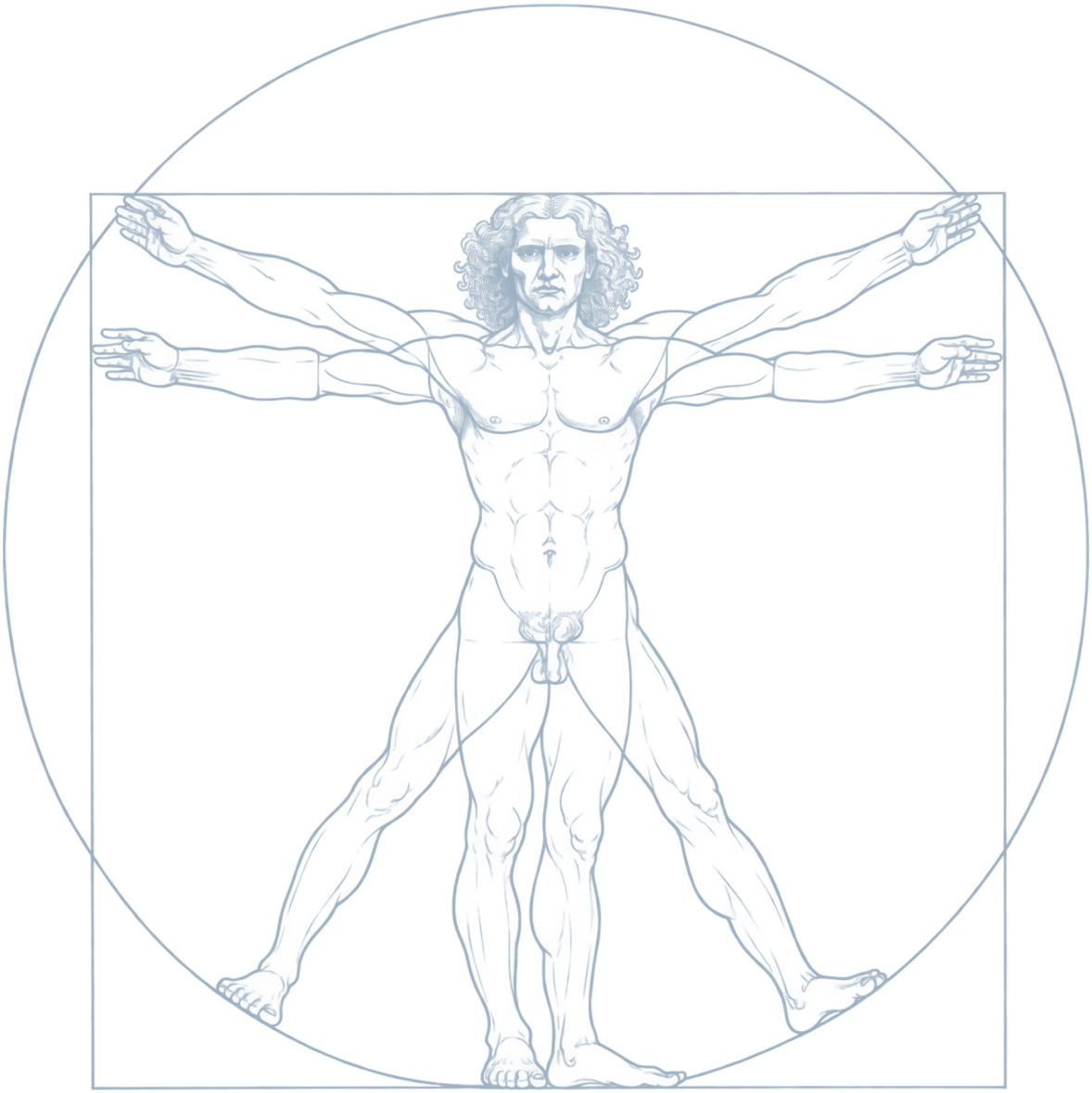
THE HUMAN BODY IN LANGUAGE AND CULTURE

Embodiment in cognitive and cultural linguistics

Judit Baranyiné Kóczy



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PART I. EMBODIMENT, THE HUMAN BODY, AND CULTURAL EXPERIENCE

1. The human body as a basis of conceptualization

The human body is central to the way we experience and understand the world. We perceive our surroundings through our senses, move through space, manipulate objects, and interact with other people. These recurring bodily experiences shape the way we organize knowledge and make sense of more complex or abstract phenomena.

At the same time, the body is not simply a biological basis of cognition. Humans share broadly similar anatomical structures and bodily capacities, but languages do not necessarily segment the body into the same categories or associate the same meanings with certain body parts. Bodily experience always takes place in a social and cultural environment, and cultures may differ in which aspects of the body they consider particularly meaningful or salient.

Body-part terms offer a useful way of exploring this relationship between body, language, and culture. Their meanings often extend well beyond anatomy. Body-part terms can describe the shape or position of objects and geographical features, while also providing ways of talking about less tangible aspects of human experience, including emotions, thought, character, moral judgement, and social relations. The study of body-part semantics can therefore reveal how bodily experience interacts with conceptualization and culturally shared knowledge (Gibbs, 2005; Sharifian et al., 2008; Maalej & Yu, 2011a).



Figure 1. Symbolic and culturally specific meanings associated with different body parts across cultures.

1.1. The embodiment hypothesis: how bodily experience shapes cognition

The embodiment hypothesis is based on the idea that cognition cannot be fully understood independently of the body. Our concepts are shaped, at least partly, by the ways in which we perceive, move, and physically interact with the world. In Cognitive Linguistics, this view is closely associated with Lakoff and Johnson (1980), who argue that abstract concepts are often understood in terms of more concrete areas of experience. Many of these experiences are bodily. Recurrent experiences of movement, orientation, containment, balance, force, and physical interaction can therefore provide a basis for understanding concepts that are not themselves physical.

A simple example is vertical orientation. The distinction between UP and DOWN comes from our experience of the body in space, but it also appears in the way we talk about other domains. Expressions such as *feeling up* and *feeling down* connect vertical orientation with emotional states, while *high status* and *low status* apply the same spatial distinction to social hierarchy. These are not simply isolated expressions: they reflect recurring conceptual associations between spatial experience and more abstract domains.



Figure 2. Bodily experiences of vertical orientation as a basis for abstract conceptualization.

Johnson (1987) uses the term image schema for recurring patterns that emerge from bodily experience and interaction with the environment. Examples include CONTAINER, PATH, SOURCE–PATH–GOAL, UP–DOWN, FRONT–BACK, and BALANCE. These schemas are highly schematic: they do not represent individual objects or events in detail, but capture recurring patterns in experience that can also structure more abstract concepts.

Embodiment does not mean, however, that bodily experience determines meaning in a simple or uniform way. Different approaches give different weight to bodily structure and sensorimotor experience (Clark, 2008; Shapiro, 2004). Earlier accounts of embodiment have also been criticized for paying insufficient attention to the social and cultural contexts in which bodily experience takes place (Rakova, 2002). For the study of body-part meanings, we therefore need

to consider not only their bodily motivation but also how these meanings become conventionalized in language and interpreted within particular cultural contexts.

1.2. Experiencing the human body: external perception, internal sensation, and bodily functions

We experience the body in different ways. Some aspects of it are directly visible, others are known through touch or movement, while internal bodily processes are experienced through sensations such as pain, hunger, heartbeat, or breathing. These different forms of bodily experience can all become relevant to conceptualization and linguistic meaning (Kapitány & Kapitány, 2013).

1.2.1. The externally perceptible body

The external body can be perceived through vision, touch, and movement. Characteristics such as size, shape, colour, contour, visibility, spatial position, and proportion contribute to the way we perceive individual body parts and the body as a whole. The position of body parts is especially important. The body has a recognizable spatial organization: parts may be located at the top or bottom, front or back, centre or sides. These relationships help us identify and categorize parts of the body, but they can also provide models for describing the spatial organization of other entities. Our experience of the body is not exclusively visual. Touch, bodily movement, sounds, odours, hardness and softness, and other sensory properties also contribute to the way the body is experienced and conceptualized (Kapitány & Kapitány, 2013).

1.2.2. Bodily functions

Body parts are also strongly associated with what they do. The hand is associated with grasping and manipulation, the leg with support and locomotion, the eye with seeing, and the mouth with eating and speaking (Shelton et al., 1998). These recurrent associations between a body part and its function can become an important source of semantic extension.

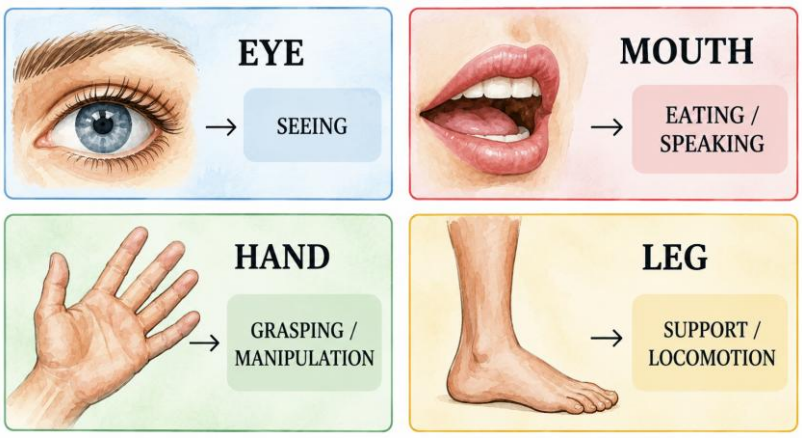


Figure 3. Selected body parts and their basic bodily functions.

1.2.3. The internal body

The internal body is experienced differently. We can feel a heartbeat, hunger, pain, breathing, or other internal processes, but we cannot normally see the organs responsible for them. Our understanding of internal anatomy therefore comes partly from direct bodily sensation and partly from knowledge acquired through medicine, education, traditional beliefs, and cultural models.

This becomes especially important when internal organs are associated with emotion, thought, personality, morality, or spiritual life. Such associations cannot always be explained by physiological function alone. They may reflect historically and culturally established ideas about where emotions, thoughts, or aspects of the self are located in the body.

Bodily experience is also not identical for everyone. Age, sex, physical capacities, and individual bodily differences may affect how the body is experienced and which of its characteristics become salient. A shared human body therefore provides a common experiential basis without producing identical conceptualizations in all individuals or cultures.

1.3. The human body as a source of conceptualization: from physical structure to abstract meaning

Body-part terms frequently develop meanings beyond their anatomical reference. These extensions can be grouped into two broad directions. Body parts may provide models for understanding entities in the external world, or they may be used to conceptualize less directly observable aspects of human experience.

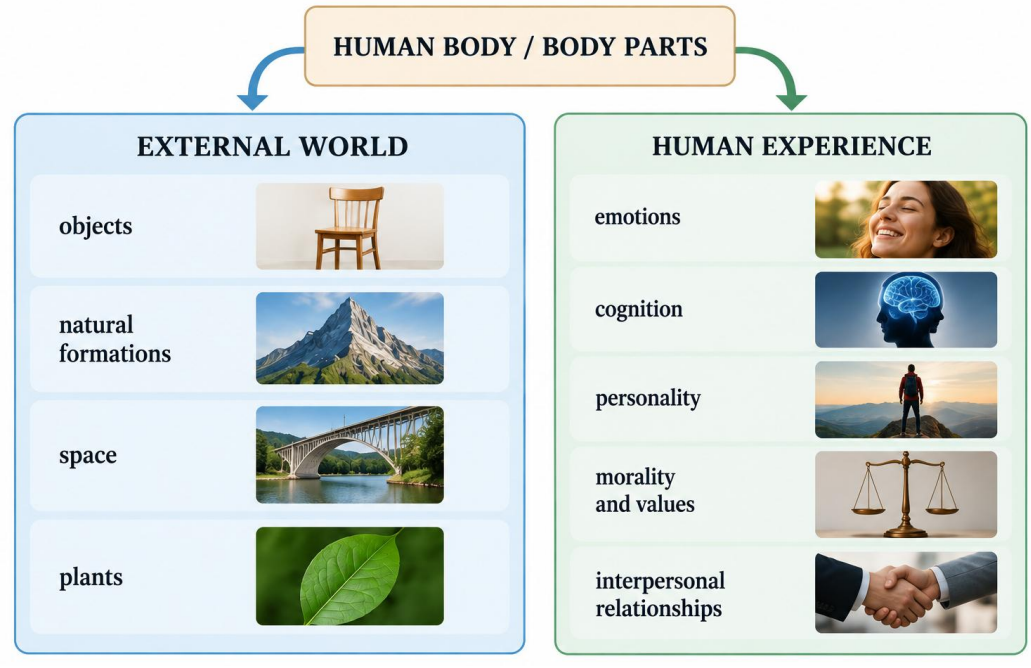


Figure 4. Two major directions of body-based conceptualization.

1.3.1. The body as a model for the external world

The human body provides a familiar model for describing the structure of non-human entities. Expressions such as *foot of the hill*, *mouth of the cave*, and *back of the car* use body-part terms to identify regions of objects or natural formations. Such extensions may be motivated by similarities in shape, position, orientation, or function. The *foot* of a hill is its lower part, corresponding to the position of the human foot relative to the rest of the body. The *mouth* of a cave is an opening that gives access to an interior. Similar patterns can be found in the naming of parts of plants and other natural entities.

1.3.2. The body as a model for psychological and social experience

Body parts can also be associated with experiences that are less directly observable. They may be used to conceptualize emotion, cognition, personality, morality, power, and interpersonal relationships. HEAD, for example, is often associated with thinking, while HEART may be associated with emotion and personal relationships. Such associations may give rise to metaphorical and metonymic extensions.

The use of the human body as a model for understanding other domains reflects the anthropocentric character of conceptualization. We perceive and interpret the world from the perspective of our own bodily experience (Kövecses & Benczes, 2010). However, this does not mean that body-based meanings are identical across languages. Different languages may foreground different properties of the same body part or associate it with different abstract concepts.

The study of body-part semantics therefore involves several related questions: How do languages categorize the human body? How do body-part terms develop additional meanings? What conceptual mechanisms connect these meanings? And how are these semantic patterns influenced by culturally shared knowledge? Conceptual metaphor and metonymy are particularly important in explaining such extensions and will be discussed in detail later in this coursebook.

Discussion and analysis tasks

Task 1. From bodily experience to meaning

Complete the table. Identify the bodily experience and the abstract meaning involved in each expression.

Expression	**Bodily experience**	**Abstract meaning**
feeling up	_____	_____
feeling down	_____	_____

Expression	Bodily experience	Abstract meaning
high status	_____	_____
low status	_____	_____
under pressure	_____	_____

What general pattern can you identify?

_____

_____

Task 2. Experiencing the body

Place the following examples in the appropriate category:
heartbeat – facial expression – hunger – posture – pain – hand movement – breathing – facial redness

External perception	Internal sensation	Bodily movement / function
_____	_____	_____
_____	_____	_____
_____	_____	_____

Can any example belong to more than one category? Give one example.

_____

_____

Task 3. Where does the body extend?

Classify the expressions according to the target domain.
the foot of a mountain – the mouth of a river – Use your head! – open your heart – lend me a hand – the face of a building

BODY → EXTERNAL WORLD	BODY → HUMAN EXPERIENCE
_____	_____
_____	_____
_____	_____

Now choose **one expression from each column** and identify what motivates the extension.

Expression	Body part	Relevant property / function
_____	_____	_____
_____	_____	_____

Task 4. Explore your language!

Choose one body part and find three expressions in your own language.
Body part: _____

Expression	Meaning	What motivates the meaning?
_____	_____	_____
_____	_____	_____
_____	_____	_____

Are these meanings mainly based on bodily experience, cultural knowledge, or both?

2. The human body in cultural context

Although the human body provides a broadly shared biological and experiential basis for cognition, bodily experience is always situated in a social and cultural environment. People learn how to interpret, use, display, and evaluate their bodies as members of particular communities. Cultural practices, beliefs, values, and shared knowledge can therefore influence which aspects of bodily experience become salient and how they are represented in language.

This interaction between body and culture is particularly important for understanding cross-linguistic variation. Similar anatomical structures and physiological processes do not necessarily give rise to identical linguistic categories or conceptual associations. Rather, body-part meanings develop through the interaction of bodily experience with culturally shared ways of understanding the body and the person.

2.1. The body as a culturally embedded entity: social practices, symbols, and values

The human body is not a culture-free object (Gibbs, 2005). Its anatomical structure provides a shared biological basis for human experience, but people encounter and understand the body within particular cultural settings. Bodily movements, physical appearance, bodily practices, and individual body parts may all acquire meanings that go beyond their immediate physical properties.

This is especially clear in social interaction. Bodily actions can express respect, authority, solidarity, intimacy, or social distance, but these meanings cannot always be inferred from the movements themselves. Bowing the head, shaking hands, and making eye contact, for example, involve ordinary bodily capacities, yet their communicative significance depends on culturally established conventions. The same action may therefore be interpreted differently in different communities or interactional settings.

Culture may also influence the meanings attributed to individual body parts. The head, heart, hands, eyes, and other parts of the body can acquire symbolic significance through their association with particular functions, social practices, and cultural beliefs. A body part may consequently become associated with intellectual ability, emotion, personality, moral qualities, social status, or other aspects of personhood.

Internal organs provide an illustrative example: unlike many external body parts, they are not normally accessible to direct visual perception. Although internal processes can be experienced through sensations such as heartbeat, pain, or hunger, knowledge about the organs themselves is also culturally transmitted. Traditional medicine, religious and philosophical ideas, and historically changing theories of the relationship between body and mind may therefore contribute to the meanings associated with particular organs.

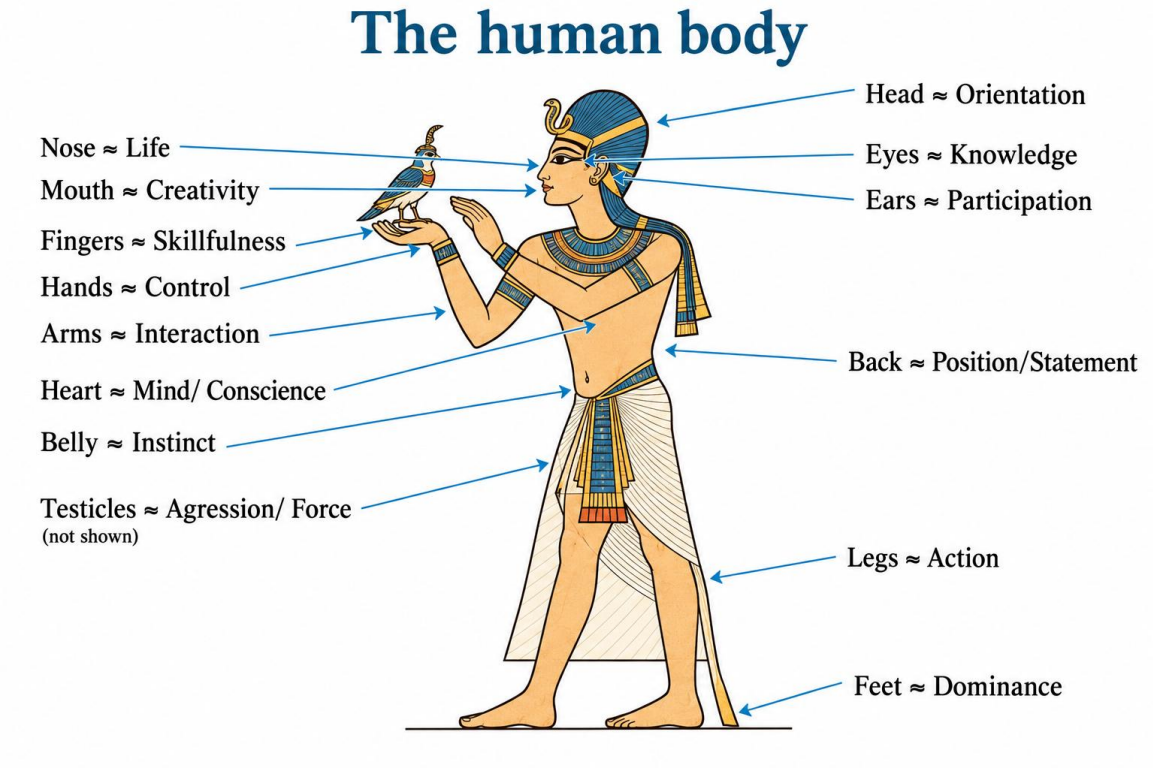


Figure 5. Cultural associations of body parts in Ancient Egyptian conceptualization. Adapted from Kootz (2021).

Cultural interpretations of the body are also historically variable. Changes in medical knowledge, social practices, and cultural beliefs may alter the way particular organs, bodily functions, or physical characteristics are understood. The cultural meaning of a body part is therefore not necessarily stable over time.

At the same time, established bodily concepts can remain productive and develop new linguistic uses. Hungarian *vér* 'blood', for example, occurs in culturally established expressions such as *vérszerződés* 'blood oath', but also in more recent formations such as *vérprofi* 'consummate professional' (lit. blood professional). Such examples show how body-related concepts can participate both in historically established cultural meanings and in newer patterns of conceptualization (Baranyiné Kóczy, 2020b).

The body can thus be understood simultaneously as a biological entity and as a culturally embedded source of meaning. Bodily experience provides the physical basis, but the ways in which the body is interpreted and represented also reflect social practices, cultural knowledge, and historically developed systems of meaning.

2.2. Cultural embodiment: the interaction of bodily experience and cultural knowledge

The growing recognition of culture within theories of embodiment can be seen in a series of formulations that gradually shift attention from the bodily grounding of cognition to the cultural interpretation of bodily experience. Johnson (1987) famously explored "the body in the mind", while Shore (1996) turned attention to "the culture in the mind." Later formulations such as

Maalej's (2008) "the culture in the body" and Mischler's (2008) "cultural embodiment" make the relationship between bodily experience and cultural knowledge increasingly explicit.

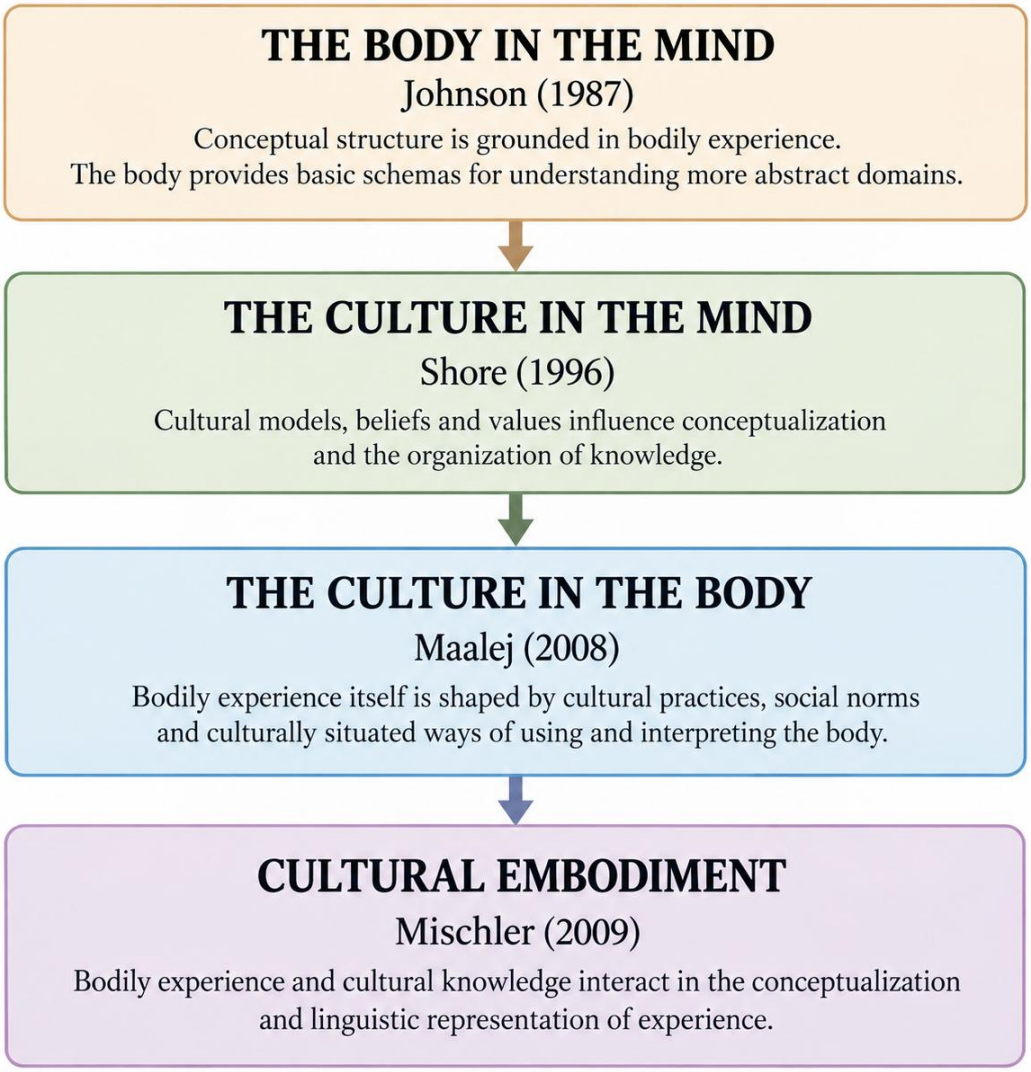


Figure 6. From embodiment to cultural embodiment.

The term "cultural embodiment" refers to the interaction between bodily experience and culturally shared knowledge in conceptualization (Gibbs, 2005; Yu, 2004; Maalej & Yu, 2011b). It does not imply that culture simply adds a separate layer of meaning to an otherwise universal bodily experience. Rather, bodily experience itself is interpreted within cultural models, practices, beliefs, and systems of value.

This distinction is important because the body offers many possible sources of conceptual meaning. A hand can be experienced in terms of shape, position, movement, touch, grasping, holding, giving, receiving, or manipulating. A cultural community does not necessarily develop all of these possibilities to the same extent. Cultural models may foreground particular aspects of bodily experience and establish conventional associations between them and other conceptual domains.

Yu (2004, p. 683) captures this relationship by arguing that the body constitutes a potentially universal source domain for metaphor and metonymy, while cultural models provide the perspectives through which particular bodily experiences or body parts become especially salient in the conceptualization of abstract domains. The relevant contrast is therefore not simply between universal embodiment and cultural meaning, but between a broadly shared range of bodily experiences and their culturally selective elaboration.

The conceptualization of HEART provides a useful example. The physiological organ is shared across human populations, but the concepts associated with it need not be identical. A cultural model may associate the heart primarily with emotion, while another may connect it with both emotional and cognitive functions. Such differences cannot be explained solely by the anatomical properties of the organ; they also reflect culturally transmitted models of the relationship between body, mind, and emotion.

The Chinese concept *xin* 'heart' is a case in point: Yu (2009) shows that *xin* is conceptualized not only as a centre of emotion but also as a physiological and cognitive centre involved in the regulation of body and mind. These meanings are related to traditional Chinese philosophical and medical models and continue to be reflected in contemporary Chinese.

Cultural embodiment therefore concerns more than the presence of body-based metaphor or metonymy. It also concerns the cultural models through which particular bodily properties and functions become associated with other domains of experience. Maalej and Yu (2011b) describe embodiment as a continuum involving both physiological and cultural processes, allowing shared bodily motivation and cultural variation to be treated as interacting rather than competing explanations. Related notions such as culture-specific embodiment, culture-in-the-body, and culturally driven embodiment similarly emphasize the cultural dimension of embodied conceptualization (Gibbs, 1999; Maalej, 2004).

Cultural variation may also affect the connotations and evaluations associated with bodily concepts. Even when similar body-based metaphors occur in two languages, they need not carry the same pragmatic or evaluative meaning. A body-part expression may have positive associations in one cultural context but neutral or negative associations in another. Cross-linguistic analysis therefore needs to consider not only what an expression refers to or which metaphorical mapping it instantiates, but also the cultural meanings and evaluations attached to it (Charteris-Black, 2001).

2.3. Shared bodily experience and cultural variation in body-part conceptualization

Human beings share broadly similar anatomical structures, physiological processes, and sensorimotor capacities. These common features provide a shared experiential basis for conceptualization. They do not, however, determine how the body will be categorized linguistically or which meanings individual body parts will develop.

Languages and cultural communities may differ in several respects: in how they divide the body into lexical categories, in the conceptual domains associated with particular body parts, in which bodily properties become culturally salient, and in the connotations and evaluations attached to body-part expressions.

