human subjectivity.

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