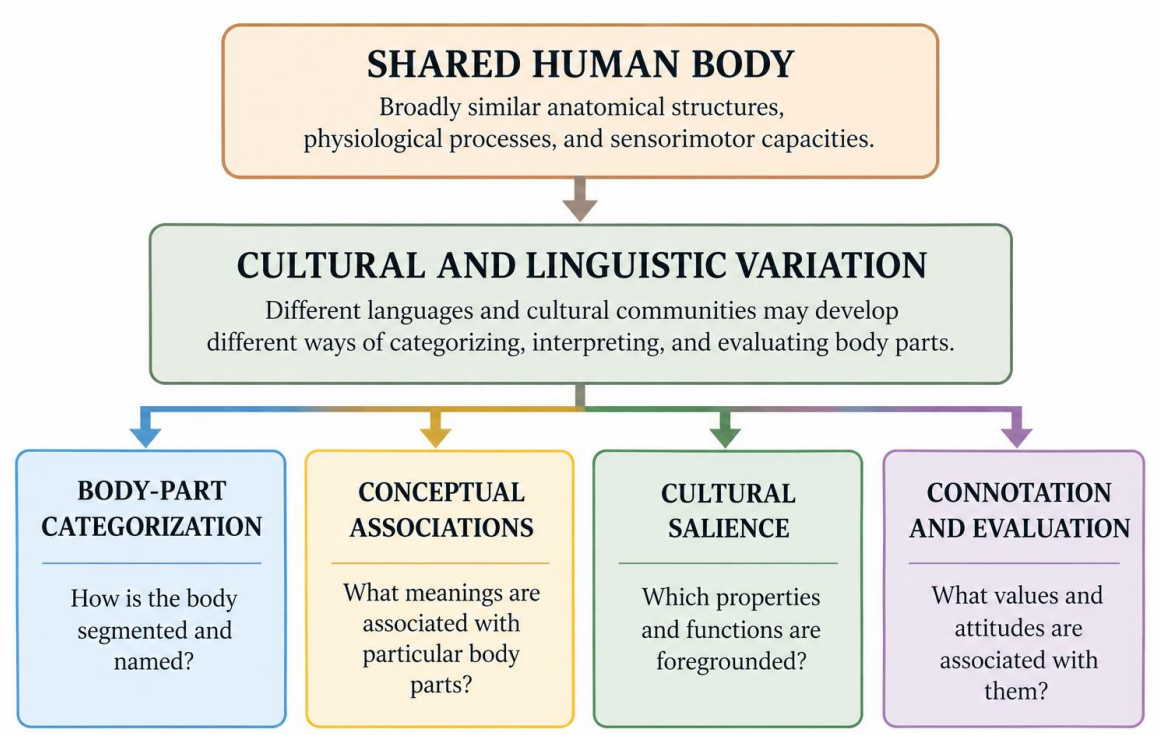


Figure 7. Major dimensions of cultural and linguistic variation in body-part conceptualization.

2.3.1. Variation in body-part categorization

Although human anatomy provides a largely shared biological basis, languages do not necessarily divide the body into identical lexical categories. They may differ in where category boundaries are drawn, how body-part terms are hierarchically organized, and how individual parts are related to larger bodily regions (Enfield et al., 2006; Majid, 2006). A shared anatomical structure, therefore, does not entail lexical or conceptual equivalence.

2.3.2. Variation in conceptual associations

The same anatomical organ may also be associated with different mental, emotional, or social functions. Research on internal organs has identified broad cross-cultural differences in how the relationship between body, cognition, and emotion is conceptualized (Sharifian et al., 2008).

Some cultural models can be described as holistic, in that cognition and emotion are associated with the same bodily centre. These include abdomen-centred conceptualizations, in which the abdominal region functions as a centre of both mental and emotional experience, and heart-centred conceptualizations, in which the heart is associated with both cognition and emotion. By contrast, dualistic head–heart conceptualizations associate cognitive and emotional functions with different bodily centres, typically linking cognition with the head and emotion with the heart.

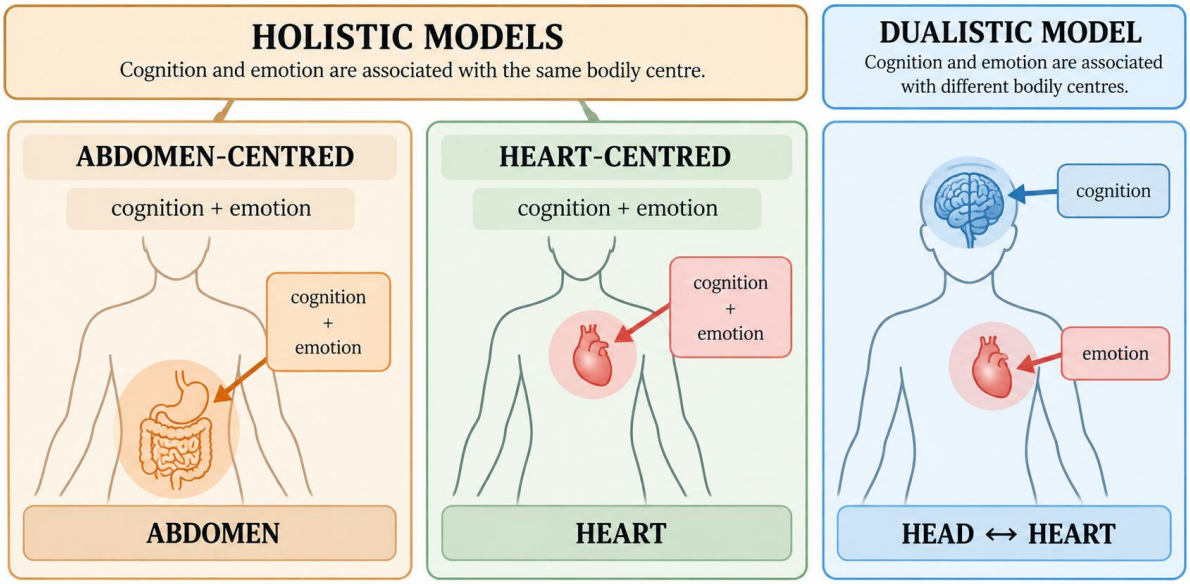


Figure 8. Selected cultural models of the bodily location of cognition and emotion.

These patterns show why cross-cultural analysis needs to ask more than simply "which body part is used?" It also needs to ask what model of the body and person makes a particular association meaningful.

2.3.3. Variation in cultural salience

A body part has many potentially relevant properties. It has a particular shape and spatial position, performs particular physiological or practical functions, and may participate in culturally significant activities. Languages do not foreground all of these properties equally. One cultural community may develop meanings based primarily on a body part's position or shape, another on its physiological function, and another on its role in culturally significant practices. Cross-linguistic variation can therefore arise not only because different body parts are selected, but also because different aspects of the same body part become salient.

2.3.4. Variation in connotation and evaluation

Finally, apparently similar body-part expressions may differ in their cultural connotations. Two languages may use the same body part in expressions referring to a comparable conceptual domain while attaching different social, moral, or emotional evaluations to it. Formal or metaphorical similarity therefore does not necessarily imply cultural equivalence.

These patterns suggest that the relationship between embodiment and culture cannot be reduced to a simple opposition between the universal and the culture-specific. The body provides a range of shared experiential possibilities, while cultural knowledge influences which of these possibilities become salient, how they are linguistically elaborated, and what additional meanings and values they acquire. Physiological experience and cultural knowledge are therefore better understood as interacting sources of conceptualization.

This perspective also prepares the ground for the next part of this coursebook. Before examining the metaphorical and metonymic extensions of body-part terms, we first need to understand how languages segment, name, and organize the human body itself. As the following chapters will show, a shared human anatomy does not necessarily result in equivalent body-part categories across languages.

Discussion and analysis tasks

Task 1. Body, action, and cultural meaning

Complete the table. Think about how the same bodily action may acquire different meanings in different cultural contexts.

Bodily action	**Possible meaning**	**Does the meaning depend on cultural knowledge?**
bowing the head		YES / NO / PARTLY
shaking hands		YES / NO / PARTLY
closing the eyes or looking down		YES / NO / PARTLY
touching one's own nose with the index finger		YES / NO / PARTLY

Add one example from your own cultural experience.

Task 2. Universal embodiment or cultural elaboration

The conceptualization of HAND shows both recurrent patterns grounded in bodily experience and culturally specific elaborations. Complete the final column.

Language / cultural context	**Salient conceptualization of HAND**	**Mainly embodied or culturally elaborated?**
Polish	POSSESSION / POWER / CONTROL	_____
Tunisian Arabic	CHARACTER TRAITS / CULTURAL VALUES	_____
Turkish	EMOTION	_____

Hungarian archaic prayers	PROVIDENCE / JUDGMENT / SALVATION	_____
Chinese	SKILL / COGNITIVE ABILITY	_____
Kazakh	SKILL / COMPETENCE / MORAL DISPOSITION	_____
Dholuo	POSSESSION / HELP / MORALITY / COMMUNAL RESPONSIBILITY	_____
Fulfulde	POSSESSION / INVOLVEMENT / GENEROSITY	_____

Then choose **two examples** and complete the analysis:

Language	Bodily basis	Cultural elaboration
_____	_____	_____
_____	_____	_____

What does the comparison show?

Embodiment provides an experiential basis, but culture guides the selection and elaboration of meaning.

Task 3. Shared body, different cultural models

Complete the diagram using the concepts below:
COGNITION – EMOTION – HEAD – HEART – SAME BODILY CENTRE – DIFFERENT BODILY CENTRES

Cultural model	Cognition	Emotion
Holistic model	_____	_____
Dualistic model	_____	_____

Then complete:

HOLISTIC MODEL: cognition + emotion → _____
DUALISTIC HEAD–HEART MODEL: cognition → _____ ; emotion → _____
Why does this difference support the concept of cultural embodiment?

PART II. THE LINGUISTIC CATEGORIZATION OF THE HUMAN BODY ACROSS LANGUAGES

3. Cross-linguistic variation in the categorization of body parts

The human body provides a shared anatomical and experiential basis for conceptualization, but languages do not necessarily divide it into the same categories. Although human beings have broadly similar anatomical structures, languages may differ in where they draw the boundaries between body parts, which anatomical regions they name separately, how body-part terms are organized, and what meanings these terms cover.

This raises a number of questions for cross-linguistic research. Do all languages recognize the same anatomical regions as distinct body parts? Do visible anatomical boundaries, such as joints, correspond to lexical boundaries? Are body-part categories organized hierarchically in similar ways? And can words translated as *arm*, *hand*, *leg*, or *foot* be assumed to refer to the same anatomical regions across languages?

These questions are particularly relevant to theories of embodiment. If the categorization of the body followed directly from anatomy and universal perceptual processes, we might expect considerable similarity across languages. If linguistic convention and cultural knowledge also contribute to categorization, however, the same human anatomy may be divided and represented in different ways (Majid, 2006).

A major cross-linguistic project involving ten languages investigated how speakers segment and categorize the human body. The findings, published in a special issue of *Language Sciences* in 2006, revealed both recurring patterns and substantial variation. Body-part categorization is therefore neither entirely arbitrary nor fully determined by anatomy (Enfield et al., 2006; Majid, 2006).

The following sections examine four related issues: the relationship between anatomy and linguistic categorization, the boundaries of body-part categories, cross-linguistic differences in the lexical inventory of body-part terms, and the question of semantic equivalence across languages.

3.1. Anatomy and linguistic categorization: do anatomical boundaries determine body-part categories?

The human body has a recognizable anatomical structure. Body parts differ in shape, size, position, and function, and many of these differences are perceptually salient. Joints, changes in contour, and differences in mobility can provide natural cues for dividing the body into smaller regions.

Such anatomical and perceptual cues do not, however, automatically determine linguistic categories. A language may group physically distinguishable regions under a single term, or it may distinguish regions that do not correspond to clearly visible anatomical boundaries. The existence of an anatomical distinction therefore does not necessarily imply a corresponding lexical distinction.

Majid (2006, p. 242) approaches this issue by contrasting the role of physical and perceptual regularities with that of linguistic and cultural conventions. If body-part categories were determined primarily by innate concepts or perceptually salient features of the human body, languages could be expected to show relatively similar systems of categorization. Cross-linguistic variation suggests, however, that physiological experience and culturally and linguistically shaped ways of interpreting the body interact in body-part categorization.

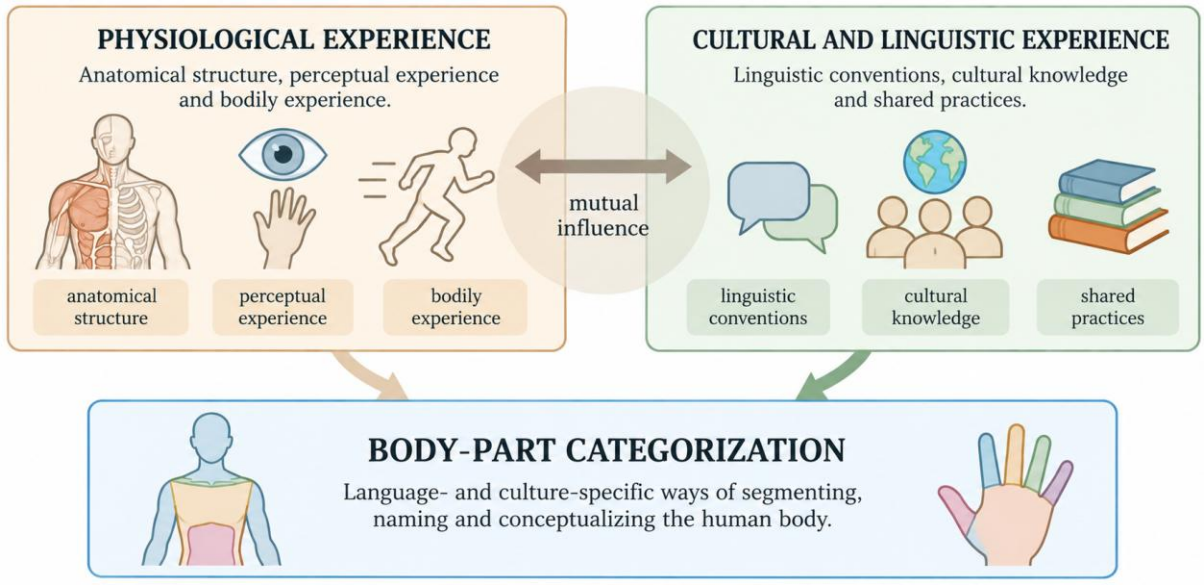


Figure 9. Factors involved in the linguistic categorization of the human body.

A striking example comes from Tiriyó, a language spoken in northern Amazonia. Tiriyó speakers use the term *kɔDDi* for an oval organ, approximately the size of a small egg, located below the sternum. Speakers report that it can be palpated in many people's bodies in the region corresponding to the xiphoid process. Yet the entity identified as *kɔDDi* has no direct equivalent as a separate organ in conventional medical anatomy (Majid, 2006, p. 250).

This example is important because it shows that linguistic categorization cannot always be treated as a straightforward linguistic labelling of independently established anatomical units. A speech community may recognize and name a bodily entity on the basis of bodily experience and a culturally established understanding of the body even when that entity does not correspond to a separate category in biomedical anatomy.

Body-part categories are therefore best understood as arising from an interaction between anatomical structure, perception, bodily experience, linguistic convention, and cultural knowledge.

3.2. Segmenting the human body: cross-linguistic differences in category boundaries

To categorize the body linguistically, speakers must in some way identify regions of the body and distinguish them from neighbouring regions. Some boundaries are perceptually conspicuous. Joints are especially relevant because they separate regions of the limbs and allow different patterns of movement.

Nevertheless, a perceptually salient joint does not necessarily function as a lexical boundary in every language. Languages may disagree about whether the ankle, wrist, knee, or another anatomical point separates two body-part categories. They may also differ in how far a particular category extends along the body (Majid, 2010).

This variation is readily observable in the categorization of the lower limb. In Hungarian, *láb* generally covers the whole lower limb, from the hip downwards, including the foot. The foot can also be singled out more specifically as *lábfej*, beginning at the ankle. Thus, Hungarian allows both a broader category and a more specific term for its distal region. English organizes this area differently. In everyday language, *leg* may be used for the lower limb more broadly, although speakers do not always agree on its precise boundaries, while *foot* is lexically distinguished. In anatomical terminology, however, *leg* has the narrower meaning of the region between the knee and ankle. Punjabi distinguishes the leg and foot as separate categories. Yélî Dnye, by contrast, distinguishes an upper and a lower region of the leg, but the lower category extends into the foot, so the ankle does not mark the boundary between two independent lexical categories. Jahai makes a three-way distinction between the upper leg, lower leg, and foot.

Tidore provides an even more striking example. The term *yohu* refers to a region extending from the foot to approximately three-quarters of the way up the thigh. Its upper boundary does not coincide with a visually obvious anatomical discontinuity (Enfield et al., 2006, p. 141).

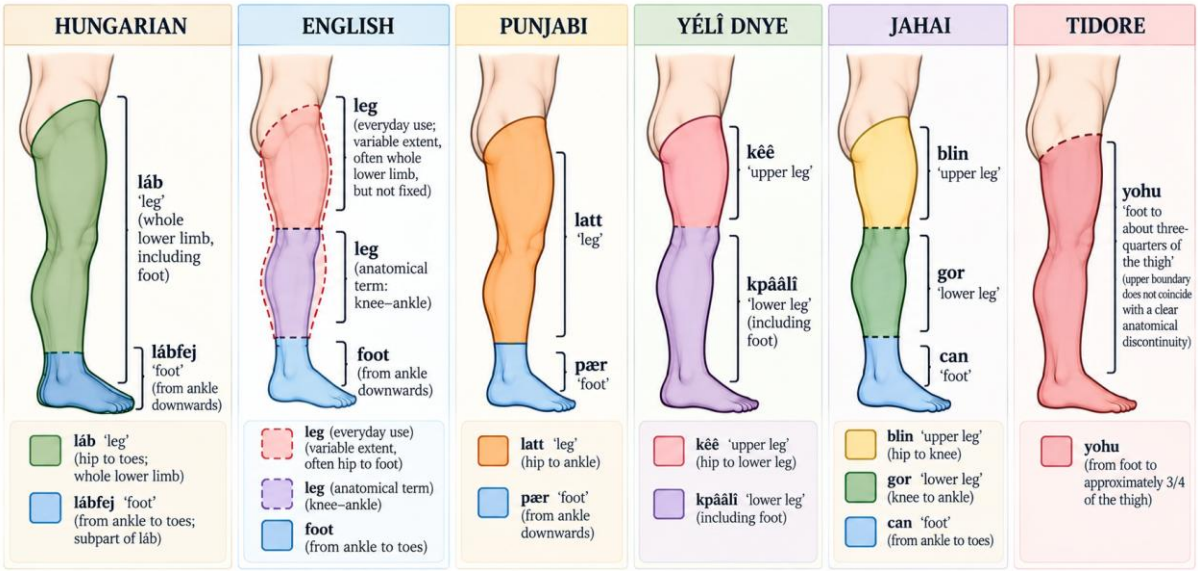


Figure 10. Cross-linguistic differences in the segmentation of the lower limb.

Anatomical boundaries therefore constrain body-part categorization without determining it completely. Languages may select different boundaries, combine several anatomical regions within a single category, or establish lexical categories whose boundaries do not coincide with conspicuous anatomical divisions.

3.2.1. Paired body parts: two entities or one functional unit?

Paired body parts raise a different kind of categorization problem. Two eyes, hands, ears, or feet can be perceived as separate anatomical entities, but they may also be construed collectively as a functional pair. In such cases, one member of the pair can be understood as one half of the normal configuration.

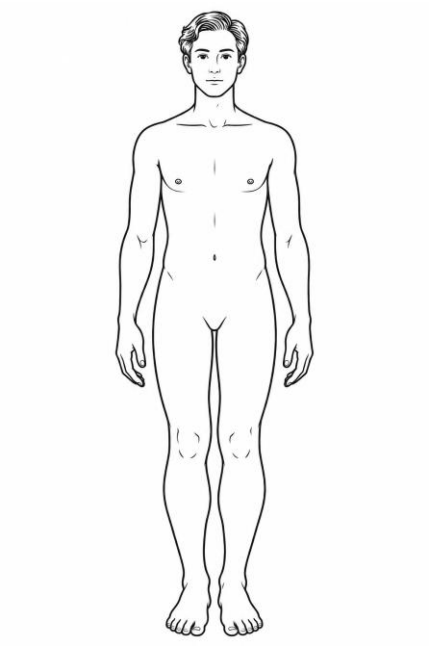
Hungarian provides interesting linguistic evidence for this construal. In *fél szemét rajta tartja* 'he/she keeps an eye on somebody/something', literally 'keeps half of his/her eye on', *fél* 'half' refers to the use of one of the two eyes. Similarly, *fél kézzel felemeli* 'he/she lifts it with one hand', literally 'lifts it with half a hand', uses *fél kéz* 'half hand' for one hand out of the normal pair. The expressions suggest that the two members can be construed together as a single functional configuration, with one member representing half of that configuration.

This can also be related to a broader conceptual association between wholeness and normal bodily functioning. Hungarian *egész* 'whole', *egészség* 'health', and *egészséges* 'healthy' show a lexical relationship between wholeness and health. This does not itself establish how paired body parts are categorized, but it provides evidence for a more general association between bodily completeness and functional integrity.

Colouring task: exploring body-part boundaries

Think about what the following words mean in your native language. Colour the corresponding areas on the human body. Use a different colour for each body part and decide as precisely as possible where each area begins and ends.

FACE · ARM · HAND · LEG · FOOT · STOMACH · CHEST



When you have finished, compare your drawing with a partner's. Do your categories cover exactly the same regions? Pay particular attention to the boundaries between ARM and HAND, LEG and FOOT, and STOMACH and CHEST.

Discuss:

1. Which boundaries were easy to identify?
2. Which were less clear?
3. Did speakers of different languages colour any regions differently?
4. Does a visible anatomical boundary always correspond to a lexical boundary?

The purpose of the task is not to identify the anatomically "correct" division of the body, but to make the boundaries of linguistic categories visible.

3.3. Lexical variation in body-part systems: which anatomical regions are named?

Cross-linguistic variation concerns more than category boundaries. Languages also differ in which bodily regions are conventionally encoded by separate lexical items. A region that has a basic body-part term in one language may be included within a broader category in another, while some languages distinguish regions for which English or Hungarian has no comparable basic term.

Earlier approaches often assumed a hierarchical system headed by a superordinate category BODY, with major categories such as HEAD, TRUNK, ARM, and LEG below it (Brown,

1976; Andersen, 1978; Tversky, 1989). Cross-linguistic research has shown that this familiar organization cannot simply be projected onto all languages.

Even BODY is not necessarily represented by a stable, independent lexical category. Words translated as 'body' may also mean 'skin', 'trunk', or 'person', and their meanings may change historically. In Tidore, for example, the basic vocabulary does not contain a term corresponding specifically to the physical human body. *Mansia* means 'person' or 'human being', while speakers may use the Indonesian loanword *badan* when they need to refer specifically to the physical body (van Staden, 2006).

Nor is HEAD necessarily lexicalized as a single general category. Jahai lacks a general term referring to the head as a whole. Instead, *kuy* refers more specifically to the upper region of the head covered by hair (Burenhult, 2006). Several languages in the comparative sample, including Jahai, Tiriyó, Tidore, and Punjabi, also lack a separate basic term for TRUNK, using instead the term referring to the body more generally.

The distinction between ARM and LEG is likewise not universal. Lavukaleve has a single general term corresponding to 'limb' that covers both arms and legs (Terrill, 2006). Jahai lacks general categories corresponding directly to ARM and LEG, while possessing more specific terms for upper arm, forearm, hand, upper leg, lower leg, and foot. Hopi shows yet another pattern: the upper leg, lower leg, and foot form separate categories, whereas the arm and hand constitute a single category without further segmentation (Swanson & Witkowski, 1977).

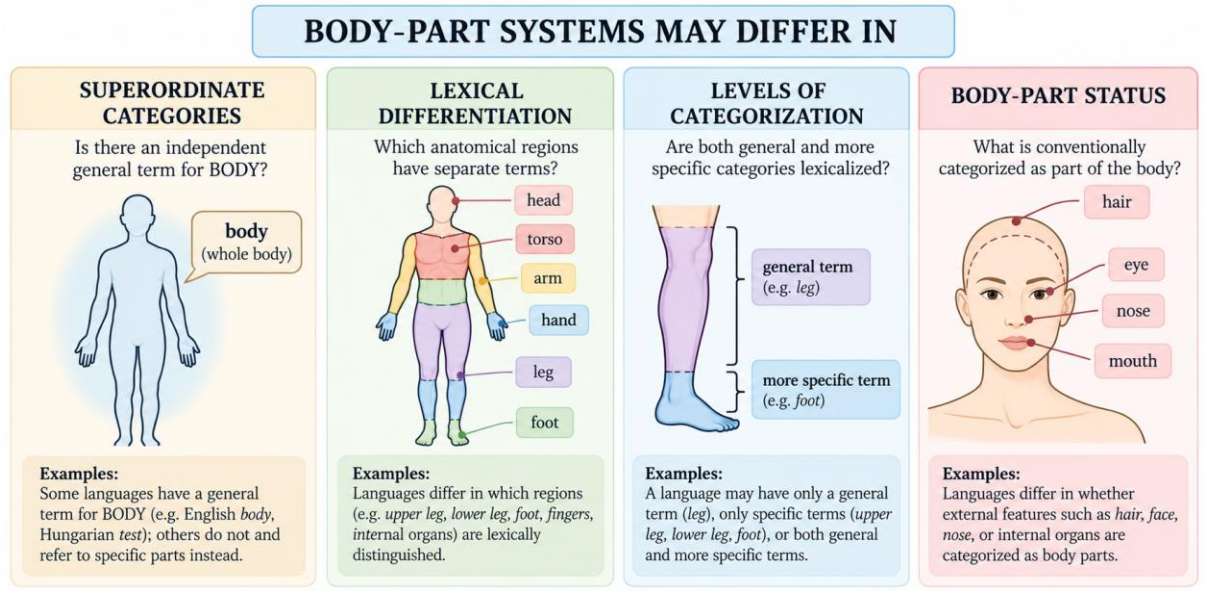


Figure 11. Types of lexical variation in body-part systems.

The last question is particularly interesting because languages may differ not only in how an entity is named but also in whether it is conventionally treated as a body part. Hair is a useful example. It is physically attached to the body, but this anatomical fact alone does not determine how it is classified linguistically. Its status may depend on several factors, including its function, visibility, linguistic behaviour, and speakers' intuitions, and these criteria do not necessarily lead to the same categorization. Languages may therefore differ in whether and how hair is integrated into their system of body-part categories.

The absence of a separate body-part term should not, of course, be interpreted as an inability to perceive the corresponding anatomical region. It means that the language does not conventionally encode that region through an independent basic body-part term.

3.4. Cross-linguistic correspondence and semantic boundaries of body-part terms

Body-part terms in different languages may appear to correspond to one another, yet they do not necessarily represent the same conceptual categories. Terms referring to such familiar body regions as the *arm*, *hand*, *leg*, or *foot* may divide the human body in different ways and may therefore differ in their semantic boundaries. Cross-linguistic correspondence between body-part terms should not be taken to imply equivalence between the underlying categories.

Majid and van Staden (2015) investigated these differences experimentally in Dutch, Japanese, and Indonesian. Rather than relying on linguistic labels alone, they used a colouring task in which speakers coloured the regions of a body corresponding to particular lexical items in their native language. This made it possible to compare the spatial extent of body-part categories across languages and to identify differences in how the same anatomical continuum is linguistically segmented.

3.4.1. ARM and HAND

The three languages have terms referring to broadly comparable regions of the upper limb, but these terms do not divide the body in the same way. In Japanese, *ude* refers to the region from the shoulder to the wrist, excluding the hand, while *te* designates the hand. Indonesian *tangan*, by contrast, extends across both the arm and the hand. Dutch falls between these patterns: *hand* is a distinct category, but the boundaries of *arm* are less stable, with approximately half of the participants also including the hand within the category.

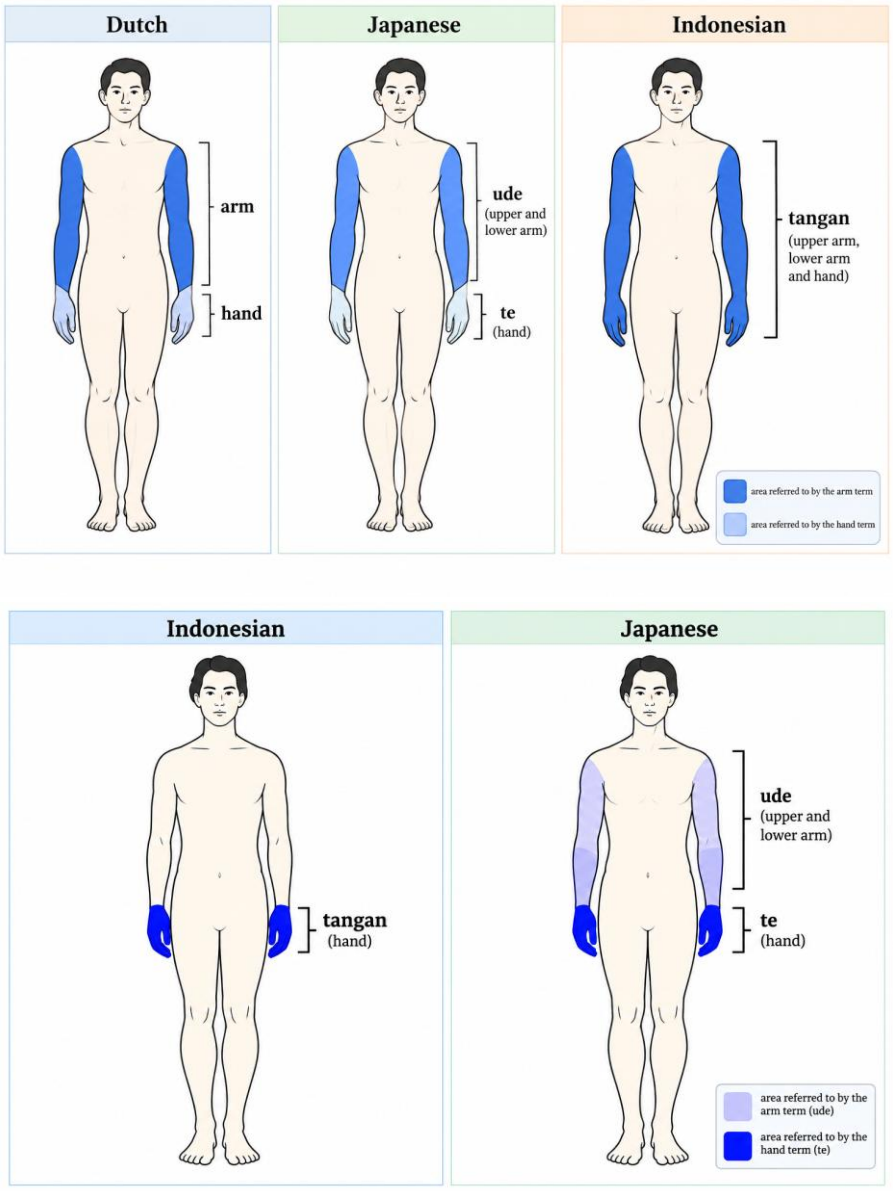


Figure 12. Semantic boundaries of ARM/HAND terms in Dutch, Japanese, and Indonesian. Adapted from Majid and van Staden (2015).

3.4.2. LEG and FOOT

A similar pattern occurs in the lower limb. Dutch distinguishes *been* 'leg' from *voet* 'foot'. Japanese *ashi* and Indonesian *kaki*, by contrast, extend across both the leg and the foot. The ankle is therefore anatomically salient in all three cases but does not function as the same kind of lexical boundary across the three languages.

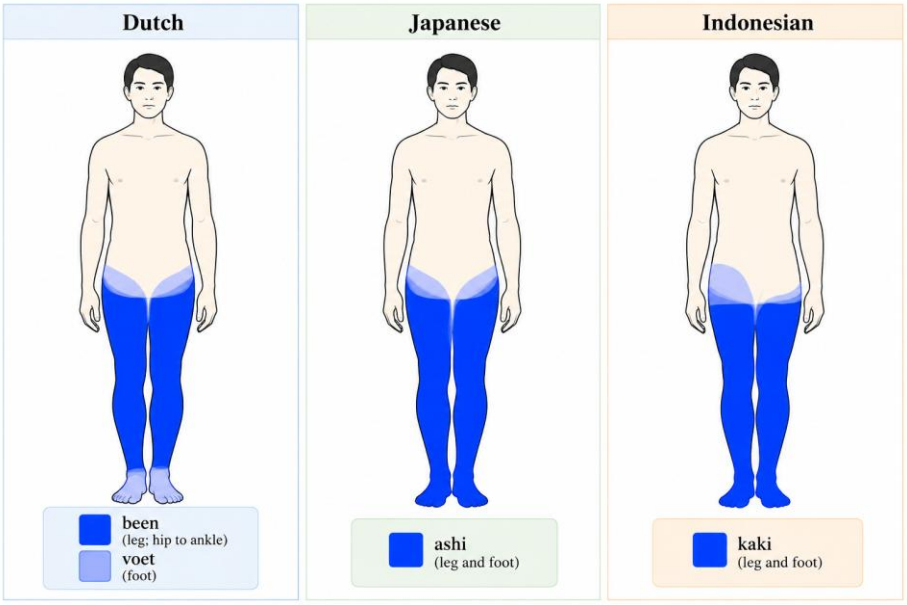
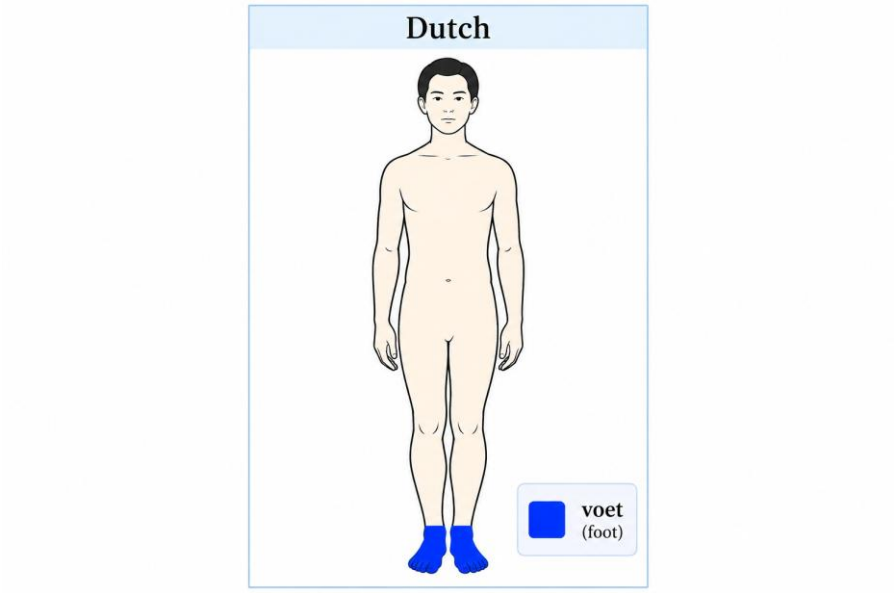


Figure 13. Semantic boundaries of LEG/FOOT terms in Dutch, Japanese, and Indonesian. Adapted from Majid and van Staden (2015).



3.4.3. HEAD

Even a category such as HEAD, which may initially appear relatively straightforward, cannot automatically be assumed to have identical boundaries across languages. The colouring data reported by Majid and van Staden (2015) show that the regions associated with Dutch *hoofd* and Japanese *atama* do not completely coincide.

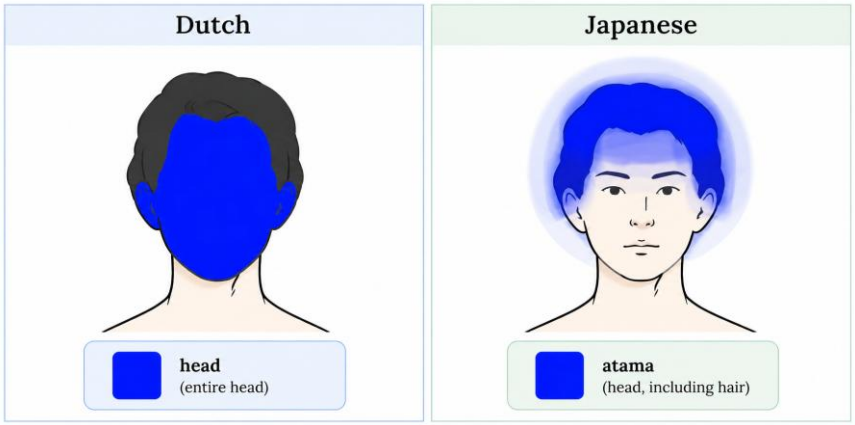


Figure 14. Differences in the spatial extent of HEAD in Dutch and Japanese. Adapted from Majid and van Staden (2015).

The example reveals an important methodological aspect: apparently corresponding body-part terms across languages may differ in their spatial extension and category boundaries. Establishing cross-linguistic equivalence therefore requires examining the actual referential range of body-part terms rather than assuming that corresponding lexical items encode the same conceptual category.

The methodological consequence is important:

LEXICAL CORRESPONDENCE ≠ SEMANTIC EQUIVALENCE

Two lexical items referring to broadly corresponding body regions do not necessarily encode the same body-part category. Their anatomical scope and category boundaries need to be established within the linguistic system of each language. Majid and van Staden (2015, p. 586) therefore caution against treating English as a reliable metalanguage for cross-linguistic comparison of body-part meanings.

3.5. Variable naming of the limbs across languages

Cross-linguistic comparison reveals considerable variation in how languages segment and name the upper and lower limbs. Some languages distinguish several anatomical regions through

separate lexical items, whereas others use a single term for regions that are lexically differentiated in English. Table 1 summarizes some of these contrasting patterns.

Table 1. Variable naming of limbs across languages. Adapted from Majid and van Staden (2015).

	Upper Arm	Lower Arm	Hand	Upper Leg	Lower Leg	Foot
Jahai (Burenhult, 2006)	*bliŋ*	*prbɛr*	*cyas*	*bliʔ*	*gor*	*can*
Punjabi (Majid, 2006)	*bãã*		*hatth*	*latt*		*pær*
Dutch	*arm*		*hand*	*been*		*voet*
Japanese	*ude*		*te*	*ashi*		
Yélî Dnye (Levinson, 2006)	*kêê*			*kpââlî*	*yi*	
Indonesian	*tangan*			*kaki*		
Savosavo (Wegener, 2006)	*kakau*			*nato*		
Lavukaleve (Terrill, 2006)	*tau*					*fe*

The table makes the central point particularly visible: anatomical segmentation and lexical segmentation do not correspond in a uniform way. A single lexical item may cover several anatomically distinguishable regions. Indonesian *tangan*, for example, extends across the upper arm, lower arm, and hand, whereas Dutch distinguishes *arm* from *hand*. Japanese *ude* covers the upper and lower arm but excludes the hand, while *ashi* extends across the upper leg, lower leg, and foot.

The colouring task is especially useful in cross-linguistic research because it allows speakers to indicate the spatial extent of a lexical category directly. Researchers can therefore compare body-part meanings without beginning from the assumption that words offered as translation equivalents refer to identical anatomical regions.

3.6. One anatomical region, multiple lexical categories

Cross-linguistic variation in body-part categorization does not only concern the boundaries between anatomical regions. Languages may also use several lexical items for what appears to be the same body part, with different terms highlighting physical, emotional, cognitive, or spiritual aspects (Baranyiné Kóczy & Sipőcz, 2023).

The HEART is a readily observable example. Japanese distinguishes *shinzō*, referring primarily to the physical organ, *kokoro*, a semantically complex concept associated with inner experience, *haato*, borrowed from English *heart*, and *mune* 'chest', which may metonymically refer to the heart. Kurdish distinguishes *ghalb*, primarily referring to the physical organ, from *dil*, which is associated with fate, decision-making, and the soul or spirit. Turkish similarly distinguishes native *yürek* from Arabic *kalp*, with *yürek* being more productive in figurative usage (Baranyiné Kóczy & Sipőcz, 2023).

Ainu is an interesting example of the diachronic restructuring of body-part categories. Unlike the Kurdish and Turkish cases, the coexistence of several HEART terms in Ainu cannot be explained by borrowing. Three Pan-Ainu terms occur: *sanpe* 'heart', *kewtum* 'heart; temperament, emotion', and *ram* 'heart; mind, soul, spirit' (de la Fuente, 2023).

Historical linguistic data suggest that these terms participated in what de la Fuente (2023) describes as a "cycle of literal to figurative meaning". In this process, a body-part term originally referring to the physical organ gradually develops figurative meanings. As its semantic range becomes increasingly associated with psychological or abstract domains, another lexical item takes over the literal anatomical function. This new term may subsequently undergo a similar process of semantic extension. In Ainu, the reconstructed development can be represented as follows:

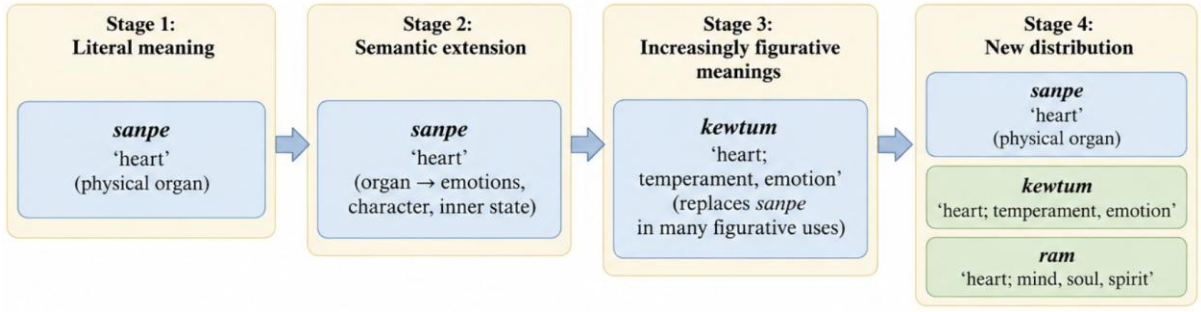


Figure 15. The cycle of literal to figurative meaning
in Ainu HEART terms (based on Baranyiné Kóczy & Sipőcz, 2023)

The earliest stage, in which *kewtum* referred to the physical organ, is not directly attested in the available linguistic data. However, the etymological evidence supports the reconstruction of an earlier physical reference. The Ainu case therefore shows how semantic extension may contribute to the historical reorganization of body-part categories, producing several coexisting lexical items with different conceptual profiles (de la Fuente, 2023).

These examples demonstrate that apparent translation equivalents such as *heart* should not automatically be treated as equivalent conceptual categories:

ONE ANATOMICAL REGION → MULTIPLE LEXICAL CATEGORIES → DIFFERENT CONCEPTUAL PROFILES

The evidence reviewed in this chapter shows that a shared human anatomy does not result in a single universal system of body-part categories. Languages differ in where they draw

category boundaries, which bodily regions they lexicalize, how broadly individual terms extend, and how body-part categories relate to one another. The next chapter turns from the boundaries of individual categories to the semantic relations through which body-part terms are organized into larger systems.

Discussion and analysis tasks

Task 1. Can you guess the body part?

Japanese body-part terms sometimes contain the name of another body part. You do not need to know Japanese to complete this task. Look at the literal structure of each expression and guess what it refers to. Choose from the meanings in the box.

Possible meanings:
heel · bridge of the nose · wrist · outer corner of the eye · palm · tip of the nose · ankle · inner end of the eyebrow · forehead · top of the foot · inner corner of the eye · knuckle · back of the hand · outer end of the eyebrow · temple · arch of the foot · eyelid · nostril · shin · cheekbone

Japanese term	Literal structure	What does it mean?
手首 *tekubi*	HAND + NECK	_____
足首 *ashikubi*	FOOT/LEG + NECK	_____
手の甲 *te no kō*	HAND + BACK/TOP	_____
足の甲 *ashi no kō*	FOOT/LEG + BACK/TOP	_____
鼻先 *hanasaki*	NOSE + TIP	_____
鼻筋 *hanasuji*	NOSE + LINE/RIDGE	_____
目頭 *megashira*	EYE + HEAD	_____
目尻 *mejiri*	EYE + REAR/END	_____
眉頭 *mayugashira*	EYEBROW + HEAD	_____
眉尻 *mayujiri*	EYEBROW + REAR/END	_____

Task 2. Look for the pattern!

Complete the table!

Embedded body-part concept	**What spatial meaning does it seem to express?**
NECK	_____
HEAD	_____
BACK / REAR	_____
TIP	_____

Which meaning was easiest to guess?

Which was the most surprising?

What do these examples suggest about how familiar body-part concepts can be used to categorize other regions of the body?

---

4. Organizing body-part concepts: part–whole relations, reference points, and semantic extension

The linguistic categorization of the human body involves more than identifying and naming individual anatomical regions. Body-part concepts also form structured systems in which individual parts are related to larger anatomical units, neighbouring regions, and more specific subdivisions. These relationships may be based on part–whole organization, spatial location, possession or association, and relations between more general and more specific categories.
Two notions are particularly important in describing such systems: taxonomy and partonomy. A taxonomy classifies entities according to kind-of relations, whereas a partonomy organizes them according to part–whole relations. The distinction is particularly relevant to the human body because body parts can themselves contain smaller parts while simultaneously forming parts of larger anatomical units. Cross-linguistic research shows, however, that the resulting systems are not identical across languages (Enfield et al., 2006).

This chapter examines several mechanisms involved in the organization of body-part concepts. It begins with hierarchical part–whole relations and then considers other semantic relations involved in body-part naming. It subsequently introduces reference-point organization and metonymy as mechanisms through which one anatomical region may provide conceptual access to another. The final sections consider the extension of body-part terms to spatial and temporal relations and the role of cultural salience in body-part systems.

4.1. Hierarchical organization of the body: part–whole relations and partonomy

Body-part concepts are frequently organized through part–whole relations. A body part may be a constituent of a larger anatomical unit while at the same time containing smaller constituent parts. A hand, for example, can be understood as part of an arm, fingers as parts of the hand, and fingernails as parts of the fingers.

This type of organization is known as partonomy. Unlike taxonomy, which groups entities according to what kind of entity they are, partonomy specifies how smaller components relate to larger wholes.

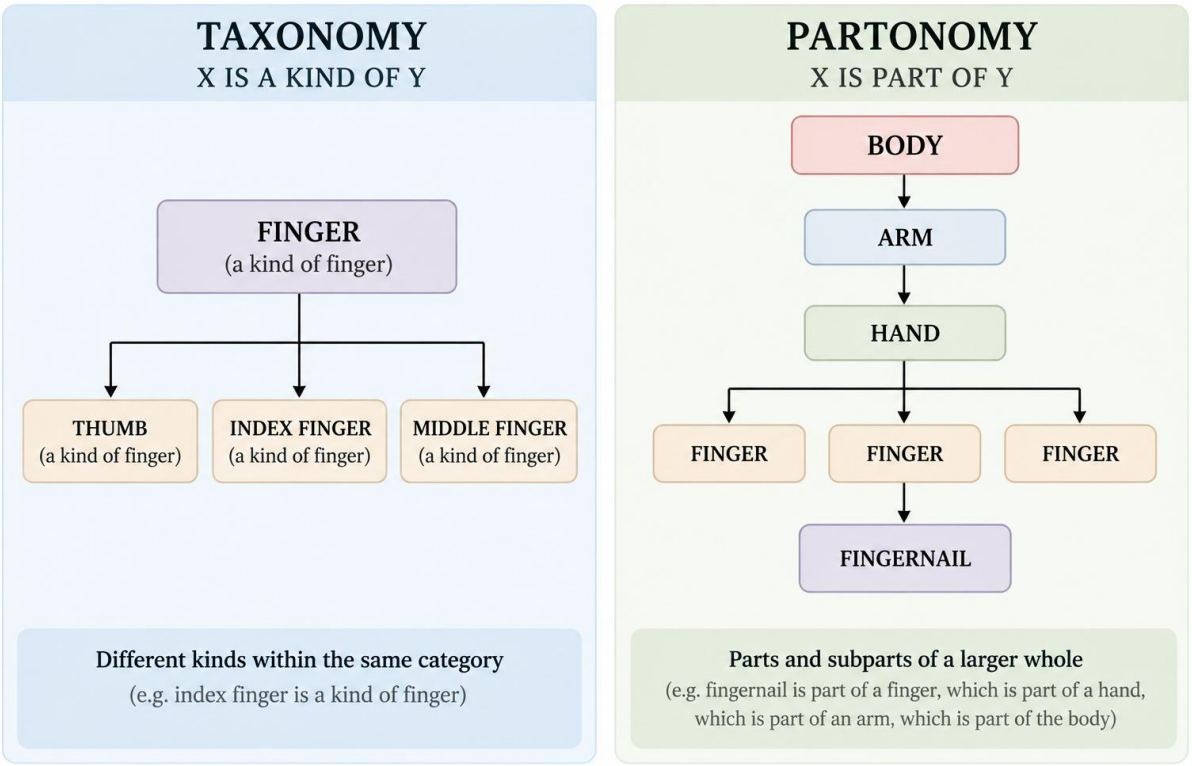


Figure 16. Taxonomic and partonomic relations in body-part categorization.

The figure shows that partonomic organization is not necessarily a simple linear chain. A larger anatomical unit may contain several constituent parts at the same level, and these may themselves contain further subdivisions.

Earlier approaches proposed relatively systematic hierarchical models of body-part terminology. BODY was treated as a superordinate category, major categories such as HEAD, TRUNK, ARM, and LEG occupied a basic level, and more specific categories such as HAND, FINGER, and FINGERNAIL were treated as subordinate parts (Brown, 1976; Andersen, 1978; Tversky, 1989).

Cross-linguistic evidence, however, challenges the assumption that such a hierarchy is universal. As discussed in Chapter 3, some languages lack an independent general term corresponding to the physical BODY, while others do not have general categories corresponding directly to HEAD, TRUNK, ARM, or LEG. This means that the existence of a particular hierarchical level cannot simply be assumed on the basis of English or another familiar language.

Jahai shows how substantially such systems may depart from this hierarchical model. Its body-part terminology does not display the systematic hierarchy familiar from languages such as English, yet speakers can identify and name more specific anatomical regions without necessarily grouping them under a lexicalized superordinate category (Burenhult, 2006).

Part–whole organization is therefore an important principle in body-part semantics, but the lexical representation of the hierarchy varies across languages.

4.2. Beyond part–whole relations: location, possession, and kind

Partonomy is not the only semantic relation involved in body-part systems. An anatomical region can also be identified through its spatial location, its relation to another body part, or its membership in a more general category.

Consider a fingernail. From a partonomic perspective, a fingernail is part of a finger. From a spatial perspective, however, it can also be described as being located on a finger. Similarly, a finger is part of a hand but is also spatially attached to it. The same anatomical configuration can therefore be conceptualized through more than one semantic relation (Cruse, 1986; Palmer & Nicodemus, 1985).

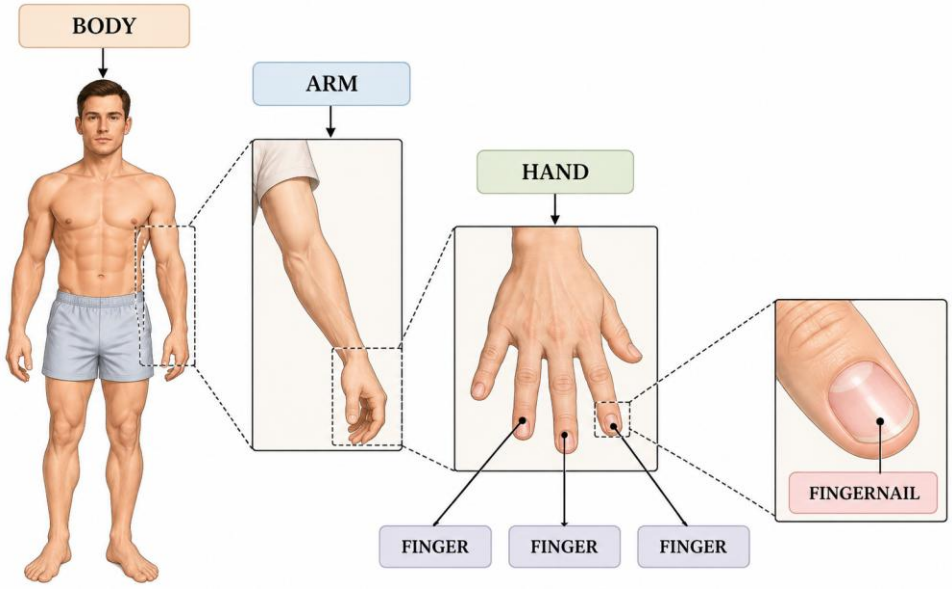


Figure 17. Semantic relations involved in the organization of body-part concepts.

Table 2. Semantic relations between body-part concepts

Relation	Question	Example
PART–WHOLE	What is it part of?	FINGER → HAND
LOCATION	Where is it located?	FINGERNAIL → ON FINGER
POSSESSION / ASSOCIATION	What anatomical region is it associated with?	SKIN → OF THE EAR
KIND	What type of category is it?	HEAD HAIR → HAIR

Cross-linguistic data show that these different relations may operate simultaneously within a single body-part system. In Lao, for example, body-part terminology involves part–whole relations as well as spatial, relational, and more general associative relations (Enfield, 2006).

Punjabi likewise combines different organizational principles: some body-part categories are structured through part–whole relations, while others are identified primarily through spatial location. Consequently, the same anatomical region may be designated differently depending on the relation through which it is conceptualized.

Possessive constructions provide another formal means of relating body parts to one another. Expressions corresponding to *skin of the ear*, for example, identify a particular anatomical region through its relation to the ear. Such constructions need not express possession in the narrow sense of ownership. Rather, the possessive form may encode different semantic relations, including anatomical association, location, or a part–whole relationship.

Body-part terminology may also involve kind relations. A general category such as HAIR may include more specific categories such as head hair, facial hair, body hair, or animal fur. In such cases, the relation is not primarily one of anatomical inclusion but of categorization: the more specific entity is understood as a particular kind of the more general category.

Body-part systems therefore cannot always be represented adequately by a single anatomical hierarchy. Different semantic relations may contribute to the identification and organization of body parts within the same language.

4.3. Body parts as cognitive reference points: identifying one body part through another

A further mechanism involved in body-part categorization is reference-point organization. Langacker (1993, 2008, 2009) uses this term for a basic cognitive ability whereby one entity provides mental access to another. A relatively salient entity functions as the reference point (R), while the entity accessed through it is the target (T). The set of entities that can potentially be accessed through the reference point constitutes its dominion (D).

Reference-point organization is dynamic rather than merely relational. The conceptualizer first directs attention to the reference point. Once the intended target has been identified, attention shifts to the target and the reference point recedes into the background. In this sense, a reference point provides a conceptual route to another entity.

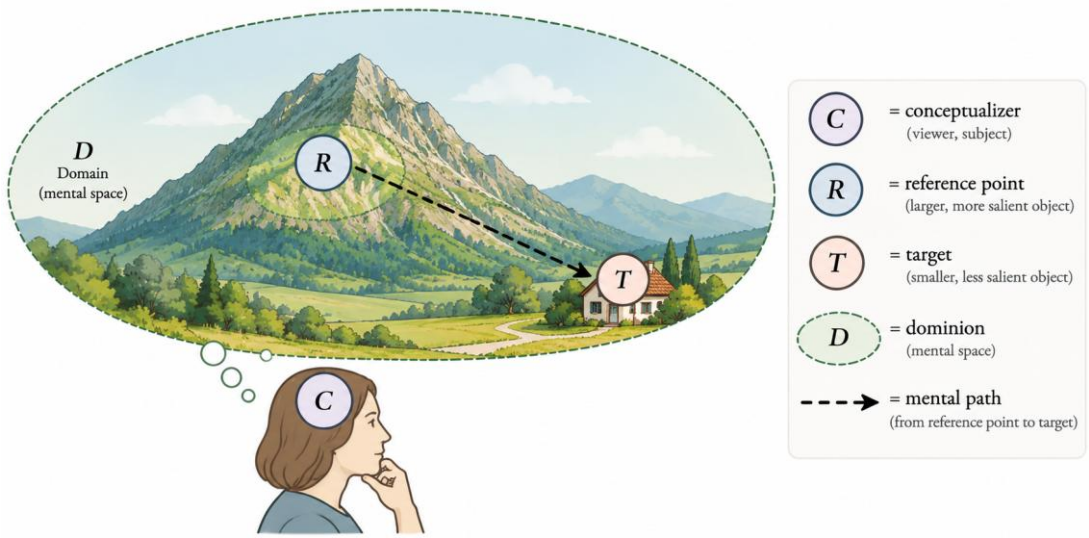


Figure 18. Essential aspects of reference-point ability. Adapted from Langacker (1993, p. 6).

In body-part terminology, this general cognitive mechanism can be used to identify one anatomical region through another. A relatively salient or readily identifiable body part may function as a reference point for locating a smaller or less independently salient region. In such cases, the target is understood through its spatial and conceptual relation to the reference point.

In Dholuo, *ng'ut lwedo* 'neck of the hand', referring to the wrist, exemplifies this pattern. Here, HAND functions as the anatomical reference point through which the wrist is located, while NECK provides the body-part concept used to characterize the target region.

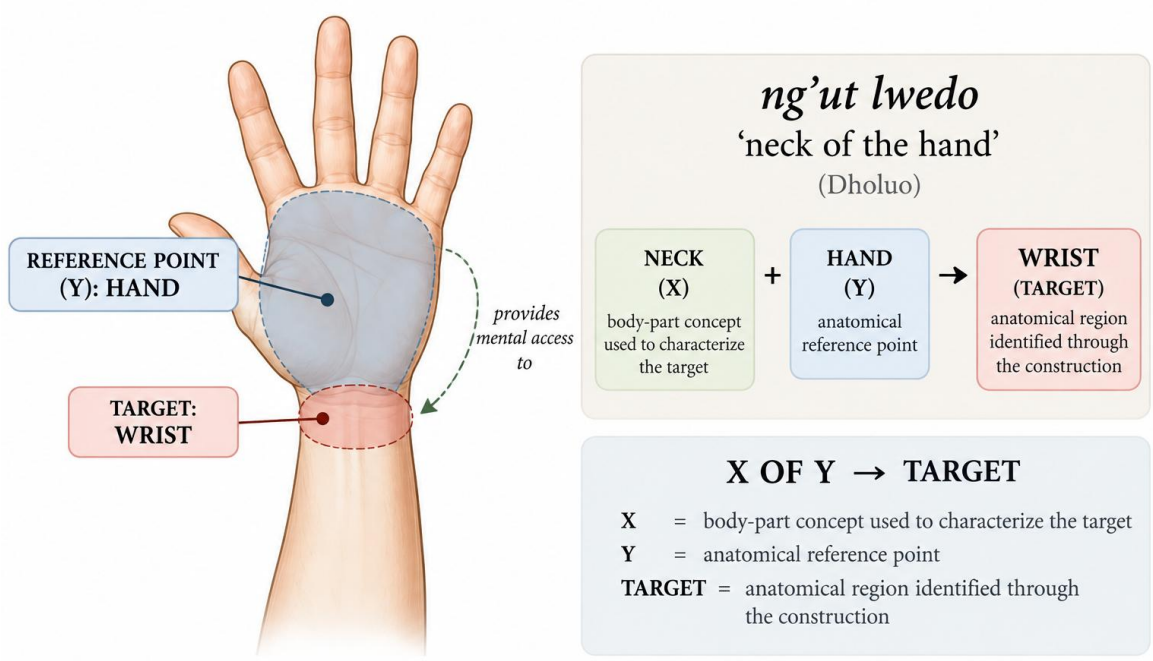


Figure 19. A body part functioning as a cognitive reference point.

The basic pattern can be represented as:

X OF Y
X = body-part concept used to characterize the target
Y = anatomical reference point
TARGET = anatomical region identified through the construction

Reference-point organization is therefore useful for explaining why a body part may be named relationally rather than independently. The target is identified not only through its own physical properties but also through its conceptual relationship with another, more accessible region of the body. Dholuo makes particularly productive use of this type of relational organization. These constructions and the semantic relationships they encode will be examined in detail in Chapter 5.

4.4. Metonymy within the body: from one anatomical region to another

Reference-point organization is closely related to metonymy. In Cognitive Linguistics, metonymy involves a conceptual relationship in which one entity provides mental access to another within the same conceptual domain (Kövecses & Radden, 1998; Radden & Kövecses, 1999). Body-part systems provide numerous examples of such relationships, since anatomical regions form a closely interconnected experiential domain.

Two broad patterns are particularly relevant to body-part categorization: PART FOR WHOLE and WHOLE FOR PART.

In **PART FOR WHOLE** metonymy, a smaller anatomical region provides conceptual access to a larger anatomical unit:

EYE → FACE
SKIN → BODY

Here, the source concept designates a constituent region, while the intended referent is anatomically more inclusive. The reverse pattern occurs when a larger anatomical region provides conceptual access to one of its constituent parts:

HEAD → HAIR

Here, HEAD provides access to the more specific referent HAIR.

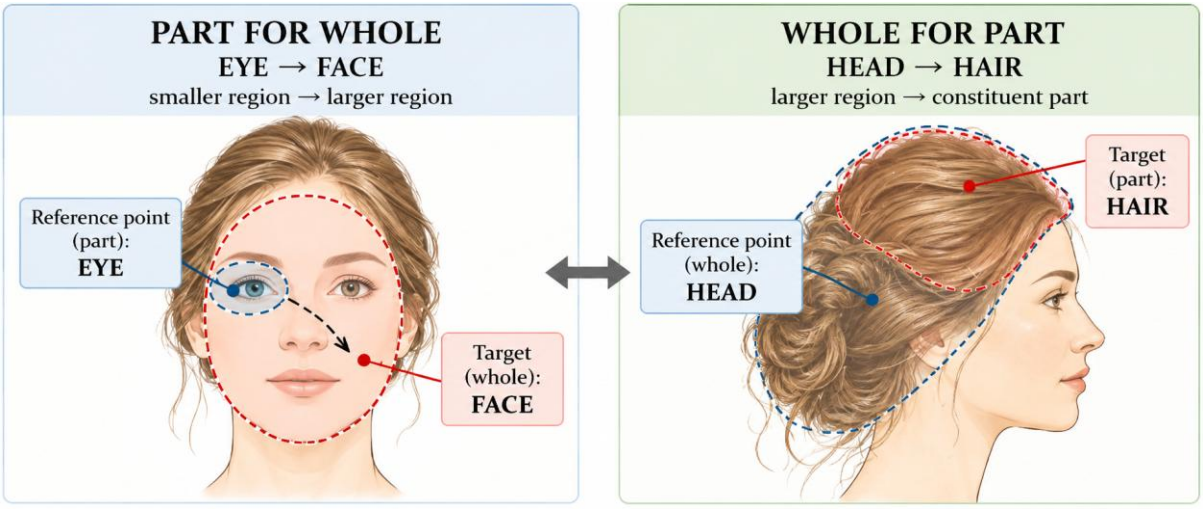


Figure 20. PART FOR WHOLE and WHOLE FOR PART metonymy in the body-part domain.

A further pattern involves the use of one body-part concept to identify a particular region of another body part. This can be represented schematically as:

BODY PART FOR A SUBSECTION OF A BODY PART

This pattern is particularly relevant to cross-linguistic body-part categorization because anatomical regions do not necessarily have to be designated by independent lexical items. A region may instead be identified through its conceptual relationship to another body part. This type of organization will be examined in detail in the Dholuo case study in Chapter 5.

Reference-point organization and metonymy should therefore not be treated as competing analyses. Rather, they highlight different aspects of the same conceptual configuration. Reference-point organization captures the cognitive process by which a salient anatomical region serves as a point of access to another region, whereas metonymy characterizes the conceptual relationship between the two. Their interaction will be illustrated in detail in the Dholuo case study in Chapter 5.

4.5. From body parts to spatial and temporal relations: grammaticalization processes

Body-part terms may extend beyond anatomical reference and develop more abstract relational functions. A well-documented process of grammaticalization is the development of adpositions from lexical expressions, including relational nouns and body-part terms. Cross-linguistically, terms referring to body parts such as HEAD, BELLY, or BUTTOCK may develop spatial relational meanings corresponding to ‘on’, ‘in’, or ‘under’ (Heine, Claudi, & Hünnemeyer, 1991; Lehmann, 1995).

Such developments are not restricted to individual languages. Heine and Kuteva (2002) document recurrent grammaticalization processes in which body-part terms develop into spatial markers across genetically unrelated languages. A particularly widespread pattern is the development of terms meaning BACK into expressions of spatial location meaning ‘behind’. More generally, body parts may function as structural templates for conceptualizing spatial relations on the basis of their relative position (Heine & Kuteva, 2002, p. 48). Similar developments have

been documented for terms referring to body parts such as HEAD, FACE, EYE, MOUTH, HEART, BELLY, NECK, SHOULDER, and SIDE.

These developments may involve a categorial shift from lexical nouns to increasingly grammatical relational expressions, for example:

BODY-PART NOUN → SPATIAL ADVERB → ADPOSITION

Spatial meanings may subsequently provide the basis for temporal relations, giving rise to a broader semantic development:

BODY PART → SPACE → TIME

The body-part term *tok* 'back' extends from anatomical reference to spatial and temporal relations, illustrating the development BODY PART → SPACE → TIME. This pattern will be examined in detail in Section 5.4.

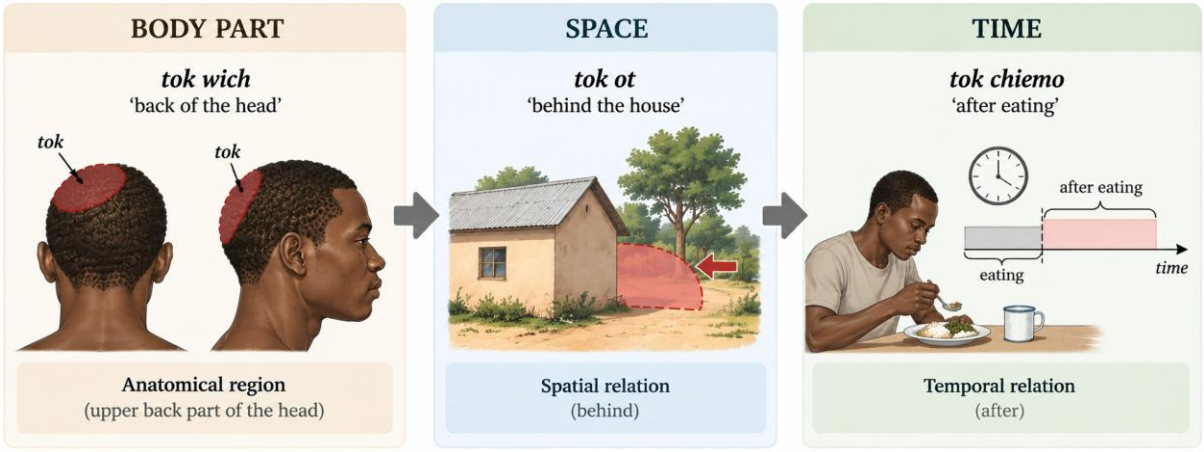


Figure 21. From anatomical reference to spatial and temporal relations.

The spatial organization of the human body can thus be extended to the structuring of relational domains that are less directly grounded in bodily experience. It also shows that the boundary between lexical and grammatical meaning is not always sharp. Body-part terms may gradually acquire relational functions as their original anatomical meanings are extended to increasingly abstract domains.

4.6. Cultural salience in the organization and naming of body parts

The organization of body-part systems is influenced not only by anatomical structure and perceptual experience but also by culturally salient distinctions and practices. Different cultural communities may attach particular significance to specific anatomical regions because of their roles in everyday activities, social practices, or culturally shared understandings of the body.

Such differences may be reflected in the lexical differentiation, naming, and conceptual organization of body-part categories.

A particular body part may, for example, receive a distinctive name because of its role in a culturally significant activity, while anatomical regions that are independently named in one language may be grouped together in another. Cultural salience may therefore influence not only which bodily regions receive linguistic attention but also which distinctions between them become conceptually and lexically prominent.

Cultural factors may also interact with bodily orientation. The distinction between LEFT and RIGHT, for instance, is grounded in the bilateral organization of the human body, but the meanings and values associated with this distinction may be reinforced or elaborated through cultural practices and social conventions. Similarly, body-part terms may foreground properties such as strength, flexibility, location, or practical function when these are particularly salient within a linguistic community.

Body-part organization should therefore not be understood as a direct linguistic representation of anatomical structure. Rather, it constitutes a conceptual system in which bodily and perceptual experience, semantic relationships, linguistic convention, and cultural knowledge interact.

The following chapter examines these principles through a detailed case study of Dholuo body-part terminology, showing how anatomical segmentation, lexical categorization, semantic relations, and culturally salient distinctions interact within a particular linguistic system.

Discussion and analysis tasks

Task 1. How does swahili organize body-part concepts?

Swahili does not always divide and name the human body in the same way as English. Study the examples below. Pay particular attention to cases in which one term covers more than one anatomical region and cases in which one body part is identified through another.

Swahili expression	Literal translation	Meaning
mwili	‘body’	body
kichwa	‘head’	head
uso	‘face’	face
jicho / macho	‘eye / eyes’	eye / eyes
mdomo	‘mouth’	mouth
mkono	‘hand/arm’	hand or arm
kiganja	‘palm/hand’	palm / hand

kiganja cha mkono	'palm of the hand/arm'	palm of the hand
kidole	'finger/toe; digit'	finger or toe
kidole cha mkono	'digit of the hand/arm'	finger
kidole cha mkono wa kushoto	'digit of the left hand/arm'	finger of the left hand
kucha	'nail(s)'	fingernail(s) or toenail(s)
kucha za mikono	'nails of the hands/arms'	fingernails
mguu / miguu	'foot/leg'	foot / leg
moyo	'heart'	heart

A. Look for patterns.

1. Which Swahili terms correspond to **more than one English body-part term**?
2. Which expressions identify a smaller anatomical region through a **larger body part**?
3. In which expressions could the larger body-part term be regarded as **a** reference point**?**
4. Why is **mkono** necessary in *kidole cha mkono* but less necessary in *kiganja cha mkono*?
5. What would *kidole* mean without further specification?
6. Why might *kucha* also require additional information in some contexts?

B. Identify the relations.

For each of the following, decide which relationship is most relevant:

PART–WHOLE · REFERENCE POINT · LEXICAL OVERLAP · SPECIFICATION

- *mkono* → 'hand/arm'
- *mguu* → 'foot/leg'
- *kidole* → 'finger/toe'
- *kiganja cha mkono* → 'palm of the hand'
- *kidole cha mkono* → 'finger'
- *kucha za mikono* → 'fingernails'

C. Compare Swahili with English and your own language.

Complete the table.

Concept	Swahili	English	Your language
HAND / ARM	*mkono*	hand / arm	
FOOT / LEG	*mguu*	foot / leg	
FINGER / TOE	*kidole* + specification	finger / toe	
PALM / HAND	*kiganja*	palm / hand	
FINGERNAIL / TOENAIL	*kucha* + specification where necessary	fingernail / toenail	

Discussion

1. How can a body part function as a reference point for identifying another anatomical region?
2. How are reference-point organization and metonymy related?
3. How can body-part terms develop from anatomical meanings to spatial and temporal meanings?

5. Case study: body-part categorization in Dholuo

Dholuo provides a particularly revealing example of how body-part categories emerge through the interaction of anatomical structure, perceptual experience, semantic relationships, linguistic convention, and cultural knowledge. Dholuo is a Nilotic language spoken primarily by the Luo people in western Kenya, particularly around Lake Victoria, as well as in parts of Uganda and Tanzania. It has approximately six million speakers and two mutually intelligible dialects, Trans-Yala and South Nyanza, the latter being the standard dialect.

Ochieng and Baranyiné Kóczy (2026) examine the linguistic categorization of body parts in Dholuo, focusing on the organization of anatomical categories, their lexical representation, and the conceptual relationships involved in their naming. Their analysis shows that Dholuo body-part terminology cannot be explained solely in terms of anatomical segmentation or hierarchical part–whole relations. Independent lexicalization, relational naming, reference-point organization, metonymic extension, and spatial relations all contribute to the organization of the system, while culturally salient distinctions may further influence the conceptual prominence of particular body parts.

The following sections use Dholuo as a case study to show how the principles introduced in Chapters 3 and 4 interact within a single linguistic and cultural system. The analysis begins with the segmentation and naming of anatomical regions and then examines relational naming, reference-point organization, metonymic patterns, and the extension of body-part terms to spatial and temporal relations. The final sections consider the role of culturally salient distinctions and practices in the conceptualization of the body.

5.1. Segmenting and naming the body in Dholuo

Dholuo distinguishes a number of major anatomical regions through independent lexical items, but the boundaries and internal organization of these categories do not necessarily correspond to those found in English. The system therefore reflects the broader cross-linguistic variation in body-part categorization discussed in Chapter 3.

For example, Dholuo distinguishes *bat* ‘arm’ from *lwedo* ‘hand’. In informal usage, however, *bat* may also refer to the arm together with the hand, indicating that the semantic boundary of a body-part category may vary according to context. Within these larger regions, some anatomical parts have independent lexical designations, while others are named through expressions involving another body-part term. The elbow, for example, is *okumbo*, whereas the wrist is *ng’ut lwedo* ‘neck of the hand’. Similarly, the knee is *chong*, whereas the ankle is *ng’ut tielo* ‘neck of the foot’.

This combination of naming strategies can be observed within the terminology of the hand. It includes the fingers (*lith lwedo*), the palm (*i lwedo* or *chuny lwedo*), the back of the hand (*tok lwedo*), and the wrist (*ng’ut lwedo*).

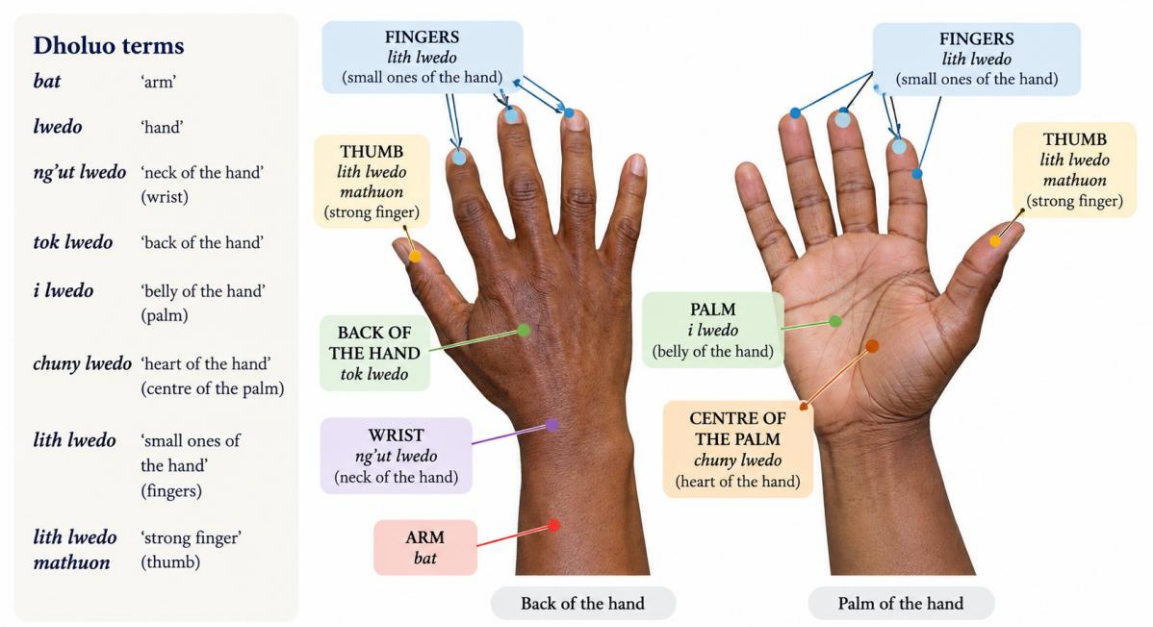


Figure 22. The conceptual organization and naming of parts of the hand in Dholuo. Based on Ochieng and Baranyiné Kóczy (2026).

The organization of the hand shows that different principles of categorization may operate within a single anatomical domain. Some regions participate in hierarchical part–whole organization, while others are identified through expressions involving another body-part concept. The precise semantic relationships underlying these constructions will be examined in Section 5.2.

This contrast between independent lexicalization and relational naming is important for understanding the Dholuo system. Anatomically identifiable regions do not necessarily correspond to independent lexical categories: some are named by means of existing body-part concepts rather than by unrelated lexical items.

5.1.1. Naming individual fingers

Languages may also differ in how extensively they lexicalize subdivisions of a larger body part. English has conventional names for the thumb, index finger, middle finger, ring finger, and little finger, reflecting several different principles of categorization.

Dholuo shows less lexical differentiation in this domain. Ochieng and Baranyiné Kóczy (2026) identify a specific designation only for the thumb: *lith lwedo mathuon* 'strong finger'. The expression foregrounds the physical strength of the thumb rather than its position or a culturally specific function. The contrast with English shows that languages may differ not only in how many anatomical categories they lexicalize, but also in which properties they treat as relevant for naming them.

5.2. Relational naming and reference-point organization

Relational naming is highly productive in Dholuo body-part terminology. Many anatomical regions are designated through constructions corresponding to the pattern X OF Y, in which one body-part concept is related to another in order to identify a particular anatomical target.
As discussed in Chapter 4, such constructions can be analysed in terms of reference-point organization. In the Dholuo data, the second element frequently specifies an anatomical region that functions as a reference point for locating the intended target, while the first element identifies a body part, bodily material, or anatomical structure used to characterize that target. The semantic relationship between the two elements is not identical in every construction. It may be based on location, structural resemblance, anatomical material, spatial orientation, or the conceptualization of a central or inner region (Ochieng & Baranyiné Kóczy, 2026).

Table 3. Relational naming of body parts in Dholuo. Examples from Ochieng and Baranyiné Kóczy (2026). The anatomical scope of *dho um* may be broader than that of the English term 'nostril'.

Dholuo expression	Literal meaning	Anatomical referent	Relational basis
chuny wich	'heart of the head'	crown of the head	centre of a larger body part
chok wich	'bone of the head'	skull	material/structural component
yie wich	'hair of the head'	head hair	location
yie tik	'hair of the chin'	beard	location
yie dho um	'hair of the mouth of the nose'	moustache	location
yie yuoth	'hair of the armpit'	armpit hair	location
yie wang'	'hair of the eyes'	eyebrows / eyelashes	location
dho um	'mouth of the nose'	nostril	structural resemblance / location
ng'ut lwedo	'neck of the hand'	wrist	connecting region
ng'ut tielo	'neck of the foot'	ankle	connecting region
tok lwedo	'back of the hand'	back of the hand	spatial orientation
i lwedo	'belly of the hand'	palm	inner surface

chuny lwedo	'heart/centre of the hand'	palm	centre / inner region
pien wang'	'skin of the eyes'	eyelid	covering tissue + location
pien dhok	'skin of the mouth'	lips	covering tissue + location
pien it	'skin of the ear'	earlobe	tissue + location

The table reveals considerable semantic diversity within a formally similar construction. In *chok wich* 'bone of the head', for example, the target is identified through a structural component located within a larger anatomical region. In *pien dhok* 'skin of the mouth', a particular subsection of bodily tissue is identified through its location in relation to the mouth. Expressions such as *yie wich* 'hair of the head' and *yie tik* 'hair of the chin' similarly identify a particular type of hair through its anatomical location.

Other expressions involve perceived correspondences between anatomical regions. A wrist is not anatomically a neck, nor is a palm a belly. In *ng'ut lwedo* 'neck of the hand' and *i lwedo* 'belly of the hand', familiar body-part concepts are applied to other anatomical regions on the basis of perceived similarities involving shape, position, flexibility, or spatial organization. The repeated use of *ng'ut* 'neck' in *ng'ut lwedo* 'wrist' and *ng'ut tielo* 'ankle' is particularly revealing: both targets are relatively narrow connecting regions between larger anatomical units. *Chuny wich* 'heart of the head' similarly uses HEART/CENTRE to identify a central region of another anatomical unit.

The Dholuo data therefore show that the X OF Y construction does not encode a single semantic relation. Its interpretation depends on the conceptual relationship between the two elements and the anatomical target they jointly identify. Formally similar constructions may thus express location, material composition, structural resemblance, spatial orientation, or relations based on perceived similarities between body parts.

These constructions also demonstrate why reference-point organization and metonymy should not be treated as competing analyses. They capture different aspects of the same conceptual configuration. Reference-point organization describes how a salient anatomical region provides a route of mental access to the target, while metonymy describes the conceptual relationship between a source concept and its target referent. The metonymic patterns found across the Dholuo body-part system will be examined in Section 5.3.4.

5.3. Variation across anatomical domains

The organization of individual anatomical domains provides further evidence that Dholuo body-part categorization cannot be reduced to a single principle. The head, limbs, and hair illustrate different combinations of independent lexicalization, relational naming, reference-point organization, spatial organization, and metonymic extension. Examining these domains separately makes it possible to see how the principles discussed above interact within particular parts of the body.

5.3.1. The head: relational naming and metonymic extension

The general Dholuo term for HEAD is *wich*. More specific regions may be identified either independently or through relational expressions. The back of the head is referred to as *tok* or *tok wich*, while the crown of the head is *chuny wich*, literally 'heart of the head'. In the latter expression, HEART/CENTRE provides a means of identifying a central region within the larger anatomical unit.

The head domain also provides clear examples of metonymic extension. *Wang'* denotes both 'eye' and 'face'. This relationship can be analysed as PART FOR WHOLE metonymy, in which EYE provides conceptual access to the larger anatomical region FACE.

The opposite direction occurs in the relationship between HEAD and HAIR. *Wich* 'head' may refer to the hair in expressions corresponding to 'shave the head' or 'wash the head'. In these contexts, the action is understood as involving the hair rather than the entire anatomical region, illustrating WHOLE FOR PART metonymy.

The conceptual organization of the head thus involves several mechanisms simultaneously. Independent lexicalization and relational naming contribute to the identification of particular anatomical regions, while metonymic extension allows one body-part concept to provide access to another. These patterns form part of a broader system of metonymic relationships in Dholuo body-part terminology, examined in Section 5.3.4.

5.3.2. The limbs: independent categories and relational naming

The limbs provide a particularly clear contrast between independent lexicalization and relational naming. In the upper limb, Dholuo distinguishes *bat* 'arm' from *lwedo* 'hand', although *bat* may include the hand in informal usage. The elbow has the independent designation *okumbo*, whereas the wrist is identified relationally as *ng'ut lwedo* 'neck of the hand'.

A comparable pattern occurs in the lower limb. The knee has the independent lexical designation *chong*, whereas the ankle is *ng'ut tielo* 'neck of the foot'. The parallel expressions for WRIST and ANKLE foreground their shared structural character as relatively narrow regions connecting larger anatomical units.

This contrast can be represented schematically:

INDEPENDENT LEXICALIZATION

okumbo → ELBOW
chong → KNEE

RELATIONAL NAMING

ng'ut lwedo → 'neck of the hand' → WRIST
ng'ut tielo → 'neck of the foot' → ANKLE

The hand itself is further differentiated through relational expressions. The palm may be referred to as *i lwedo* 'belly of the hand' or *chuny lwedo* 'heart/centre of the hand', while the back of the hand is *tok lwedo*. BELLY, HEART/CENTRE, and BACK thus contribute to the internal spatial organization of the hand. Thusly, anatomically comparable regions may be lexicalized independently or identified relationally within the same body-part system.

5.3.3. Hair: location-based and kind-based categorization

The Dholuo term *yie* provides a particularly useful example of how different semantic principles may operate within a single lexical domain. The general category encompasses human hair, animal fur, and bird feathers, but more specific categories are organized according to different principles.

Human hair is categorized primarily according to its location on the body. The relevant anatomical region provides the reference point for identifying a particular type of hair:

Human hair: categorization by location

YIE — HAIR
yie wich → 'hair of the head' → HEAD HAIR
yie tik → 'hair of the chin' → BEARD
yie dho um → 'hair of the mouth of the nose' → MOUSTACHE
yie yuoth → 'hair of the armpit' → ARMPIT HAIR
yie wang' → 'hair of the eyes' → EYEBROWS / EYELASHES

The use of *yie wang'* for both eyebrows and eyelashes is particularly informative. Although the two anatomical regions are perceptually distinguishable, Dholuo does not necessarily lexicalize the distinction in the same way as English. The example therefore is an evidence for the broader point made in Chapter 3: perceptual distinctiveness does not automatically result in separate lexical categories.

Animal fur, by contrast, is categorized according to the kind of animal with which it is associated rather than according to its location on the body.

Animal fur: Categorization by kind

YIE — HAIR / FUR

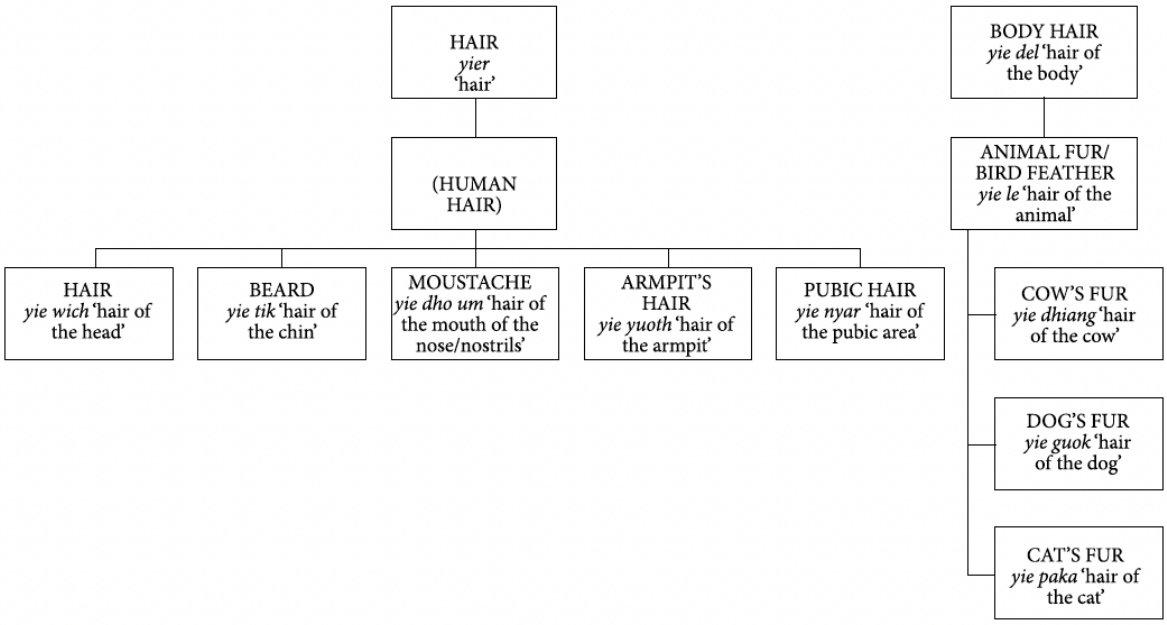


Figure 23. Location-based and kind-based categorization of yie *'hair' in Dholuo. Adapted from Ochieng and Baranyiné Kóczy (2026)*

The figure contains two different principles of categorization within the semantic domain of *yie*. In expressions referring to human hair, the second element specifies the anatomical location of the hair, whereas in expressions referring to animal fur, it identifies the kind of animal with which the fur is associated. Formally similar constructions may therefore encode different conceptual relationships.

5.4. Metonymic patterns across the body-part system

The examples discussed above show that metonymic extension is not restricted to individual anatomical domains but constitutes a recurrent organizing principle in Dholuo body-part terminology. As discussed in Chapter 4, metonymy allows one body-part concept to provide conceptual access to another anatomical region. In Dholuo, such relationships include both extensions from one body part to another and the use of a body-part concept to identify a more specific subsection of an anatomical region.

Two recurrent patterns can therefore be distinguished. In BODY PART FOR BODY PART metonymy, a body-part term extends to another anatomical category, as when *wang'* 'eye' also denotes FACE or *wich* 'head' provides access to HAIR in expressions such as 'wash the head'. In BODY PART FOR A SUBSECTION OF A BODY PART, a body-part concept contributes to the identification of a more specific anatomical region, as in *ng'ut lwedo* 'neck of the hand' for WRIST or *chuny wich* 'heart of the head' for the CROWN OF THE HEAD.

Table 4. Metonymic extensions of body-part terms in Dholuo

Body-part term as source concept	**BODY PART FOR BODY PART**	**BODY PART FOR A SUBSECTION OF A BODY PART**
wich 'head'	hair	—
yie 'hair'	—	beard: *yie tik* 'hair of the chin'; moustache: *yie dho um* 'hair of the mouth of the nose'; armpit hair: *yie yuoth* 'hair of the armpit'; body hair: *yie del* 'hair of the body'
wang' 'eye'	face	—
dhok 'mouth'	—	nostril: *dho um* 'mouth of the nose'
bat 'arm'	hand	—
ng'ut 'neck'	—	wrist: *ng'ut lwedo* 'neck of the hand'; ankle: *ng'ut tielo* 'neck of the foot'
ich 'belly'	womb	palm: *i lwedo* 'belly of the hand'
chuny 'liver/heart'	heart	crown: *chuny wich* 'heart of the head'; palm: *chuny lwedo* 'heart of the hand'
pien 'skin'	body	eyelid: *pien wang'* 'skin of the eyes'; lips: *pien dhok* 'skin of the mouth'; earlobes: *pien it* 'skin of the ear'
chok 'bone'	—	skull: *chok wich* 'bone of the head'

The table shows that the same source concept may participate in different types of metonymic extension. *Chuny* 'liver/heart', for example, may designate HEART through BODY PART FOR BODY PART metonymy, but it also occurs in *chuny wich* 'heart of the head' for the crown and *chuny lwedo* 'heart of the hand' for the palm. Similarly, *ich* 'belly' may extend to WOMB, while the same concept is used in *i lwedo* 'belly of the hand' to identify the palm.

The pattern is particularly revealing because the same anatomical target may sometimes be conceptualized through different source concepts. The palm, for example, can be referred to as *i lwedo* 'belly of the hand' or *chuny lwedo* 'heart of the hand'. The two expressions foreground different aspects of the same anatomical region: BELLY conceptualizes it as an inner surface, whereas HEART/CENTRE foregrounds its central position within the hand.

Metonymic extension therefore contributes to the organization of the Dholuo body-part system at several levels. It may extend the referential range of an existing body-part term, as in EYE → FACE, HEAD → HAIR, or SKIN → BODY, or it may contribute to the identification of more specific anatomical regions through constructions such as NECK OF HAND → WRIST, HEART OF HEAD → CROWN, and BONE OF HEAD → SKULL. The organization of the system thus depends not simply on fixed lexical meanings but on recurring conceptual relationships between anatomical regions.

These patterns also reinforce the relationship between metonymy and reference-point organization discussed in Section 5.2. The two analyses capture different aspects of the same conceptual structure: reference-point organization concerns the way one salient entity provides mental access to another, whereas metonymy concerns the conceptual relationship through which one body-related concept stands for or identifies another.

Dholuo body-part terminology demonstrates how these mechanisms can interact within a single linguistic system.

5.5. From body parts to spatial and temporal relations

The semantic extensions of Dholuo body-part terms are not restricted to the anatomical domain. Some body-part concepts also provide a basis for expressing spatial and temporal relations. As discussed in Chapter 4, such developments illustrate a broader process in which the spatial organization of the human body is extended to the conceptual organization of other domains.

Dholuo provides several examples of this pattern. Terms referring to the back, heart, belly, and mouth may develop spatial meanings, while some of these spatial meanings extend further into the temporal domain. The resulting expressions illustrate the conceptual development BODY PART → SPACE → TIME.

Table 5. Spatial and temporal extensions of body-part terms in Dholuo

Body-part term	**Spatial extension**	**Temporal extension**	**Dholuo example**
tok 'back of head'	'behind'	'after'	*tok ot* 'behind the house'; *tok chiemo* 'after eating'
chuny 'heart'	'centre, middle, inside'	'temporal middle'	*chuny misa* 'middle of a mass'; *chuny pap* 'middle of a field'
ich 'belly'	'centre, middle, inside'	—	*i nam* 'inside a lake'
dhok 'mouth'	'edge of, near'	—	*dho aora* 'edge of a river'
ng'ech 'back'	'back'	—	*ng'e punda* 'back of a donkey'

The development of *tok* follows this pathway from anatomical to relational meaning. In *tok wich*, the term refers to the 'back of the head', while *tok ot* expresses the spatial relation 'behind the house' and *tok chiemo* the temporal relation 'after eating'. The same body-based concept therefore participates in a progression from anatomical reference to spatial and temporal organization.

A related pattern occurs with *chuny* 'heart'. In addition to its anatomical meanings, *chuny* can refer to the spatial centre or middle of an entity and to the temporal middle of an event. Expressions

such as *chuny misa* ‘middle of a mass’ and *chuny pap* ‘middle of a field’ illustrate the extension of a body-based concept to the organization of non-anatomical space.

Other body-part terms participate primarily in spatial extension. *Ich* ‘belly’, for example, may express an internal or central spatial relation, as in *i nam* ‘inside a lake’, while *dhok* ‘mouth’ may identify the edge or boundary of a spatial entity, as in *dho aora* ‘edge of a river’. These expressions show how different regions of the body can provide conceptual models for spatial relations such as INTERIOR, CENTRE, EDGE, FRONT/BACK, and relative location.

The Dholuo examples therefore illustrate how body-part concepts may extend beyond the categorization of the body itself and contribute to the conceptual organization of space and time. They also show that the transition from lexical body-part meaning to more abstract relational meaning may be gradual. In some cases, these extensions may contribute to the development of increasingly grammatical relational functions, linking the Dholuo patterns to the processes of grammaticalization discussed in Chapter 4.

5.6. Cultural Salience in Dholuo body-part conceptualization

Body-part categorization in Dholuo also reflects distinctions that are salient within Luo cultural practices and culturally shared understandings of the human body. Such patterns show that anatomical structure and perceptual experience alone cannot fully account for the linguistic organization of the body. Cultural practices may contribute to the prominence of particular distinctions, anatomical regions, and conceptual associations.

5.6.1. Left and right: bodily orientation and cultural space

Dholuo reference to paired body parts involves specification of the side of the body on which the part is located. For example, *gok ma kor achich* refers to the ‘right shoulder’. The naming pattern thus gives linguistic prominence to bodily orientation. Ochieng and Baranyiné Kóczy (2026) relate the salience of the LEFT–RIGHT distinction to traditional Luo spatial organization, including the positioning of family members’ houses within the homestead and the association of the right-hand side with family hierarchy and succession. The distinction therefore has both an anatomical and a cultural dimension: bilateral bodily organization provides the physiological basis for LEFT and RIGHT, while cultural practices contribute to the significance attached to this distinction. This provides a clear example of how bodily orientation may interact with culturally organized space.

5.6.2. *Chuny*: from anatomical centre to life, personhood, and cultural practice

The semantic network of *chuny* is particularly revealing because the term participates simultaneously in anatomical, spatial, and cultural conceptualization. Although *chuny* denotes the liver, it is also used in the everyday sense of ‘heart’ and is associated with the soul, spirit,

conscience, and the seat of life. As discussed in Section 5.4, it can also refer to the spatial centre or middle of an entity.
One body-part expression in which this meaning is reflected is:

chuny wich 'heart of the head' → CROWN OF THE HEAD

Here, HEART/CENTRE provides the conceptual basis for identifying a particular region of the head. Ochieng and Baranyiné Kóczy (2026) relate the salience of this region to the traditional practice of carrying loads on the head. Its linguistic prominence may therefore reflect not only its physical characteristics but also its role in culturally established bodily practices.

The semantic network of *chuny* also extends to culturally shared understandings of life and death. The expression: *chunye odhi* 'his/her heart has gone' is used in reference to a person who has died. *Chuny* thus participates in a network connecting anatomy, spatial centrality, culturally significant bodily practice, and understandings of life and personhood. Its broader figurative and cultural extensions will be considered further in Parts III and IV.

5.6.3. Living and deceased bodies: lexical categorization and personhood

Dholuo also distinguishes linguistically between the body of a living person and that of a deceased person. The distinction between the 'body/meat of a human' and the 'body of a dead person' shows that the category BODY is not necessarily conceptualized as a purely physical entity consisting of anatomical parts.

The lexical distinction reflects culturally significant states of human existence. In this respect, the categorization of the body intersects with culturally shared understandings of personhood, life, and death. These cultural dimensions of Dholuo body-part conceptualization will be examined in greater detail in Part IV.

5.7. What the Dholuo case study shows

The Dholuo case study demonstrates that body-part categorization emerges through the interaction of several organizing principles. Anatomical structure and perceptual experience provide an important bodily foundation, but they do not determine the linguistic system on their own. Languages may differ in the boundaries they assign to body-part categories, in the anatomical regions they lexicalize independently, and in the conceptual relationships they use to identify more specific regions.

Dholuo combines hierarchical part–whole organization, independent lexicalization, relational naming, reference-point organization, and metonymic extension. Body-part concepts may also extend beyond anatomical categorization to provide structures for conceptualizing spatial and temporal relations. At the same time, culturally salient practices and distinctions may contribute to the prominence and interpretation of particular anatomical regions.

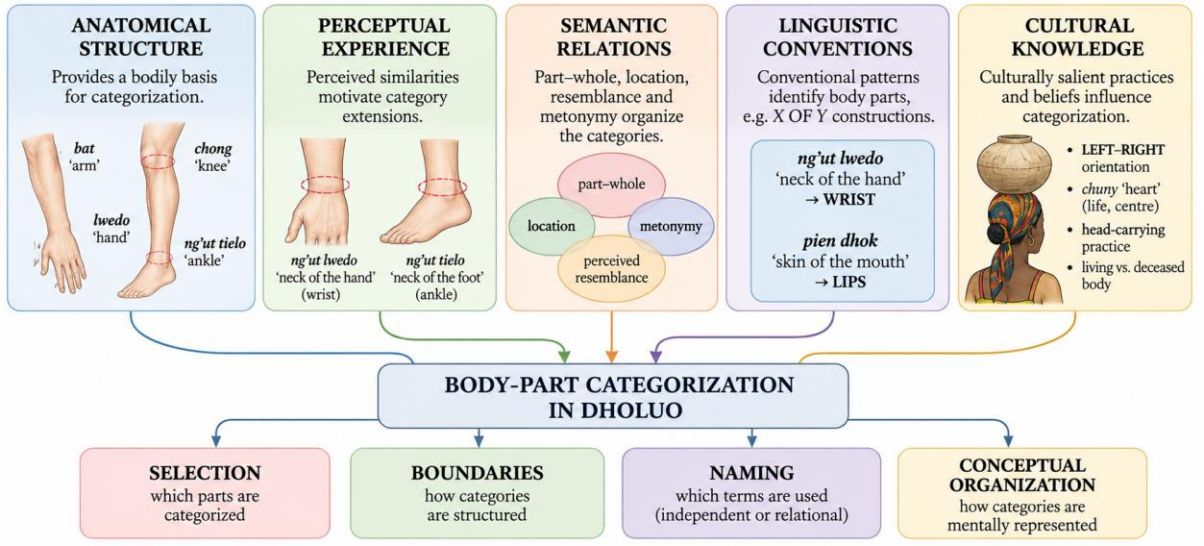


Figure 24. Factors shaping body-part categorization in Dholuo. Based on Ochieng and Baranyiné Kóczy (2026).

The Dholuo system thus supports the central argument of Part II: the human body provides a shared biological basis for conceptualization, but languages do not simply reproduce anatomical structure. Body-part categories emerge through the interaction of bodily, perceptual, cognitive, linguistic, and cultural processes.

Discussion and analysis tasks

Task 1. Cross-linguistic categorization

Compare the meanings and anatomical boundaries of ARM, HAND, LEG, and FOOT in your native language and English. Identify any differences in the regions designated by the corresponding terms. Are the differences primarily related to category boundaries, lexical differentiation, or both?

Task 2. Constructing a body-part partonomy

Construct a body-part partonomy for your native language using HAND, FACE, and HAIR as starting domains. Identify the relevant superordinate and subordinate categories. Indicate which anatomical regions have independent lexical names and which are designated through relational or possessive constructions.

Task 3. Analysing relational body-part names

Consider the following Dholuo expressions:

- *ng'ut lwedo* 'neck of the hand'
- *pien dhok* 'skin of the mouth'
- *chuny wich* 'heart of the head'
- *yie wich* 'hair of the head'

For each expression, identify the anatomical target and analyse the conceptual relationship between the elements. Consider location, perceived resemblance, part–whole relations, spatial organization, and reference-point organization.

PART III. FIGURATIVE EXTENSIONS OF BODY-PART TERMS

6. Conceptual mechanisms of semantic extension

Body-part terms do not refer exclusively to anatomical entities. They may also designate parts of objects, geographical features, spatial and temporal relations, and aspects of human mental and social experience. A word such as *head*, for instance, can refer to an anatomical region, the upper part of an object, a person in a position of authority, or a unit in a count of animals. These meanings are related, but the conceptual relationships between them are not necessarily of the same kind.

The previous chapters examined how body-part concepts are categorized and organized within the anatomical domain and how some of them extend to spatial and temporal relations. Part III shifts the focus to the conceptual mechanisms underlying semantic extension. In cognitive linguistics, conceptual metaphor and conceptual metonymy are two major mechanisms through which meanings may be extended and related. They can operate independently, but they may also interact in the development of a body-part term's semantic network.

6.1. Conceptual metaphor and source–target mappings

Conceptual Metaphor Theory proposes that metaphor is not merely a stylistic device but a conceptual mechanism through which one domain of experience is understood in terms of another (Lakoff & Johnson, 1980). A conceptual metaphor establishes systematic correspondences, or mappings, between a source domain, which provides conceptual structure, and a target domain, which is understood in terms of that structure.

A familiar example is LOVE IS A JOURNEY. Expressions such as *Our relationship has hit a dead-end street*, *It has been a long, bumpy road*, and *We are at a crossroads* reflect a set of related conceptual correspondences rather than three unrelated figures of speech.



Table 6. Source–target mappings of LOVE IS A JOURNEY metaphor

Source domain: JOURNEY	Target domain: LOVE
Travellers	Lovers
Vehicle	Relationship
Destination	Shared goals
Obstacles	Difficulties
Movement along a route	Development of the relationship

Body-part concepts may participate in semantic extension in a comparable way. Familiar anatomical structures, bodily functions, and spatial relationships between body parts can provide conceptual structure for understanding entities and relations outside the anatomical domain. Expressions such as *the foot of a hill*, *the eye of a needle*, and *the mouth of a cave*, for example, apply body-part concepts to parts of non-human entities on the basis of perceived similarities in shape, position, function, or structural relationship.

Not every body-based extension involves a complete source domain being mapped onto an entire target domain. In some cases, a particular feature of a body part—its shape, location, function, orientation, or relationship to adjacent parts—is especially salient in motivating an extension. In other cases, several interrelated body-part concepts may jointly provide a model for conceptualizing the structure of another entity, as illustrated by the Apache automobile terminology discussed in Section 7.1.

6.2. Conceptual metonymy and metonymic chains

Conceptual metonymy involves a relationship between closely associated concepts within the same conceptual domain. One concept provides mental access to another through a relationship such as part–whole, organ–function, location–activity, or bodily response–emotion. As discussed in Part II, body-part terminology frequently involves metonymic relationships between anatomical regions. Metonymy, however, may also provide access from a body part to its function, to a mental or emotional state, or to an activity associated with it.

The expression *Use your head!* provides a simple example. Here HEAD provides access to the brain, which in turn is associated with the mind and the activity of thinking. The interpretation can therefore be represented as a metonymic chain:

HEAD → BRAIN → MIND → THINKING

Rather than involving a direct relationship between only two concepts, the expression activates a sequence of closely associated concepts. The anatomical region provides access to an organ, the organ to a mental faculty, and the mental faculty to its characteristic activity.

Metonymy may also interact with metaphor. The expression *hot-headed*, for example, combines bodily associations involving HEAD with the metaphorical conceptualization of emotional intensity in terms of HEAT. HEAD provides access to a person's mental or emotional state, while HEAT provides a source domain for conceptualizing emotional intensity. The interpretation of the expression therefore depends on the interaction of metonymic and metaphorical processes.

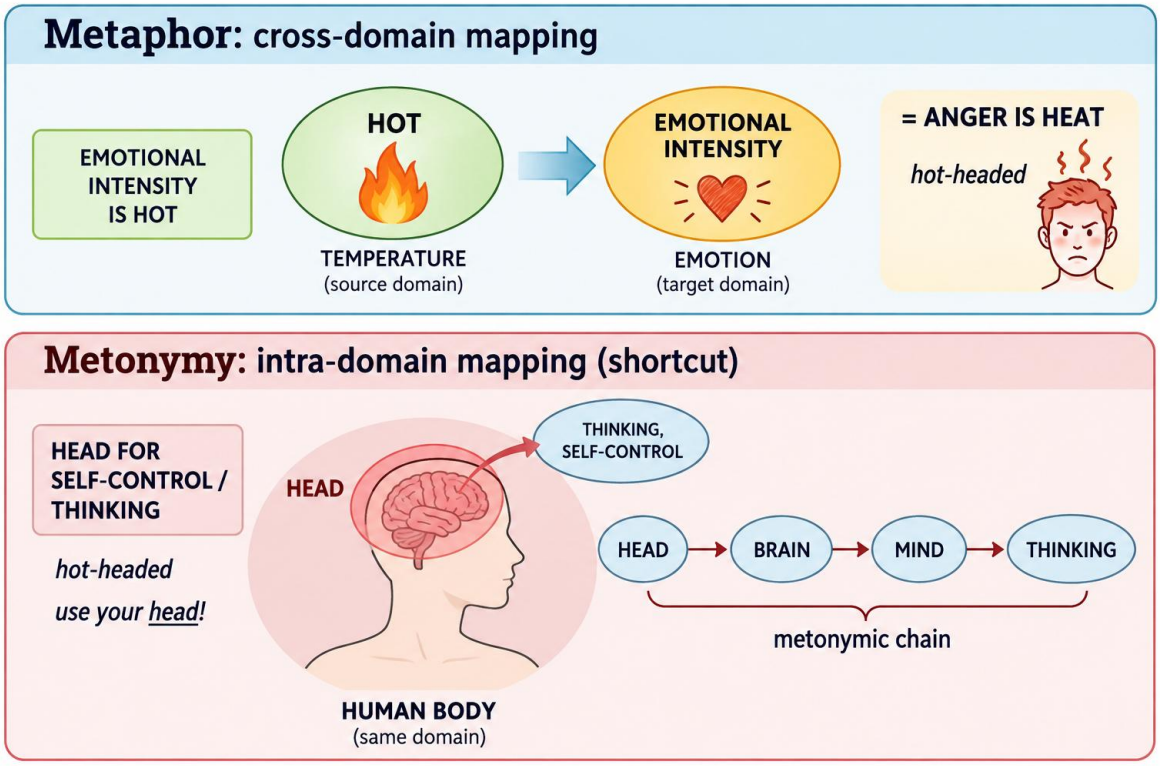


Figure 25: Metaphor and metonymy in body-based conceptualization

A useful distinction is therefore that metaphor establishes correspondences across conceptual domains, whereas metonymy provides mental access to a closely associated concept within a domain. The two mechanisms are analytically distinguishable, but they may interact in the interpretation and development of a single expression.

Metonymic chains are particularly relevant to body-part concepts because an anatomical region may evoke a network of associated concepts. EYE, for instance, may provide access to SEEING, and visual perception may in turn be associated with ATTENTION, OBSERVATION, or KNOWLEDGE. The interpretation activated in a particular expression depends on the linguistic and contextual environment.

6.3. Polysemy and semantic networks of body-part terms

Polysemy refers to the association of multiple related meanings with a single linguistic form. Body-part terms are frequently polysemous because their anatomical meanings may provide the basis for extensions to physical objects, spatial relations, abstract concepts, and social or interpersonal meanings.

The related meanings of a polysemous term can be represented as a semantic network. Such a network does not imply that every meaning develops directly from the primary anatomical sense. Some meanings may emerge through intermediate extensions, and different parts of the network may involve metaphor, metonymy, or an interaction between the two.

The Hungarian word *szem* 'eye' has developed a diverse range of meanings beyond its anatomical reference. It occurs in expressions relating to visual perception, attention, evaluation, and interpersonal interaction. For instance, *szemet szúr valami* 'something catches one's attention' and *az én szememben* 'in my eyes; according to my evaluation' both involve EYE, but draw on different relationships between visual perception and mental or social experience.

The semantic potential of EYE also reveals recurrent patterns across languages. Comparing EYE terms in a range of languages, Kraska-Szlenk (2014a) identifies several perceptual properties that frequently motivate their semantic extensions. These include SMALL AND ROUND, SMALL, ROUND, AND HOLLOW, ROUND AND SHINY, and CENTRAL / CENTERED. Individual languages differ in which properties they foreground and in the meanings that develop from them, but similar perceptual motivations recur across otherwise unrelated languages.

Table 7. Semantic extensions of EYE based on perceptual attributes across languages. Adapted from Kraska-Szlenk (2014a, p. 62).

Perceptual schema	Cross-linguistic examples
SMALL AND ROUND	Polish *oczko* 'gem (in a ring)'; French *oeil* and Polish *oko (w rosole)* 'eye (in broth)'; German *Auge*; Swahili *jicho (la ua)* 'bud (of a flower)'; Indonesian *mata kaki* 'ankle'; Polish *oczko*, Russian *glazók*, and Turkish *göz* 'eye (on a plant)'; Tamil *kaṇ* 'small dot' (e.g. on a coconut)
SMALL, ROUND, AND HOLLOW	French *oeil*, Turkish *göz*, Basque *begi*, Russian *glazók*, Arabic *ʕajn*, and German *Auge* 'small hole' (e.g. eye of a needle, peephole); Basque *ogibegi* 'holes in bread', *gatzabegi* 'holes in cheese', *erlategiren begia* 'hive entrance'; Tamil *kaṇ* 'mesh' (of a sieve or net), 'stitch'; French *oeillet* 'small hole' (e.g. buttonhole, eyelet), 'eye of the needle'; Polish *oczko (w pończosze)* 'hole (in a stocking)'
ROUND AND SHINY	Arabic *ʕajn*, Swahili *jicho la maji*, and Indonesian *mata (air)* 'spring (of water)'; Turkish *göz* 'spring (of water)' or 'scale pan'; Polish *oczko wodne* 'little pond (in the garden)'; Polish *pawie oczko* and Tamil *mayil tōkaiyin kaṇ* 'peacock's eye'

CENTRAL / CENTERED (INCLUDING ABSTRACT USES)	German *Auge* and Indonesian *mata* ‘center’; Polish *oko cyklonu* ‘eye of tornado’; Turkish *göz* ‘bridge span’ or ‘drawer, compartment’, e.g. *araba gözü* ‘glove compartment’; Indonesian *mata ati* ‘innermost feeling or thought’ (lit. ‘eye liver’)

An additional Hungarian example that may illustrate the CENTRAL/CENTERED schema is *a QR-kód szeme* ‘the eye of a QR code’. The example was suggested during a discussion following a lecture at the Hungarian Linguistic Society on 3 December 2019.

Accordingly, a semantic network may be motivated by different perceptual properties of the same body part. The anatomical concept EYE does not provide a single feature that is transferred uniformly to other referents. Rather, different extensions may foreground its shape, size, hollowness, brightness, or central position. The resulting meanings are therefore related through partially overlapping conceptual motivations.

The Dholuo term *chuny*, discussed in Part II, provides a comparable example of a body-part term with an extended semantic network. Its meanings and uses connect LIVER, HEART, spatial centrality, and concepts associated with life, personhood, and inner experience. Rather than repeating that analysis here, it is worth noting how these related meanings cluster around a culturally salient body-part concept.

When reconstructing a semantic network, however, it is important to distinguish attested meanings from an analyst’s proposed account of the relationships between them. A semantic network is an analytical model: connections between meanings should be supported by linguistic evidence rather than inferred solely from similarities in their English translations.

6.4. The directionality of semantic extension

The examples discussed so far illustrate a recurrent tendency in semantic extension: familiar and relatively concrete bodily experience frequently provides a basis for conceptualizing less directly accessible or more abstract domains. Body-part concepts may be extended to objects and their parts, bodily orientation may provide a model for spatial relations, and spatial relations may in turn contribute to the conceptualization of time.

This tendency toward increasing abstraction is related to the unidirectionality principle discussed in grammaticalization research (Heine et al., 1991). One proposed sequence is:

PERSON → OBJECT → PROCESS → SPACE → TIME → QUALITY

The sequence represents a recurrent tendency rather than an obligatory developmental path. It should not be assumed that every lexical item passes through all of these stages or that the historical development of a particular meaning can be reconstructed from the sequence alone.

Body-part terms provide many examples of movement from relatively concrete to more abstract meanings. English *back*, for instance, may refer to an anatomical region, the rear part of an object such as a vehicle, or participate in expressions involving temporal relations, as in *back in time*.

Swahili *uso* ‘face’ and *usoni* ‘the future’ provide another example of a body-part concept participating in temporal conceptualization.

At the same time, the body-to-abstract tendency should not be treated as an absolute rule. Anatomical terminology itself may draw on concepts from other physical domains. Hungarian *hajtő* ‘hair root’, *orrnyereg* ‘bridge of the nose’, and *körömágy* ‘nail bed’, for example, use ROOT, BRIDGE, and BED to conceptualize anatomical structures. The body can therefore function not only as a source but also as a target of figurative conceptualization.

The central analytical question is consequently not whether semantic extension is exclusively unidirectional, but which directions recur, which meanings appear to be more basic within a particular semantic network, and what linguistic or historical evidence supports a proposed relationship between them.

Discussion and analysis tasks

Task 1. From bodily experience to abstract meaning

Consider the following Hungarian expressions involving *láb* ‘leg/foot’. Identify the target domain of each expression and decide whether its figurative meaning is primarily motivated by the embodied experience of STABILITY or MOTION.

Expression	**Meaning**	**Target domain**	**STABILITY / MOTION**
a saját lábára áll	‘becomes independent’		
gyenge lábon áll	‘is in an insecure position’		
elveszti a talajt a lába alól	‘loses stability/security’		
két lábbal áll a földön	‘is pragmatic, has common sense’		
szedi a lábát	‘hurries’		
lógatja a lábát	‘does nothing / is lazy’		

Stability-based expressions may extend into domains such as physical and abstract states, social position, financial state, opinion, and interpersonal relationships, while motion-based expressions may develop meanings related to movement, activity, and work.

Task 2. Reconstruct a conceptual pathway/metonymic chain

Choose two expressions from Task 1 and reconstruct a possible conceptual pathway from bodily experience to figurative meaning. Follow the model:

LEG/FOOT → STANDING → PHYSICAL STABILITY → ABSTRACT STABILITY → SOCIAL POSITION

Then explain in 2–3 sentences which aspect of embodied experience motivates the figurative meaning. Consider whether metaphor, metonymy, or an interaction between the two contributes to the interpretation.

7. Body-part extensions to external domains

Body-part concepts provide familiar models for understanding the structure and organization of entities outside the human body. Their extensions may be motivated by similarities in shape, relative size, spatial position, orientation, movement, or function. Some expressions involve an isolated correspondence between a body part and a non-human entity, while others establish a more systematic relationship in which several parts of an object are conceptualized through the organization of the human body.

Such extensions reflect the anthropocentric character of conceptualization: the human body provides a familiar reference structure through which people may interpret objects, artefacts, plants, landscapes, and other aspects of their environment. Importantly, however, different extensions may foreground different properties of bodily experience. The following sections therefore examine not only which body-part concepts extend to external domains, but also which perceptual, spatial, and functional relationships motivate these extensions.



Figure 26. Body-part concepts as models for the conceptualization of external domains.

7.1. Objects, artefacts, and vehicles

The extension of body-part terms to artefacts can be observed in the naming of furniture, buildings, tools, and vehicles. Familiar examples include the *legs* of a table, the *neck* of a bottle, and the *face* or *foot* of a building. Beyond such conventional examples, some languages employ body-part concepts more systematically, using the organization of the human body as a model for the internal structure of artefacts.

In some cases, body-based conceptualization extends beyond an individual object part and provides a more systematic model for the organization of an artefact. A particularly revealing example comes from Apache. Basso (1967) describes at least nineteen body-part terms used for parts of motor vehicles. The correspondences are not limited to isolated resemblances: major components of the vehicle are associated with major body parts, while smaller components may be identified through smaller body parts or internal organs.

Table 8. Apache body-part terms and their extensions to the automobile domain. Based on Basso (1967).

Apache term	Body-part meaning	Extended meaning
wos	shoulder	front fender(s)
gən	hand/arm	front wheel and tyre
dɔ	chin/jaw	front bumper
ke'	leg(s)	rear wheel and tyre
ni	face	area from the windshield to the bumper
ta	forehead	front part of the passenger compartment or roof
kai	buttocks	rear fender(s)
ze'	mouth	fuel-tank cap
inda'	eyes	headlights
pɪt	stomach	fuel tank

In Apache, an artefact may be conceptualized as a structured body. Relative position plays an important role: the front of the vehicle corresponds to the face and associated anatomical regions, while components toward the rear are associated with other parts of the body. Individual correspondences may also draw on perceived similarities in shape or function. The system therefore involves a network of related mappings rather than the repeated application of a single feature.

Furniture and architecture provide comparable examples. In Zapotec, the tabletop is conceptualized as the FACE, its edge as the MOUTH, its underside as the STOMACH, and its supporting structures as LEGS (Lillehaugen, 2003). In languages such as Mangbetu, EYE may correspond to a window, MOUTH to a door, and HEAD to the roof of a house (Heine, 2011). In Mixtec languages, body-part concepts may similarly provide a systematic model for the structure of a building: the roof may be referred to as the 'head' of the house, the façade as its 'face', the interior or floor as its 'stomach', and a window as its 'throat/neck' (Brugman, 1983).

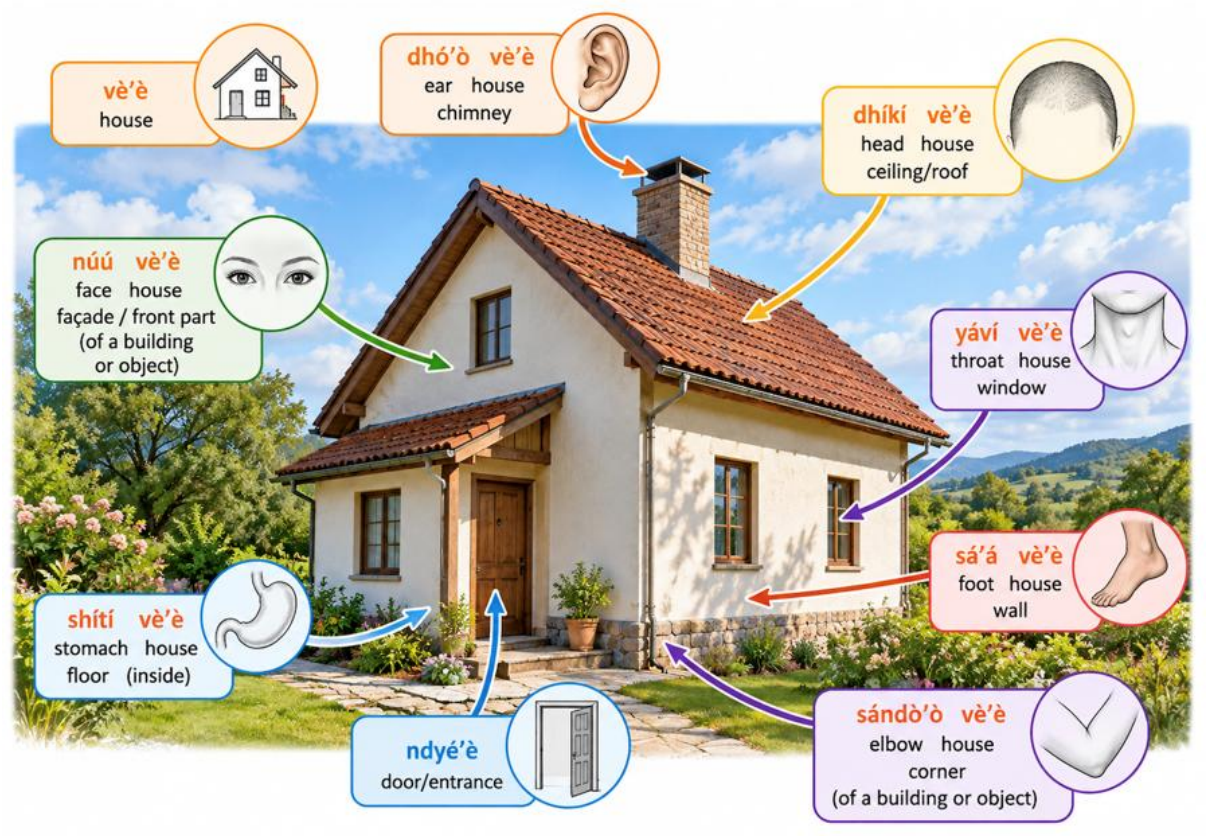


Figure 27. Body-part-based conceptualization of the house in Mixtec. Based on Brugman (1983).

Hungarian architectural terminology also contains body-based expressions, including *homlokzat* 'façade', *szemöldökfa* 'lintel', *oszlopfő* 'capital of a column', *lábazat* 'base', *tetőgerinc* 'roof ridge', and *ablakszem* 'windowpane' (Kapitány & Kapitány, 2013), showing how body-part concepts may contribute to the conceptualization of an object's overall structure, the relative position of its components, or their perceived appearance.

Body-based conceptualization is not restricted to traditional objects. It may also be extended productively to newly encountered technologies. In Apoala Mixtec, for example, a computer screen may be conceptualized as the 'face of the computer', while its edges can be referred to as its 'elbows' (Ramírez Lajara, 2016). This suggests that body-based models are not

simply preserved in conventional vocabulary but may remain available as productive resources for conceptualizing new artefacts.

7.2. Plants and natural formations

Plants provide a particularly accessible target domain for body-part extensions because their component structure can readily be interpreted in bodily terms. Branches may be conceptualized as arms, twigs as fingers, a trunk as a torso, and roots as legs. In such cases, the human body provides a familiar structural model for identifying and organizing the different parts of a plant.

Body-part concepts may also be used to categorize individual plant components. In Polish, for example, a head of garlic may be referred to as *główka* 'little head', while individual cloves are called *ząbki* 'little teeth' (Kraska-Szlenk, 2014b). Here, familiar body-part concepts provide a model for categorizing plant parts on the basis of perceived similarities in shape and structural organization.

A comparable extension of HEAD is found in Hungarian. The term *fej* 'head' may refer to a compact, rounded part of a plant, as in *káposzta feje* 'head of cabbage' and *hagyma feje* 'head of onion' (Tolcsvai Nagy, 2013, p. 245). In these expressions, the extension appears to be motivated primarily by the shape and bounded configuration of the plant part.

Hungarian *szem* 'eye' shows a related pattern. The term occurs in expressions referring to small, discrete plant parts, as in *búzaszem* 'grain of wheat', *kukoricaszem* 'corn kernel', and *mákszem* 'poppy seed'. These examples foreground properties such as small size, rounded shape, and the status of the referent as an individually distinguishable unit.

Natural landscapes are also frequently conceptualized through body-part terms. Familiar English examples include *the foot of a mountain*, *the mouth of a river*, and *the face of a cliff*. Here the human body provides a model for identifying such properties as the lower region of a formation, an opening or outlet, or a prominent surface.

Hungarian provides numerous comparable examples, including *hegygerinc* 'mountain ridge' (literally 'mountain spine'), *hegyhát* 'mountain back', *hegyláb* 'foot of a mountain', *torkolat* 'river mouth', *barlang szája* 'mouth of a cave', and *barlang gyomra* 'interior of a cave' (literally 'stomach of a cave') (Tolcsvai Nagy, 2013).

Comparable body-based extensions are found in Marquesan, a Polynesian language. The term *tua* 'spine' may refer to a mountain range, *ivi* 'bone' to a mountain peak or hill, and *mata'ae* 'eye–forehead' to a headland (Cablitz, 2008). These examples further illustrate how the structure and spatial organization of the human body may provide a model for conceptualizing geographical formations.

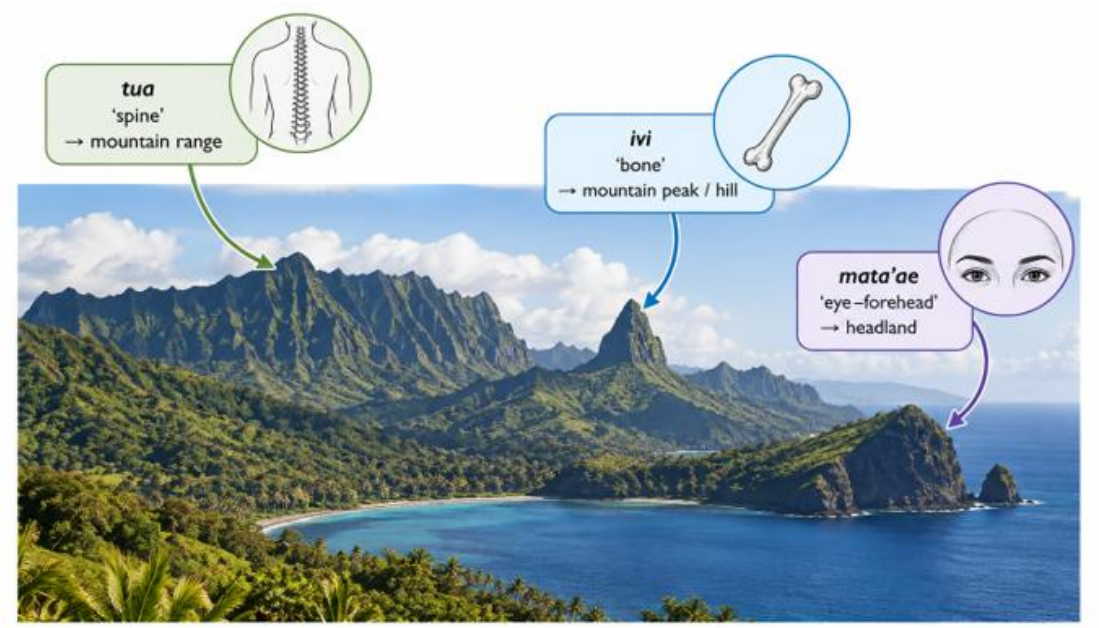


Figure 28. Body-part extensions to geographical formations in Marquesan. Based on Cablitz (2008).

7.3. Body parts as models for spatial organization

The human body provides an important reference structure for spatial orientation. Its front and back, upper and lower regions, sides, interior, and exterior constitute familiar spatial distinctions that can be extended to the organization of objects and surrounding space. Body-part concepts may therefore provide models for locating one entity in relation to another or for identifying particular regions of non-human entities.

As discussed in Part II, body-part terms may develop spatial meanings through recurrent pathways of semantic extension. The present section approaches this relationship from a different perspective, focusing on the body as a structured model for spatial organization.

Cross-linguistically, a number of recurrent correspondences can be observed between body-part concepts and spatial relations. Kraska-Szlenk (2014a, p. 20) summarizes this tendency in terms of the general pattern A (SPECIFIC) POINT IN ORIENTATION IS A (SPECIFIC) BODY PART.

Table 9. Recurrent correspondences between body-part concepts and spatial relations. Based on Kraska-Szlenk (2014a, p. 20).

Body-part concept	Spatial relation
BACK	behind, at the back
BUTTOCKS	bottom, below
FACE	ahead, in front
HEAD	top, above, up
STOMACH / BELLY	within, inside
SIDE	beside, next to
FOOT	under, below

These correspondences reflect salient properties of the upright human body. HEAD, for example, provides a model for an upper region, while FOOT is associated with a lower region. FACE and BACK provide opposing orientations, and STOMACH or BELLY may serve as a model for an interior region. Body-part concepts can thus function as reference structures for spatial organization even when the entity being located or described is non-human.

Expressions such as *the front of the house*, *the back of the car*, *the head of the table*, and *the foot of the bed* illustrate how body-based spatial concepts may identify regions of non-human entities. In some cases, the interpretation depends on the intrinsic orientation or function of the object. In others, it may depend on the observer's perspective or on the object's position in a particular setting.

Hungarian also illustrates the close relationship between body-part concepts and spatial orientation.

Table 10. Body-part concepts and spatial expressions in Hungarian.

Body-part term	Spatial expression	Meaning
hát 'back'	*hátul*	'at the back, behind'
mell 'chest, breast'	*mellett*	'beside, next to'
oldal 'side'	*oldalt*	'at the side'
szem 'eye'	*szemben*	'opposite, facing'

These expressions show how distinctions associated with the organization and orientation of the human body may become conventional resources for locating entities in space.

A particularly systematic example is provided by Hausa. Several expressions for spatial relations are based on terms referring to parts of the human body (Pawlak, 2010, pp. 275–276, cited in Kraska-Szlenk, 2014b, p. 19).

Table 11. Body-part terms and spatial relations in Hausa.

Body-part term	Body-part meaning	Spatial expression	Spatial meaning
cikìi	'stomach'	*ciki*	'interior, inside'
gàba	'front part of the body'	*gàba*	'front part'
bàya	'back'	*bàya*	'rear part, behind'
kâi	'head'	*kâi*	'top'
gèfèe	'side'	*gèfèe*	'side, beside'
bàki	'lips'	*bàki*	'edge, rim'

The Hausa examples demonstrate how the body can provide a coherent model for spatial organization. The extension of *bàki* 'lips' to 'edge, rim' is particularly illustrative: the lips occupy the boundary of the mouth, and this spatial relationship provides a basis for conceptualizing the boundary of another entity.

At the same time, cross-linguistic variation shows that the same spatial relationship need not be conceptualized through the same body part. In some Siberian Turkic languages, for example, expressions referring to the front are derived from terms meaning 'liver' or 'intestines', while in other Turkic languages expressions meaning 'in front' or 'before' are derived from the word for 'nose' (Johanson, 2011, p. 755). Thus, although the use of the body as a source for spatial reference is widespread, languages may differ in the particular anatomical concepts they select for spatial orientation.

Body-based spatial reference consequently involves selective conceptualization rather than a complete correspondence between the human body and another entity. An object need not be understood as possessing every component of a human body. Instead, a particular bodily distinction—such as upper–lower, front–back, interior–exterior, or centre–edge—may provide a useful model for identifying and organizing one of its spatial regions.

7.4. Cross-linguistic patterns in body-part extensions

Body-part terms provide a productive source for naming and conceptualizing objects and their parts across languages. Tjuka's (2024) large-scale cross-linguistic study, based on lexical data from 396 language varieties representing 79 language families, identified 78 recurrent body–object colexifications. These patterns show that associations between body parts and objects are not random. They are frequently grounded in perceptually accessible properties of the human body and in the way body parts are shaped, positioned, and function within the body.

Among the recurrent associations identified in the study are SKIN–LEATHER, SKIN–BARK, TESTICLES–EGG, HEAD–TOP, and NECK–COLLAR. The examples vary considerably in frequency and motivation, but together they demonstrate that similar body–object associations recur across genetically and geographically diverse languages.

Body	Body concept	Object	Object concept	Number of languages (strict)	Main motivation
	SKIN		LEATHER	160	**shape / function** outer covering
	SKIN		BARK	90	**shape / function** outer covering
	TESTICLES		EGG	31	**shape** similar form
	HEAD		TOP	24	**spatial orientation** upper part
	NECK		COLLAR	24	**function** surrounds / encircles
	BUTTOCKS		BOTTOM	15	**spatial orientation** lower part
	HEART		FIREWOOD	13	**shape** similar form
	SKIN		SHELL	13	**shape / function** outer covering
	FINGERNAIL		NAILTOOL	12	**shape** similar form
	INTESTINES		SAUSAGE	12	**shape** elongated, tubular form
	LIP		EDGE	12	**spatial orientation** boundary / outer rim
	MOUTH		EDGE	12	**spatial orientation** boundary / outer rim
	BODY		TREETRUNK	9	**shape** similar overall form
	TENDON		ROOT	9	**function / structure** long, thin, branching
	SHOULDER BLADE		SPADE	8	**shape** flat, extended form

Figure 29. Frequent cross-linguistic body–object associations and their main motivations. Based on Tjuka (2024).

Three dimensions are particularly useful for understanding such extensions: shape, spatial orientation, and function (Tjuka, 2019, 2024).

7.4.1. Shape

An object or one of its parts may be associated with a body part because the two are perceived as having a similar form. A clear example is the cross-linguistic association between NOSE and CAPE, in which the projecting shape of a geographical feature resembles the protruding shape of the human nose. Tjuka (2024) contrasts this with HEAD–CAPE and argues that NOSE–CAPE is more clearly motivated by shape similarity. Another example is HEAD–GOURD, which draws on the rounded shape of the head, although this association is relatively infrequent in the dataset.

Shape-based extensions may therefore foreground different perceptual properties, including roundness, elongation, projection, or overall configuration. The relevant property is not necessarily the body part as a whole, but a particular perceptually salient aspect of its form.

7.4.2. Spatial orientation

Spatial orientation constitutes another recurrent basis for body–object associations. Tjuka's (2024) data provide cross-linguistic support for the body-based spatial patterns discussed in Section 7.3. The most frequent spatial association in the dataset is HEAD–TOP, attested in 24 language varieties, while other recurrent associations include HEAD–ROOF, HEAD–TIP, HEAD–SUMMIT, BUTTOCKS–BOTTOM, LIP–EDGE, and MOUTH–EDGE. These findings show that similar body-based spatial correspondences recur across genetically and geographically diverse languages.

7.4.3. Function

In other cases, the relevant similarity concerns what a body part does rather than what it looks like or where it is located. The mouth, for example, functions as an opening through which substances enter or leave the body. This functional property motivates associations such as MOUTH–HOLE and MOUTH–DOOR. Comparable extensions occur in expressions referring to the opening of a bottle or the mouth of a river.

The same body part may therefore motivate different extensions through different aspects of bodily experience. MOUTH–EDGE primarily foregrounds spatial position, whereas MOUTH–HOLE or MOUTH–DOOR foregrounds the function of the mouth as an opening.

The three dimensions are not mutually exclusive. A body part and an object may correspond in shape, spatial orientation, and function simultaneously. Tjuka's (2019) cross-linguistic research suggests that body-part extensions are particularly likely when several dimensions of similarity converge. This helps explain why certain body-based associations recur independently across unrelated languages.

The main patterns can be summarized schematically:

BODY PART → OBJECT
SHAPE: NOSE → CAPE
SPATIAL ORIENTATION: HEAD → TOP / ROOF / SUMMIT
FUNCTION: MOUTH → HOLE / DOOR

Tjuka (2024) cautions against treating all body–object associations simply as instances of conceptual metaphor. The relationships may involve different cognitive mechanisms and may range from relatively direct perceptual similarity to more figurative conceptualization. The analytical task is therefore to identify the particular perceptual, spatial, or functional properties

that motivate an extension rather than assuming a single BODY PART → OBJECT metaphor for all cases.

7.5. Body parts as standards of measurement and quantification

Body-part concepts may extend to the external world not only by providing models for the shape, spatial organization, or function of objects, but also by serving as reference points for measurement and quantification. In such cases, the body provides a practical standard through which quantities, lengths, distances, and loads can be conceptualized.

Dholuo provides a particularly systematic example. Body-part terms referring to the hand, finger, arm, head, shoulder, mouth, and foot may function as units of measurement. A hand may represent the quantity that can be held or scooped, a finger a small quantity that can be pinched or a short linear measure, an arm the quantity that can be carried or an armlength, and a mouth the quantity that can be consumed. The foot may similarly provide a reference point for spatial measurement. These expressions are primarily motivated by metonymic relationships in which the body part stands for a quantity associated with its characteristic use. These extensions are not motivated solely by the anatomical properties of the body parts themselves. The Dholuo system foregrounds the actions conventionally performed with them: holding and scooping with the hand, pinching with the fingers, carrying with the arms, head, or shoulders, eating with the mouth, and traversing space with the feet. The relevant conceptual relationship can therefore be represented as:

BODY PART → EMBODIED ACTION → MEASURABLE QUANTITY

This pattern suggests that the body functions as a model for external quantification not merely as an anatomical object but as a body in action. Recurrent interactions between the body and the material environment provide the experiential basis for conventional units of measurement.

The Dholuo examples also demonstrate that such embodied measurement may be culturally structured. *Wich* ‘head’ and *gok* ‘shoulder’, for example, refer to quantities that can be carried on the head and shoulder respectively. In the cultural practices described in the study, these units are associated with traditionally differentiated load-carrying practices: head-carrying is associated with women and shoulder-carrying with men. The measurement expressions therefore encode not only bodily action and quantity but also aspects of the social organization of embodied practice.

The cultural motivation of these measurement terms is particularly evident in traditional load-carrying practices. Head-carrying among Luo women has also attracted attention in biomechanical research. Maloiy et al. (1986) observed that Luo women may carry very heavy loads balanced on the head and found that experienced Luo and Kikuyu women could carry loads of up to approximately 20% of their body mass without a measurable increase in energy consumption. Subsequent research demonstrated that the efficiency of head-supported load carriage is related to the mechanics of walking, including an improved pendulum-like transfer

between potential and kinetic energy (Heglund et al., 1995). These findings provide a striking illustration of how a recurrent bodily practice may become a culturally salient action schema and, in Dholuo, provide the experiential motivation for body-part-based quantification.



Figure 30. Traditional head-load carrying among Luo women in Kenya. Photograph by E. E. Evans-Pritchard, 1936. Pitt Rivers Museum, University of Oxford.

Body-based measurement thus represents a further form of external extension: culturally organized bodily actions provide conceptual structures for quantifying the material world. The example also illustrates a broader principle of cultural embodiment: the body that motivates linguistic meaning is not simply a biological body, but a body acting within particular material, social, and cultural environments.

7.6. From body parts to space and time

The spatial extensions discussed in this chapter may also participate in broader pathways of semantic development. As discussed in Section 4.5, body-part concepts can extend from anatomical reference to spatial relations and, in some cases, from spatial relations to temporal meanings:

BODY PART → SPACE → TIME

The present chapter has shown how the spatial stage of this pathway is grounded in the use of the human body as a model for organizing objects and the surrounding environment. For a detailed discussion of the further extension from space to time, see Section 4.5.

7.7. Grammatical extensions of body-part concepts

Body-part concepts may become integrated into grammatical structures in a variety of ways. In some languages, body-part-related forms participate in systems of grammatical classification; in others, they occur as verbal affixes specifying the location, manner, or instrument of an action or experience. Body-related expressions may also develop increasingly abstract functions such as intensification.

Some of these patterns may be related to processes of grammaticalization, in which lexical expressions develop grammatical functions. However, it is important to distinguish semantic extension, conventionalized body-based categorization, and grammaticalization. The presence of a body-related meaning in a grammatical construction does not by itself demonstrate that the grammatical marker developed historically from an independent body-part noun. Establishing such a developmental pathway requires appropriate linguistic and, where relevant, diachronic evidence.

7.7.1. Body-Part-based grammatical classification in Great Andamanese

A particularly elaborate system of body-part-based grammatical classification is found in Great Andamanese. Body-part-related elements function as class markers and may occur not only with body-part terms but also with other nouns and words belonging to other grammatical categories (Abbi, 2011, 2013).

The system distinguishes seven body-based classes. For example, the marker *a-/ta-* is associated with the mouth and related body parts, including *foŋ* ‘mouth, oral cavity’, *tat* ‘tongue’, and *kɛr* ‘throat’. The same class also includes semantically associated concepts such as *mu* ‘mute’ and *tutlup* ‘greedy’, as well as kinship terms such as *may* ‘father’ and *mimi* ‘mother’.

Other classes are associated with major body parts and organs, extremities, bodily products and part–whole relations, internal organs, rounded body parts and genital organs, and the foot and associated parts (Abbi, 2011, 2013). The system therefore extends beyond anatomical classification: body-based categories provide a grammatical framework for organizing wider networks of semantic and culturally established relationships.

7.7.2. Body-part affixes and the location of bodily experience

In Tarascan, body-part-related suffixes may be attached to verbs to specify the bodily location of an experience. The verb stem *p’ame* ‘to feel pain’, for example, combines with different suffixes to indicate where pain is experienced (Mendoza, 2007).

Table 12. Body-part suffixes expressing the location of pain in Tarascan

Expression	Meaning
p'ame-cha-ni	'to feel pain in the throat'
p'ame-k'u-rha-ni	'to feel pain in the hand'
p'ame-a-rha-ni	'to feel pain in the stomach'
p'ame-ŋarhi-ni	'to feel pain in the face or eye'

Here, information about bodily location is integrated into the morphological structure of the verb rather than expressed through a separate body-part noun. The example reflects how body-based distinctions may become part of the grammatical organization of an event.

7.7.3. Body-part markers and the performance of actions

Body-part-related grammatical markers may also specify which part of the body is involved in performing an action. In some North American languages, verbal prefixes distinguish, for example, actions performed with the hand from those performed with the foot (Majid, 2010, p. 61). In such cases, body-based information becomes part of the grammatical encoding of manner or instrument. Together with the Tarascan examples, these patterns show that bodily information may be incorporated into grammatical structure in different ways. A grammatical form may specify where an experience is located or which body part participates in the performance of an action.

7.7.4. Body-part terms as intensifiers

Body-related terms may also develop more abstract linguistic functions. In Hungarian, *vér* 'blood' and *csont* 'bone' can contribute an intensifying meaning comparable to 'very' or 'extremely'. Examples include *vérciki* 'extremely embarrassing' (lit. 'blood-embarrassing'), *vérprofi* 'highly professional' (lit. 'blood-professional'), *vérgazdag* 'extremely rich' (lit. 'blood-rich'), and *csonthülye* 'extremely stupid' (lit. 'bone-stupid').

In the case of *csont*, the intensifying meaning may be related to the conceptualization of bone as an innermost or extreme point, as in *csontig hatoló* 'penetrating to the bone'. The intensifying uses of *vér* appear to involve several interacting conceptual motivations (Baranyiné Kóczy, 2020a). Unlike English *bloody*, which is typically associated with negative or emotionally charged evaluation, Hungarian *vér-* may intensify both negative and positive meanings.

These intensifying uses differ from the grammatical class markers and body-part affixes discussed above. They nevertheless illustrate the broader process examined throughout this chapter: body-related expressions may extend beyond concrete anatomical reference and develop increasingly abstract linguistic functions.

Discussion and analysis tasks

Task 1. What motivates body-part extensions? A Swahili case study

The Swahili body-part term *mkono* means 'hand/arm', but it is also used to refer to parts of animals, plants, artefacts, geographical formations, and other entities. Study the examples below and identify what motivates each extension.

Swahili expression	Literal translation	Meaning
mkono wa tembo	'hand/arm of an elephant'	elephant's trunk
mikono ya pweza	'hands/arms of an octopus'	tentacles of an octopus
mikono ya ngisi	'hands/arms of a squid'	tentacles of a squid
mikono ya saa	'hands/arms of a clock/watch'	hands of a clock/watch
mikono ya shati	'hands/arms of a shirt'	sleeves
mkono wa kiti	'hand/arm of a chair'	arm of a chair
mkono wa mto	'hand/arm of a river'	arm/branch of a river
mkono wa bahari	'hand/arm of the sea'	arm of the sea / spit
mkono wa ndizi	'hand/arm of bananas'	bunch of bananas
mkono wa chungu	'hand of a clay pot'	handle of a clay pot
mkono wa kikaango	'hand of a pan'	handle of a pan
mkono wa sufuria	'hand of a metal pot'	handle of a metal pot
mkono wa ndoo	'hand of a bucket'	handle of a bucket
mkono wa kitasa	'hand of a lock'	doorknob
mkono wa kampuni	'hand/arm of a company'	company branch

A. Identify the target domain.
Place the examples into the following categories:

ANIMAL PLANT ARTEFACT GEOGRAPHICAL FORMATION ORGANIZATION

Some categories may contain several examples.

B. Identify the motivation.
For each expression, decide which property of HAND/ARM provides the main motivation for the extension:

SHAPE POSITION MOVEMENT FUNCTION CONTIGUITY PART–WHOLE STRUCTURE

More than one motivation may be possible. Where this is the case, explain which one you consider primary.

C. Compare the following pairs.

1. *mkono wa kiti* 'arm of a chair'
   mkono wa ndizi 'bunch of bananas'
2. *mkono wa tembo* 'elephant's trunk'
   mikono ya saa 'hands of a clock/watch'
3. *mkono wa chungu* 'handle of a clay pot'
   mikono ya shati 'sleeves'

For each pair, explain why the same body-part concept can motivate two different kinds of extension.

D. A second body part: *jicho* 'eye'
Now consider the following Swahili expressions:

Swahili expression	Literal translation	Meaning
jicho la ua	'eye of a flower'	flower bud
jicho la maji	'eye of water'	spring of water
jicho la mtandao / wavu	'eye of a net'	hole/mesh of a net
jicho la kamera	'eye of a camera'	camera eye/lens

These extensions foreground different perceptual properties of EYE, including small size, roundness, hollowness, and brightness. The additional *jicho la mtandao/wavu* and *jicho la kamera* examples are also explicitly documented in the Swahili corpus analysis. For each example, identify the property of EYE that you think is most salient in motivating the extension.

Then answer: Why is it insufficient to say simply that BODY PARTS ARE OBJECTS or OBJECTS ARE BODY PARTS? In your answer, consider the role of shape, spatial position, function, movement, and perceptual similarity.

Discussion

Choose one body-part term from your own language and find three extensions to non-human domains. For each example, identify the target domain and explain what aspect of the body part motivates the extension. Compare your examples with the Swahili data.

8. Body-part extensions to human experience

Body-part concepts are not restricted to the conceptualization of anatomical entities or the external physical world. They also provide important resources for understanding aspects of human experience that are not directly observable as physical objects. References to bodily sensations, physiological responses, organs, and visible body parts may structure the conceptualization of emotion, cognition, personality, interpersonal relationships, and cultural values. Expressions such as *She grasped the idea*, *He is burning with anger*, *Lend me an ear*, *They tied the knot*, and *I look up to him* illustrate how bodily experience may provide a conceptual basis for understanding and expressing psychological, social, and cultural meanings.

These extensions are motivated in different ways. Some are closely associated with bodily processes that can be experienced or observed, such as changes in heartbeat, breathing, facial expression, gaze, posture, or muscular tension. Others develop from the characteristic functions of particular body parts: the EYE is associated with seeing, the HAND with acting, grasping, and touching, and the MOUTH with eating and speaking. Through metaphorical and metonymic extension, these bodily functions may provide access to increasingly abstract domains such as understanding, social contact, control, evaluation, and moral behaviour.

Bodily experience alone, however, does not determine how these semantic networks develop. Body-part concepts may also reflect culturally shared beliefs about the functions of particular organs, culturally significant bodily practices, and conventional interpretations of bodily behaviour. The HEART, for example, may be conceptualized as a centre of emotion, cognition, or both, while FACE and EYE may acquire meanings connected with honour, respect, shame, evaluation, and social identity. An analysis of body-based expressions must therefore distinguish between physiological and perceptual motivation, conventional linguistic meaning, and culturally established interpretation.

Cross-linguistic similarities suggest that some figurative extensions of body-part concepts recur across languages and cultures. Kraska-Szlenk (2014a) refers to such recurrent patterns as “embodied emerging universals”: tendencies grounded in shared bodily experience but realized differently in individual languages and cultures. Such patterns do not imply complete universality. Rather, shared human embodiment provides comparable conceptual resources, while languages and cultures differ in which aspects of bodily experience become salient, which body parts acquire particular abstract functions, and how these meanings are conventionalized.

The major domains examined in this chapter are summarized in Figure 31. Although they are analytically distinguishable, they frequently overlap, demonstrating the pervasive role of embodied experience in psychological, social, and cultural conceptualization.

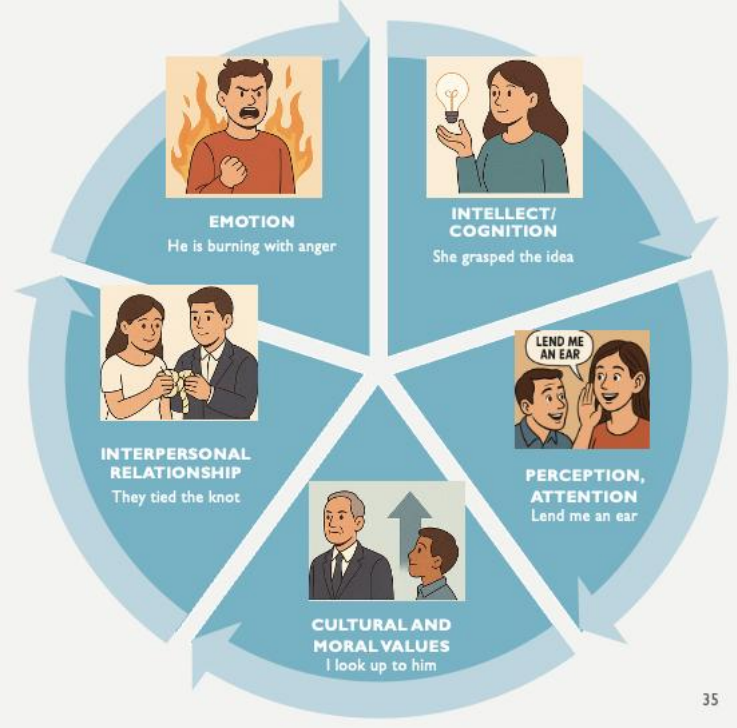


Figure 31. Major domains of human experience conceptualized through bodily experience.

The following sections examine these domains with particular attention to the interaction of metaphor, metonymy, bodily experience, and cultural conceptualization. The aim is not simply to identify figurative meanings of body-part terms, but to understand how bodily concepts develop into interconnected semantic networks linking physical experience with psychological, social, and cultural meaning.

8.1. The body and the conceptualization of emotions

Emotions are closely connected to bodily experience. They may be accompanied by physiological and perceptual changes such as increased heart rate, changes in breathing and blood pressure, facial flushing, muscular tension, changes in facial expression, or sensations in internal organs. Such bodily experiences provide an important basis for the linguistic conceptualization of emotional states (Johnson, 1987; Kövecses, 2000, 2005a; Enfield & Wierzbicka, 2002; Sharifian et al., 2008).

The relationship between bodily experience and emotion may take several forms. An emotion may be conceptualized as located in a particular body part or internal organ, or a bodily response associated with an emotional state may provide conceptual access to that emotion. The latter relationship is frequently metonymic: an observable or internally experienced bodily effect stands for the emotional state that produces or accompanies it.

Importantly, emotion-related expressions do not always correspond directly to scientifically established physiological processes. Some reflect culturally shared beliefs and conventional representations of what happens inside the body during emotional experience

(Kövecses, 1990). Emotion-related language therefore reflects an interaction between bodily experience and culturally mediated interpretations of the body.

The following sections examine these relationships from two complementary perspectives, focusing first on the bodily location of emotion and then on bodily responses associated with emotional experience.

8.1.1. Body parts as loci of emotion

One important dimension of the bodily conceptualization of emotion concerns its perceived location within the body. Languages may conceptualize particular body parts or internal organs as the centre, seat, or container of emotional experience. In such cases, an internal organ is not simply referred to anatomically but functions as a conceptual location in which emotions are experienced, contained, or from which they originate.

In many languages, the HEART occupies this role. Heart-centred conceptualizations have been described in Hungarian, English, Italian, Chinese, Polish, Swahili, and Tunisian Arabic, among other languages (Niemeier, 2000; Deignan & Potter, 2004; Kraska-Szlenk, 2005a, 2005b; Yu, 2008; Maalej, 2008; Bańczerowski & Dziewonska-Kiss, 2013). This relationship is lexicalized in Hungarian in expressions such as:

Table 13. Hungarian heart expressions and their conventional meanings

Hungarian expression	**Literal meaning**	**Conventional meaning**
szívébe zár valakit	'to lock someone into one's heart'	'to hold someone close to one's heart'
kitárja a szívét	'to open one's heart'	'to reveal one's feelings; to open one's heart'
a szíve csücske	'the tip/corner of one's heart'	'someone particularly dear to one's heart'
csordultig tele van a szíve	'one's heart is full to the brim'	'one is overflowing with emotion'
szívből szeret	'to love from the heart'	'to love wholeheartedly'

These expressions conceptualize the heart as a location or container of emotional experience. Emotions may be located within the heart, the heart may be opened to another person, and another person may symbolically be placed within it. The heart may also represent the emotional centre from which feelings originate. Several conceptual relationships therefore converge within this semantic network:

HEART → LOCATION OF EMOTION
HEART AS CONTAINER FOR EMOTION
HEART → SOURCE / CENTRE OF EMOTIONAL EXPERIENCE

The prominence of the heart, however, should not be interpreted as a universal mapping between a particular anatomical organ and emotional experience. Other bodily centres may be culturally salient. In Japanese and Thaayorre, for example, the abdomen or stomach plays an important role in the conceptualization of emotions (Matsuki, 1995; Gaby, 2008; Berendt & Tanita, 2011), while in Indonesian and Dogon the liver is associated with emotional experience (Siahaan, 2008; McPherson & Prokhorov, 2011).

These cross-linguistic differences illustrate a central principle of cultural embodiment. Emotional experience is bodily grounded, but this shared bodily basis does not determine which organ will become conceptually salient or how emotional experience will be organized around it. Languages and cultures may foreground different bodily centres and associate them with different aspects of emotional life. The relationship between BODY and EMOTION thus emerges from the interaction between shared embodiment and culturally established patterns of conceptualization.

8.1.2. Bodily responses as expressions of emotion

A second important pattern involves bodily responses that accompany emotional experience. Rather than locating an emotion in a particular organ, expressions of this type refer to a bodily change or reaction associated with an emotional state. These responses may be externally visible, such as facial flushing, changes in facial expression, goosebumps, or hair standing on end, or internally experienced, such as a rapid heartbeat or sensations in the stomach. The conceptual relationship underlying many such expressions can be described metonymically as:

BODILY RESPONSE FOR EMOTION

A bodily effect associated with an emotion may provide conceptual access to an emotional state that cannot itself be directly observed. Facial expressions, changes in skin colour, rapid heartbeat, and other bodily reactions may therefore function linguistically as indicators of emotion.

Importantly, the relationship between bodily response and emotional meaning is not necessarily one-to-one. The same physiological or perceptual change may accompany different emotions, and a particular bodily response may receive different conventional interpretations across languages. Conversely, different bodily responses may be associated with the same emotion.

This distinction is important for the study of embodiment. The existence of a physiological response does not by itself determine its linguistic meaning. Languages select, categorize, and conventionalize bodily experiences in different ways. Bodily responses therefore

provide an experiential basis for emotional conceptualization, while their interpretation may also depend on linguistic and cultural knowledge.

8.1.2.1. Face and the conceptualization of emotion

The FACE is particularly important in the bodily conceptualization of emotion because facial expressions and changes in facial appearance provide highly visible cues to emotional states. This relationship can be described more specifically through the metonymy:

FACIAL EXPRESSION FOR EMOTION (Wierzbicka, 1999; Yu, 2001, 2002; Gibbs, 2005; Vainik, 2011)

Facial colour, shape, muscular configuration, and movement may all become associated with emotional experience. Facial redness, for example, may be associated with embarrassment, shame, or anger, while paleness may be associated with fear. A tense or hardened facial expression may indicate seriousness or dissatisfaction, a sour expression may signal disgust, and a radiant or shining face may express happiness.
Chinese and Estonian provide several examples of these relationships:

Table 14. Facial expressions and emotions in Chinese and Estonian.
Based on Yu (2002, p. 344) and Vainik (2011, pp. 54–55).

Language	Expression	Literal meaning	Emotional meaning
Chinese	*lian-re*	face–hot	to feel ashamed
	lian-hong	face–red	to blush with shame or embarrassment
	hong-lian	red–face	to feel ashamed, become angry, or turn red with anger
	beng-lian	tense–face	to look serious, reluctant, or dissatisfied
	ban-lian	hardened–face	to maintain a stern or expressionless face
	shang-lian	onto–face	to become flushed from drinking wine; to become carried away by success or praise
Estonian	*näost valgeks minema*	to become white in the face	to be afraid
	puna tõuseb palgesse	redness rises into the face	to feel ashamed

näost hall olema	to be grey in the face	to be worried
pikka nägu tegema	to make a long face	to be disappointed
nägu krimpsutama	to make a sour face	to feel disgust
nägu särab	the face shines	to be happy
palg lööb vihast leegitsema	the face bursts into flames with anger	to be angry

These examples demonstrate that facial colour, shape, and movement may provide metonymic access to emotional states. At the same time, they also show why bodily motivation should not be equated with a fixed relationship between physiological response and emotion. A similar bodily change may receive different emotional interpretations, while languages may conventionalize these relationships differently.

English, for example, may express anger through references to either a blue face or a reddened face (Gibbs, 2005, p. 259). Hungarian provides a related illustration of how different lexical choices may distinguish between emotional interpretations of a similar physiological response. *Elpirul* 'to blush' is typically associated with embarrassment or shame, whereas *elvörösödik* 'to turn red' may describe facial redness associated with anger. Both expressions refer to a change in facial colour, but their conventional emotional associations differ.

Cultural variation may also concern which parts of the face are treated as particularly informative in the interpretation of emotion. In the study discussed by Occhi (2011, p. 180), Japanese participants focused mainly on the eyes when interpreting happiness and unhappiness, whereas American participants relied more strongly on the mouth. The findings suggest that cultural differences may concern not only the interpretation of bodily responses but also the perceptual salience attributed to different parts of the face.

These patterns illustrate the interaction between shared bodily experience and culturally shaped interpretation. Human beings may experience broadly comparable physiological and perceptual changes, but languages and cultures can differ in which changes they select as meaningful, how they categorize them, and which emotions they conventionally associate with them.

8.1.3. Blood and the conceptualization of emotion

Internal bodily processes may also provide an important basis for the conceptualization of emotional experience. BLOOD is particularly productive in this respect because its movement, distribution, temperature, and changes of state may be associated with psychological and emotional conditions. Unlike facial expressions, however, many processes involving blood are not directly visible. Their figurative interpretation may therefore draw both on perceptible bodily

experience and on culturally shared representations of what happens inside the body during emotional states. In Hungarian, expressions involving *vér* 'blood' draw on several physical or culturally attributed characteristics of blood (Baranyiné Kóczy, 2020a, pp. 113–114).

Table 15. Characteristics of BLOOD in Hungarian emotion-related expressions

Characteristic of blood	**Hungarian expression**	**Literal meaning**	**Conventional meaning**
Blood fills the body or a body part	*arcába szökik a vér*	'blood rushes to his/her face'	to blush; to become flushed
Blood fills the body or a body part	*vérszemet kap*	'to get a blood-eye'	to become emboldened
Blood has a temperature	*megfagy az ereiben a vér*	'the blood freezes in his/her veins'	to become extremely frightened
Blood has a temperature	*vérlázító*	'blood-heating'	outrageous
Blood is dynamic and may change its state	*megdermed a vére*	'his/her blood congeals'	to become paralysed with fear/shock
Blood is dynamic and may change its state	*pezseg a vére*	'his/her blood is bubbling'	to be full of energy

These expressions show how characteristics attributed to blood may be extended to emotional and psychological experience. Some have a basis in perceptible bodily processes. Changes in blood circulation, for example, may become externally visible through facial flushing or may be internally experienced as sensations of heat. In *arcába szökik a vér* 'blood rushes to someone's face', the conceptualization is therefore closely connected to an observable bodily response.

Other expressions involve processes that do not literally occur in the way described. Blood does not freeze, boil, or congeal in response to fear or anger, yet such imagined changes provide conventional ways of conceptualizing intense emotional states. Expressions such as *megfagy az ereiben a vér* 'one's blood freezes in one's veins' and *megdermed a vére* 'one's blood congeals' therefore depend not simply on physiological experience but on culturally established representations of the internal body.

BLOOD consequently is an example of how bodily experience and perceptible physiological changes interact with culturally shared knowledge and conventional representations of the internal body in the conceptualization of emotion. More generally, body-based expressions of emotion can be placed along a continuum:

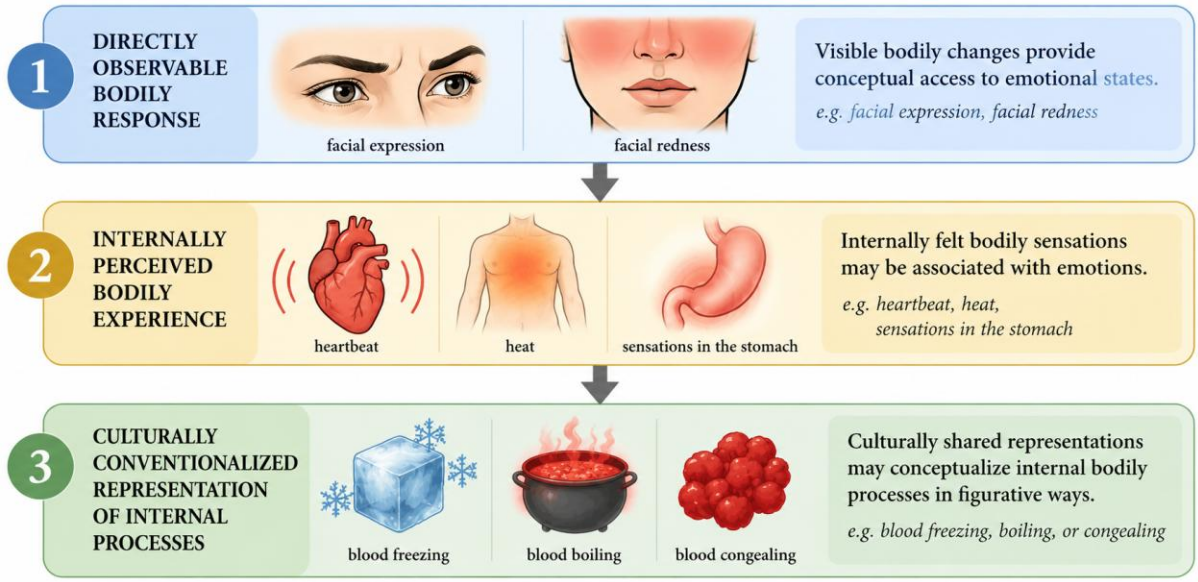


Figure 32. From Bodily responses to culturally conventionalized representations of emotion

The boundaries between these categories are not necessarily absolute, but the continuum highlights an important distinction. The bodily grounding of emotion may involve observable physiological responses, subjective bodily sensations, and culturally mediated interpretations of the internal body. Emotional conceptualization is therefore simultaneously physiological, perceptual, linguistic, and cultural.

8.2. Body parts as loci of cognition

Body-part concepts provide important resources for conceptualizing cognitive processes such as thinking, understanding, remembering, knowing, and decision-making. The bodily centres associated with these processes, however, are not necessarily the same across languages and cultures. While some languages strongly associate cognition with the HEAD, others locate cognitive activity in the HEART, LIVER, or other internal organs. A central cross-cultural question is therefore how languages select particular parts of the body as loci of mental activity and how they conceptualize the relationship between cognition and emotion.

The extension from body parts to cognition may involve both metonymy and metaphor. A body part may provide metonymic access to a cognitive faculty or activity associated with it. In expressions involving HEAD, for example, a possible conceptual chain is:

HEAD → BRAIN → MIND → COGNITION

At the same time, cognitive processes may be structured metaphorically through spatial relations, containers, movement, or perception. Thoughts may be conceptualized as entities located *in* the head, ideas may *enter* or *leave* the mind, and understanding may be represented in terms of seeing. Body-part expressions referring to cognition therefore frequently involve an interaction between several conceptual mechanisms.

8.2.1. Dualistic and holistic conceptualizations of cognition and emotion

In the Western tradition, rational thought and emotion have often been conceptualized as distinct domains. This distinction is reflected in a broadly dualistic model in which cognition is associated primarily with the HEAD, while emotion is associated primarily with the HEART. Similar patterns have been described in Hungarian and English (Niemeier, 2008; Baranyiné Kóczy, 2019). Hungarian expressions illustrate this contrast:

Table 16. HEART and HEAD in the Hungarian conceptualization of emotion and cognition

Bodily centre	Hungarian expression	Literal meaning	Conventional meaning
HEART: emotion	*szívből gyűlöl*	'to hate from the heart'	'to hate wholeheartedly'
	szívére vesz valamit	'to take something onto one's heart'	'to take something to heart'
HEAD: cognition	*fejébe vesz valamit*	'to take something into one's head'	'to set one's mind on something'
	megfordult a fejében	'it turned in his/her head'	'it crossed his/her mind'
	fejben dől el	'it is decided in the head'	'it is decided mentally/in one's mind'
	fejetlenség	'headlessness'	'confusion; lack of organization'

In these expressions, HEAD does not simply refer to an anatomical region. It provides conceptual access to the brain, the mind, and cognitive activity more generally. HEART, by contrast, provides access primarily to emotional experience. The opposition between HEAD and HEART thus contributes to a culturally familiar distinction between thinking and feeling.

This division, however, is not universal. Other languages and cultures may associate cognition and emotion with the same bodily centre or distribute these functions differently across the body. The broader cross-cultural organization of these bodily centres into holistic, continuum-type, and dualistic models will be examined in Chapter 10.

8.2.2. Cognition and emotion as overlapping domains

The distinction between dualistic and holistic conceptualizations should not be treated as absolute. Even in languages in which different body parts are predominantly associated with cognition and emotion, their figurative functions may overlap.

Swahili provides an example. Its dominant conceptualization is broadly dualistic: *moyo* 'heart' is primarily associated with emotion, whereas *kichwa* 'head' is associated with intellectual abilities. Corpus evidence nevertheless shows that thoughts, questions, doubts, and memories may also be located figuratively in the heart (Kraska-Szlenk, 2014a, pp. 109–124). English provides a familiar parallel in *learn by heart*, where memorization is associated with HEART rather than HEAD.

Such examples suggest that bodily centres should not be understood as belonging to rigidly separated conceptual domains. The same body part may participate in the conceptualization of both cognition and emotion, while different bodily centres may provide access to overlapping aspects of mental life.

8.2.3. The head as a locus and container of cognition

In languages in which the HEAD is strongly associated with cognitive activity, expressions involving the head frequently rely on a metonymic relationship between the anatomical region and the mental processes conventionally associated with it. English *Use your head!*, for example, does not primarily refer to the physical head but to the activity of thinking. Similarly, Hungarian *fejébe vesz valamit* 'to set one's mind on something' associates the head with mental commitment and decision-making. The relationship can be represented as a metonymic chain:

HEAD → BRAIN → MIND → COGNITION

This metonymic association may interact with another important conceptual pattern: the CONTAINER schema. The head can be conceptualized as a bounded space in which thoughts, ideas, knowledge, memories, and decisions are located (Jäkel, 1997). Mental entities may enter this space, remain within it, be organized or reorganized there, or leave it. Consider, for example, the following Hungarian expressions:

Table 17. HEAD as a locus and container of cognition in Hungarian

Hungarian expression	Literal meaning	Conventional meaning
megfordult a fejében	'it turned in his/her head'	'it crossed his/her mind'
nem fért a fejébe	'it did not fit into his/her head'	'he/she could not comprehend it'
kiment a fejéből	'it went out of his/her head'	'it slipped his/her mind'
sikerült helyretenni a fejében	'he/she managed to put it in order in his/her head'	'he/she managed to organize/clarify it in his/her mind'

These expressions combine two different conceptual mechanisms. First, HEAD provides metonymic access to MIND or COGNITION. Second, the CONTAINER schema structures the mind

spatially: mental content can be conceptualized as being inside the head and as moving into, within, or out of it. The conceptual structure can therefore be represented schematically as:

HEAD → MIND / COGNITION
↓
HEAD AS CONTAINER
↓
THOUGHTS / IDEAS / MEMORIES AS ENTITIES IN A CONTAINER

In the semantic network of HEAD, metonymy and metaphor interact in several ways. The anatomical body part provides access to the cognitive domain, while embodied spatial experience provides a structure for conceptualizing the organization and movement of mental content.

8.2.4. The eye, perception, and cognition

The EYE provides a different bodily route to cognition. Unlike HEAD, which may function as a locus or container of mental activity, EYE is connected to cognition primarily through its physiological function of vision. As the organ of sight, EYE first provides metonymic access to SEEING:

EYE → SEEING

Visual perception, in turn, provides an experiential basis for conceptualizing cognitive processes. Seeing something makes information perceptually accessible, and this physical experience may provide a model for becoming aware of something, knowing it, or understanding it. This relationship motivates the conceptual metaphor:

UNDERSTANDING IS SEEING

The resulting semantic network may be represented schematically as:

EYE → SEEING → ATTENTION / AWARENESS → KNOWLEDGE / UNDERSTANDING

Hungarian provides several examples of this relationship. Expressions and lexical items such as *szemlél* ‘to observe or contemplate’, *szemlélet* ‘perspective, approach’, *szempont* ‘point of view’, *nyitott szemmel* ‘with open eyes’, *csukott szemmel* ‘with closed eyes’, and *szem előtt tart* ‘to keep in mind’ (lit. ‘to keep before one’s eyes’), point to different extensions from visual perception towards cognition (Tolcsvai Nagy, 2013, pp. 218–221). These examples show how physical vision may provide a basis for conceptualizing mental access to information. Seeing something may correspond metaphorically to knowing or understanding it, while keeping something within one’s visual field may correspond to maintaining it in awareness.

The semantic network extends further. Hungarian *szemet szúr valami* ‘something catches one’s attention’ (lit. ‘something pricks/stabs one’s eye’) connects the eye and visual perception with attention or awareness. In *az én szememben* ‘in my eyes’ (lit. ‘in my eye’), EYE is associated with a particular perspective from which a person, action, or situation is evaluated. It is important, however, not to analyse all of these extensions automatically in terms of a single conceptual metaphor. Different stages of the network may involve different mechanisms:

EYE → SEEING — metonymy
SEEING → ATTENTION / AWARENESS — perceptual–cognitive extension
SEEING → KNOWING / UNDERSTANDING — metaphor
VISUAL PERSPECTIVE → COGNITIVE PERSPECTIVE / EVALUATION — further figurative extension

The EYE network brings metonymy and metaphor together in the development of abstract meanings from bodily experience. The body provides the perceptual starting point, but successive extensions create a semantic network reaching from physical vision to attention, awareness, knowledge, understanding, perspective, and evaluation.

8.2.5. Cultural variation in the bodily conceptualization of cognition

Cross-linguistic comparison requires particular caution because body-part terms conventionally translated as *heart*, *liver*, *head*, or even *mind* may occupy substantially different positions within the conceptual systems of different languages. What matters is not simply which anatomical term appears in an expression, but the broader network of cognitive, emotional, social, and cultural meanings associated with it.

The bodily conceptualization of cognition thus provides further evidence for cultural embodiment. Bodily experience supplies important experiential resources for conceptualizing mental processes, but languages and cultures differ in the body parts they select as salient and in the functions associated with them. The broader cultural models through which these bodily centres organize cognition, emotion, and other aspects of personhood will be examined in Chapter 10.

8.3. The conceptualization of personality and character

Body-part expressions can characterize a person’s habitual behaviour, emotional disposition, intellectual qualities, or socially evaluated character traits. Unlike expressions referring to temporary emotional states, these expressions typically attribute a more stable or recurrent quality to the person. A bodily feature, body part, bodily response, or bodily function may therefore provide conceptual access to a characteristic of the person as a whole.

This relationship frequently involves metonymy. A salient body part may stand for the person, while properties or functions associated with that body part contribute to the evaluation of the person:

BODY PART → PERSON → PERSONALITY / CHARACTER

Hungarian offers several examples:

Table 18. Body-part expressions referring to personality and character in Hungarian

Expression	Literal meaning	Conventional meaning
jó fej	'good head'	a nice or likeable person
nagy arc	'big face'	a conceited or self-important person
szemtelen	'eyeless'	disrespectful or insolent

The expressions *jó fej* 'good head' and *nagy arc* 'big face' illustrate how a body-part term may provide access to the person as a whole, while the complete expression conveys a conventional evaluation of that person. The meaning of these expressions cannot be predicted simply from the literal meanings of their components: *jó fej* does not describe the physical properties of someone's head, nor does *nagy arc* normally refer to the anatomical size of the face. Instead, the expressions have become conventional ways of characterizing personality or social behaviour.

Not all expressions in this domain involve the same conceptual mechanism. In *szemtelen* 'disrespectful, insolent' (lit. 'eyeless'), for example, the body-part term *szem* 'eye' participates in a highly conventionalized characterization of social behaviour. This points to an important connection between personality and interpersonal evaluation: character is often conceptualized not simply in terms of what a person *is*, but in terms of how that person habitually behaves towards others.

Personality may also be conceptualized through bodily states and responses. English *hot-headed*, for example, characterizes a person as prone to anger or impulsive reactions. Its interpretation combines the association between HEAT and emotional intensity with the metonymic association of HEAD with a person's mental or emotional state. A temporary bodily or emotional condition may thus become the basis for describing a relatively stable disposition:

BODILY / EMOTIONAL STATE → RECURRENT BEHAVIOUR → CHARACTER TRAIT

This distinction is particularly important in relation to the previous sections. The same bodily domain may contribute to the conceptualization of both temporary states and relatively stable personal characteristics. An expression may refer to what a person feels or does in

a particular situation, while another expression based on similar bodily experience may characterize what kind of person they are perceived to be.

Body-part expressions referring to personality and character are also closely connected with social and cultural evaluation. Qualities such as friendliness, arrogance, impulsiveness, or disrespect are interpreted against culturally shared expectations concerning appropriate behaviour. Their meanings may therefore be highly conventionalized and culturally specific: a literal translation of the component words does not necessarily convey the same character judgment in another language. Cross-linguistic analysis must consequently consider not only the body part involved but also the cultural values and social expectations that make a particular bodily expression meaningful as a description of personality.

8.4. Body parts in the conceptualization of interpersonal relationships

Body-part concepts play an important role in the conceptualization of INTERPERSONAL RELATIONSHIPS AND SOCIAL INTERACTION. Human relationships are themselves embodied: people are born into families, touch and hold one another, give and receive objects, help and support others, and physically orient themselves towards or away from other people. Such experiences provide an experiential basis for conceptualizing FAMILY RELATIONSHIPS, SOCIAL BONDS, COOPERATION, AGREEMENT, COMMITMENT, POSSESSION, POWER, and CONTROL.

Two particularly important body-related concepts in this domain are BLOOD and HAND. Each foregrounds a different dimension of interpersonal experience. BLOOD is strongly associated with KINSHIP AND ANCESTRY, while HAND is associated with PHYSICAL CONTACT, SOCIAL BONDING, AGREEMENT, COMMITMENT, ASSISTANCE, POSSESSION, and CONTROL. Their extensions involve different combinations of metonymy and metaphor and may also reflect culturally established models of social relationships.

8.4.1. Blood and kinship

Kinship is an important domain of body-based conceptualization. Kraska-Szlenk (2014a, p. 29) describes one of the underlying conceptual relationships as:

KINSHIP RELATION IS BODY(-PART) SHARING

This conceptualization is partly motivated by bodily experiences associated with reproduction and birth, as well as by observable physical similarities between family members. BLOOD is particularly salient in this domain. Although modern genetics provides a scientific account of biological inheritance, conventional expressions of kinship frequently preserve an older cultural model in which blood represents biological relatedness:

BLOOD IS KINSHIP

The pattern is also found in Hungarian (Table 19).

Table 19. BLOOD and body-based conceptualizations of kinship in Hungarian

Hungarian expression	Literal meaning	Conventional meaning
a vérem	'my blood'	my relative; a member of my family
vérvonal	'bloodline'	lineage; line of descent
testvér	'body-blood'	sibling
vérrokon	'blood relative'	biological relative
vér szerinti szülő	'parent according to blood'	biological parent

The expression *vérvonal* 'bloodline' is particularly revealing because it reflects an older cultural model in which blood is conceptualized as the substance through which hereditary characteristics are transmitted across generations (Baranyiné Kóczy, 2020a). These expressions do not imply that blood itself carries hereditary information. Rather, they reflect a culturally conventionalized representation of biological relatedness. Similar conceptualizations occur in English, where *blood* may refer to ancestry, descent, or family background, as in *blood relative* and the proverb *Blood is thicker than water* (Charteris-Black, 2001).

The association between blood and kinship may extend beyond biological relationships. In blood-brotherhood rituals, individuals who are not biologically related may establish a socially recognized, kinship-like bond through the symbolic sharing or exchange of blood. Such rituals create relationships involving mutual loyalty and reciprocal obligations (Hauser-Schäublin, 1993; Evans-Pritchard, 1933). Among the Zande, for example, blood-brotherhood was documented as a socially binding relationship between individuals who entered the bond voluntarily (Evans-Pritchard, 1933, p. 400). The significance of the practice does not derive from the physiological properties of blood alone. Rather, blood functions within a cultural model in which shared bodily substance represents a durable social bond.

SHARED BLOOD → SHARED KINSHIP → SOCIAL BOND

A historically important Hungarian example is *vérszerződés* 'blood pact/covenant'. In traditional Hungarian accounts of the ritual, men who were not related by birth established a kinship-like bond through the symbolic sharing of blood (Ortutay, 1982, p. 535). The term is particularly associated with the Hungarian historical tradition according to which the leaders of the seven Magyar tribes formed an alliance and chose Álmos as their leader in the ninth century. The symbolic sharing of blood represented unity, loyalty, and mutual obligation. In this case,

individuals who did not literally share descent symbolically constructed a relationship analogous to kinship through the sharing of blood.

These practices reveal an important dimension of **cultural embodiment**. The association between blood and relatedness is not restricted to linguistic expressions but may be enacted through bodily practice:

BODILY SUBSTANCE → CULTURAL MODEL OF KINSHIP → RITUAL CREATION OF A SOCIAL RELATIONSHIP

The examples therefore demonstrate why body-based conceptualization should not be studied exclusively through metaphorical expressions. Cultural conceptualizations involving the body may be manifested simultaneously in language, ritual practice, historical tradition, and systems of social obligation.

Blood is not the only bodily source for the conceptualization of kinship. Body parts associated with pregnancy and birth may also represent family relationships. In Swahili, for example, *wa tumbo moja* 'of one womb/abdomen' refers to siblings and derives from *tumbo* 'womb, abdomen'. Another Swahili term, *kitovu* 'navel', may refer metaphorically to a person's birthplace, cradle, or home (Kraska-Szlenk, 2014a, p. 29).

These examples demonstrate that kinship may be conceptualized through shared bodily substance, shared bodily origin, and the body parts associated with birth. The bodily basis is recurrent across languages, but languages and cultures differ in which aspects of embodied experience they select and conventionalize as models of family and social relationships.

8.4.2. The hand and interpersonal relationships

Physical contact involving the hands provides an important embodied basis for the conceptualization of interpersonal relationships. In Hungarian, different forms of hand contact are associated with the establishment, maintenance, or restoration of social bonds (Baranyiné Kóczy, forthcoming-a). Extending the hand may function as a greeting (*kezet nyújt*), while other forms of hand contact may express agreement or commitment, as in *kezet rá* 'let's make a deal', *belecsap valakinek a kezébe* 'confirms an agreement by striking someone's hand', and *kezet fog valakivel* 'shakes hands with someone; seals an agreement or reconciles with someone'.

HAND CONTACT → INTERPERSONAL RELATIONSHIP → AGREEMENT / COMMITMENT

The HAND is also involved in the conceptualization of marriage, although through partly different mechanisms. The Hungarian term *kézfogó* (lit. 'hand-grasping') refers to an engagement ceremony and foregrounds the joining of hands as a representation of relational commitment. In the expression *megkéri a kezét* 'asks for her hand', by contrast, the HAND metonymically represents the person entering the relationship. HAND-based conceptualizations may therefore connect physical contact, social bonding, agreement, and commitment within the interpersonal domain.

8.5. Body parts in the conceptualization of cultural values

Body-part concepts also participate in the conceptualization of culturally important values such as honour, respect, social standing, shame, morality, and conscience. These domains are closely connected to interpersonal interaction, but they extend beyond individual relationships because they reflect shared expectations concerning appropriate behaviour, personal reputation, social value, and moral responsibility.

The bodily conceptualization of cultural values frequently develops from meanings discussed in the preceding sections. A body part associated with perception, emotional expression, or interpersonal interaction may acquire further meanings connected with the way individuals are evaluated within a community. Bodily experience thus provides a basis for conceptualizing not only what people feel, think, or do, but also how their behaviour is judged according to culturally established norms.

The FACE and EYE are particularly important in this domain. FACE may represent a person's socially recognized identity, dignity, honour, and reputation, while EYE may provide access to perspective, evaluation, respect, shame, and moral awareness. Their semantic networks illustrate how bodily experience may become integrated into broader systems of social and moral value.

8.5.1. The face as a symbol of honour and respect

As discussed earlier, the FACE is highly salient in social interaction because it is both a primary means of identifying individuals and an important site of emotional and interpersonal expression. In the domain of cultural values, however, FACE develops a further function: it may represent the **socially recognized self** and the value attributed to that self by others.
This relationship can be represented schematically as:

FACE → SOCIAL SELF → SOCIAL STANDING / REPUTATION → HONOUR / RESPECT

The association motivates the broader concept of SOCIAL FACE, in which FACE represents a person's socially recognized image, standing, dignity, or reputation. Cross-linguistic research has identified related conceptualizations of HONOUR/RESPECT IS FACE in a number of languages (Yu, 2001; Ukosakul, 2003).

The conceptual association has an experiential basis in the social visibility of the face. Because the face is highly identifiable and publicly accessible, it can represent the way a person presents the self and is perceived by others. Changes affecting the face may consequently provide a model for changes in social standing: FACE may be preserved, damaged, lost, concealed, or restored.

The relationship between FACE and social value may also interact with orientational patterns such as VALUABLE IS UP and LESS VALUABLE IS DOWN. Lowering or concealing the face, for example, may be associated with shame, embarrassment, or diminished social standing,

linking bodily orientation with social evaluation. Expressions connecting FACE with honour, respect, and social evaluation occur in several languages:

Table 20. FACE in the conceptualization
of honour, respect, and social evaluation across languages

Language	Expression	Literal meaning	Conventional meaning
Hungarian	*tiszta arcú*	'clean-faced'	honest or innocent-looking
Hungarian	*arcátlan*	'faceless'	shameless; insolent
Hungarian	*vastag a bőr a képén*	'the skin on his/her face is thick'	shameless
English	*lose face*	'lose face'	lose honour or social standing
Arabic	*waʤh*	'face'	face; also honour or a prominent person
Turkish	*yüz akı*	'clean/white face'	honour
Swahili	*sina uso*	'I have no face'	'I am ashamed'

These expressions draw on different aspects of FACE. Presence and absence, cleanliness, thickness, and physical integrity may all become relevant to the conceptualization of social value. The recurrent association between FACE and social standing therefore does not imply that languages structure this domain in exactly the same way.

Chinese provides a particularly elaborated example. Yu (2001) discusses expressions corresponding broadly to English *lose face*, including *diu-lian* 'lose face', *pao-lian* 'throw away face', *quian-lian* 'scratch face', and *sao-lian* 'sweep away face'. These expressions conceptualize damage to social standing through different actions affecting FACE.

Thai likewise makes extensive metaphorical use of *nâa* 'face' in expressions concerning honour, shame, and shyness. A shameless person may be conceptualized as having a 'thick face' or a 'hard face', whereas a 'thin face' may characterize someone who is shy or easily embarrassed. The consequences of losing honour may also be represented through descriptions of the face as numb, broken, or withered (Ukosakul, 2003, pp. 290, 292).

These cross-linguistic patterns illustrate the interaction between shared embodiment and cultural elaboration. The physical and social salience of the human face provides a widely available experiential basis for conceptualization, but languages differ in the particular properties and actions they select and in the cultural models through which FACE becomes associated with honour, shame, dignity, and reputation.

8.5.2. The eye as the locus of social evaluation: respect and honour

While FACE primarily represents the social self and its standing in the eyes of others, EYE approaches social value from a different perspective. As the organ of vision, EYE is associated with seeing and attention; these functions may extend to the way a person perceives, judges, and evaluates other people and their behaviour.
This development builds on the semantic network of EYE discussed in the previous sections:

EYE → SEEING → ATTENTION / AWARENESS → PERSPECTIVE → EVALUATION

The connection between EYE and value is particularly explicit in the Hungarian dialectal expression *nagy szeme van valaminek* 'something has a large eye', meaning that something has great value (ÉrtSz.).

Other Hungarian expressions extend EYE into the domains of personal evaluation, respect, and disrespect (Baranyiné Kóczy, 2020b):

Table 21. EYE in the conceptualization of social evaluation and respect in Hungarian

Hungarian expression	Literal meaning	Conventional meaning
az én szememben	'in my eye'	according to my evaluation; in my view
nagyot nőtt a szememben	'he/she grew greatly in my eye'	he/she rose considerably in my estimation
szemtelen	'eyeless'	disrespectful; insolent
szembeköp valakit	'to spit in someone's eye'	to show extreme disrespect
szeme közé nevet	'to laugh between someone's eyes'	to laugh in someone's face

The first two expressions illustrate particularly clearly the extension from visual perspective to evaluative perspective. In *az én szememben* 'in my eyes', an individual's visual perspective provides a model for subjective judgment. In *nagyot nőtt a szememben* 'he/she rose considerably in my estimation', this evaluative perspective interacts with an orientational representation in which an increase in value is conceptualized as upward movement or growth.

The remaining expressions concern socially evaluated behaviour. *Szemtelen* 'disrespectful, insolent' (lit. 'eyeless'), already discussed in relation to character in Section 8.3, also proves the close connection between personality attribution and the social evaluation of behaviour. Expressions such as *szembeköp valakit* 'to spit in someone's eye' and *szeme közé nevet* 'to laugh in someone's face' refer more directly to acts of interpersonal disrespect or

confrontation. In these cases, EYE and the immediately surrounding facial region participate in culturally conventionalized interpretations of face-to-face interaction.

The semantic network of EYE thus extends beyond perception and cognition into the domain of social evaluation. Seeing provides an experiential basis for perspective, perspective for evaluation, and evaluation for judgments concerning respect, social value, and appropriate behaviour.

8.5.3. The eye as a locus of moral evaluation and moral reflection

The evaluative functions of EYE may extend further into the domain of morality and conscience. In Hungarian, expressions involving the eye may refer to the recognition and evaluation of objectionable behaviour, feelings of shame, reproach, and confrontation with personal responsibility. The EYE may therefore function both as an organ of moral evaluation, directed towards the behaviour of others or external situations, and as an organ of moral reflection, associated with the evaluation of one's own behaviour. This distinction corresponds to the analysis of Hungarian EYE expressions proposed by Baranyiné Kóczy (2020b).

This development can be understood as a further extension of the relationship between vision and cognition. If SEEING provides a basis for awareness and understanding, visual perception may also provide a model for recognizing that something is wrong, acknowledging one's own actions, and evaluating behaviour according to socially shared norms:

EYE → SEEING → AWARENESS → EVALUATION → MORAL AWARENESS

The following Hungarian expressions illustrate this:

Table 22. EYE in the conceptualization
of evaluation, shame, and moral awareness in Hungarian

Hungarian expression	Literal meaning	Conventional meaning
bántja a szemét	'it hurts his/her eye'	something offends or troubles him/her
szemet szúr valami	'something pricks one's eye'	something attracts attention, often because it is objectionable
majd kisül a szeme	'his/her eye almost burns out'	to feel intense shame
lesüti a szemét	'to lower one's eyes'	to lower one's gaze in shame or embarrassment
szemére hány valamit	'to throw something onto/in someone's eye'	to reproach someone for something

These expressions illustrate different functions of EYE in moral evaluation and moral reflection. *Bántja a szemét* 'something offends or troubles him/her' (lit. 'it hurts his/her eye') and *szemet szúr valami* 'something attracts attention because it is objectionable' (lit. 'something pricks one's eye') represent EYE as an organ of moral evaluation: an objectionable or morally unacceptable situation is conceptualized as something that physically disturbs or affects the eye. In these expressions, an IMMORAL ACT IS PHYSICAL INSULT AGAINST THE EYE.

Majd kisül a szeme 'to be deeply ashamed' (lit. 'his/her eyes nearly burn out') and *lesüti a szemét* 'to lower one's eyes in shame' (lit. 'to cast down one's eyes'), by contrast, represent EYE as an organ of moral reflection. Here the eye is directed towards the moral behaviour of its possessor rather than towards the evaluation of an external situation. Shame is particularly important in this internal function: burning eyes and lowered gaze provide bodily representations of a person's awareness and evaluation of his or her own behaviour.

Szemére hány valamit 'to reproach someone for something' (lit. 'to throw/cast something onto someone's eyes') combines interpersonal confrontation with moral evaluation: the person is confronted with an action for which he or she is expected to account.

The broader relationship between vision and moral awareness is also reflected in expressions such as *szembesül* 'to be confronted with', *szembenéz a hibáival* 'to face one's mistakes', and *belát valamit* 'to acknowledge or recognize something'. While these expressions do not all contain the body-part term EYE itself, they illustrate the wider conceptual relationship between visual orientation, recognition, and acceptance, including the recognition of one's own faults or responsibilities.

Bodily behaviour associated with gaze is particularly significant in the conceptualization of shame. Lowering the eyes provides an observable bodily basis for representing internal moral reflection, while its interpretation in terms of shame or acknowledgment of wrongdoing is culturally mediated. The relationship therefore combines bodily experience with social and moral interpretation:

BODILY BEHAVIOUR → SOCIAL INTERPRETATION → MORAL MEANING

The different functions of EYE discussed throughout this chapter can now be brought together into a broader semantic network:

EYE → SEEING → ATTENTION → AWARENESS / UNDERSTANDING → PERSPECTIVE / EVALUATION → SOCIAL AND MORAL VALUE

This network connects several domains examined separately in the chapter. EYE participates in cognition through seeing and understanding, in interpersonal relationships through gaze and attention, in social evaluation through perspective and respect, and in morality through moral evaluation, shame, and self-reflection. The distinction between external moral evaluation and internal moral reflection is particularly important in Hungarian, where EYE may be directed both towards evaluating others and towards reflecting on the moral behaviour of the self.

Importantly, this network should not be interpreted as a single metaphor or as a necessary historical sequence. Rather, it represents a set of interconnected semantic relationships involving different conceptual mechanisms. The anatomical EYE provides metonymic access to its perceptual function; visual perception provides an experiential basis for cognitive access; and perceptual and cognitive perspective may in turn structure social evaluation and moral awareness.

8.5.4. Cultural values and cultural embodiment

FACE and EYE occupy an important place in culturally shared systems of social and moral value. Their semantic extensions draw on recurrent bodily and perceptual experiences: people recognize one another by their faces, communicate through facial expression and gaze, see the world from particular perspectives, and physically orient themselves towards or away from others. These experiences, however, do not lead to a single universal system of meaning.

FACE and EYE develop different but interconnected semantic networks. FACE is closely associated with the socially presented self and may therefore participate in the conceptualization of dignity, reputation, honour, and social standing. EYE, by contrast, develops from visual perception towards attention, awareness, perspective, and evaluation, and may consequently participate in social and moral evaluation, respect, honour, shame, and moral reflection. In Hungarian, these moral functions include both the evaluation of external situations and reflection on one's own behaviour. These networks can be summarized schematically as:

FACE → SOCIAL SELF → REPUTATION / SOCIAL STANDING → HONOUR / RESPECT
EYE → SEEING → AWARENESS → PERSPECTIVE / EVALUATION → SOCIAL AND MORAL VALUE

These pathways illustrate a central principle of cultural embodiment. Bodily experience supplies an experiential foundation for abstract conceptualization, while culturally shared beliefs, values, and behavioural conventions influence which aspects of bodily experience become salient and how they are interpreted. Cross-linguistic similarities may therefore coexist with substantial differences in the meanings and conceptual associations conventionalized within individual languages.

More broadly, the patterns examined throughout this chapter show that the body provides conceptual resources for understanding multiple dimensions of human experience. Bodily sensations and physiological responses contribute to the conceptualization of emotion; body parts may function as loci of cognition; bodily properties and responses may characterize personality and character; physical contact, shared bodily substance, and gaze may structure interpersonal relationships; and socially salient body parts may participate in culturally established systems of social and moral value. These relationships can be represented schematically as follows:

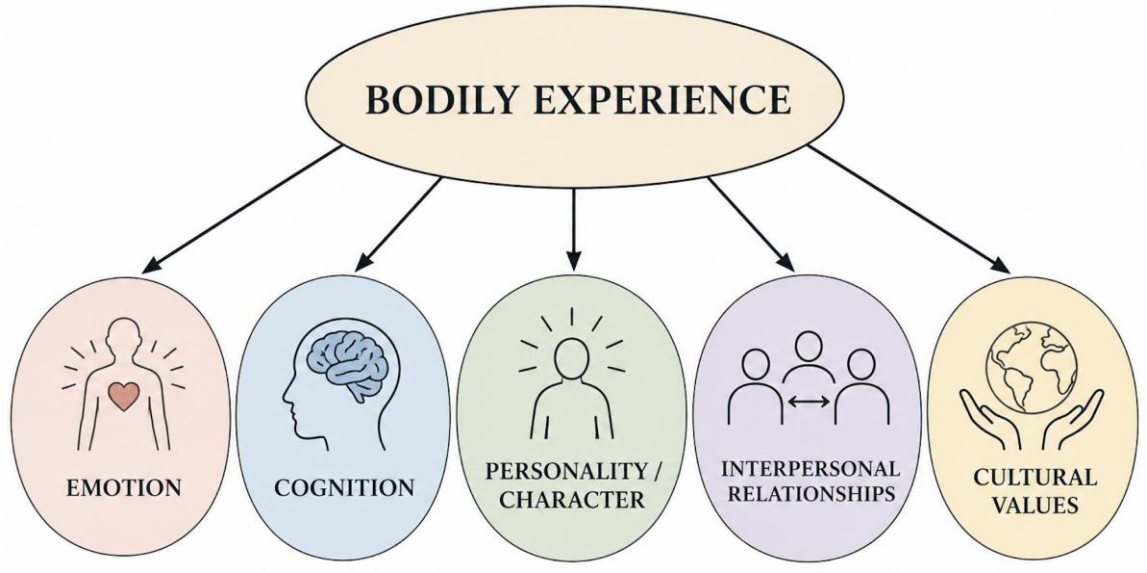


Figure 33. Body-based pathways to psychological, social, and cultural conceptualization.

This representation should not be interpreted as a fixed developmental or historical sequence. Rather, it summarizes the major domains examined in this chapter and illustrates the extension of body-based conceptualization from individual experience towards interpersonal and culturally shared meaning.

Across these domains, metonymy and metaphor frequently interact. A body part may provide metonymic access to a bodily function or experience—EYE to SEEING, HAND to ACTION, HEAD to cognitive activity, or BLOOD to bodily relatedness. Such associations may provide an experiential basis for further extensions into abstract domains such as understanding, control, social relationships, evaluation, honour, or morality. Cultural models may further elaborate these meanings and integrate them into conventional linguistic expressions and social practices.

Body-based conceptualization therefore emerges through the interaction of shared human embodiment, perceptual and physiological experience, conceptual mechanisms, linguistic convention, and culturally shared knowledge. The same human body provides comparable experiential resources across communities, but languages and cultures differ in which aspects of those resources they select, elaborate, and conventionalize. In this sense, the semantic extensions examined in this chapter provide particularly clear evidence for cultural embodiment.

8.6. Case study: the cultural conceptualizations of MOUTH in Hungarian

The Hungarian concept of MOUTH provides a useful case study of how a body-part term may develop a complex network of meanings extending from bodily experience to psychological, social, and cultural domains. The mouth is centrally involved in basic bodily activities such as eating and speaking, while its visible position and movement may also provide information about emotional states. These embodied functions and perceptual properties provide different starting

points for semantic extension, while culturally shared interpretations contribute to the development and conventionalization of particular meanings (Baranyiné Kóczy, forthcoming-b).

One important group of expressions is related to emotion and its bodily manifestation. The position, movement, or appearance of the mouth may provide observable evidence of an emotional state. Expressions referring to smiling, laughing, tightening the lips, or changes in the shape of the mouth therefore illustrate a broader metonymic relationship:

BODILY RESPONSE → EMOTIONAL STATE

In such cases, the visible behaviour of the mouth provides access to an emotion that is not itself directly observable. This relationship forms part of a wider pattern in which facial and bodily responses function as signs of internal emotional states.

A second group of meanings develops from the physiological function of eating. Because food enters the body through the mouth, MOUTH may stand metonymically for eating, appetite, or the need for food. Activities associated with eating, such as tasting, licking, or chewing, may also provide an experiential basis for more abstract meanings:

MOUTH → EATING → APPETITE / SATISFACTION

The mouth is also centrally involved in speech production, and this function motivates a particularly rich set of semantic extensions. MOUTH may provide access to speaking and, through speaking, to the expression of thoughts, opinions, intentions, and attitudes:

MOUTH → SPEAKING → VERBAL EXPRESSION → THOUGHT / ATTITUDE

This pathway describes how a concrete bodily function can provide access to increasingly abstract aspects of human experience. The relationship is not simply metaphorical: the physiological role of the mouth in speech provides a metonymic basis from which further meanings may develop.

Speech, however, is also a form of social action. What a person says, how they say it, and when they speak or remain silent may be interpreted in relation to culturally shared expectations concerning discretion, restraint, honesty, and appropriate behaviour. The semantic network of MOUTH may therefore extend beyond the act of speaking itself to the social evaluation of verbal behaviour.

These different conceptual pathways can be observed in a range of Hungarian expressions analysed by Baranyiné Kóczy (forthcoming-b):

Table 23. Conceptual extensions of MOUTH in Hungarian

Hungarian expression	**Literal meaning**	**Conventional meaning**	**Conceptualization**
fülig szalad a szája	'his/her mouth runs to his/her ears'	he/she is grinning widely	MOUTH FOR EMOTION
megnyalhatja a szája szélét	'he/she can lick the edge of his/her mouth'	he/she can be very satisfied with what he/she gets	TASTE AS SATISFACTION
szájába rág valamit	'to chew something into someone's mouth'	explains something in an overly explicit way	CHEWING AS UNDERSTANDING
lakat van a száján	'there is a padlock on his/her mouth'	he/she keeps a secret	CLOSED MOUTH FOR KEEPING SECRETS
kicsúszik a száján	'it slips out of his/her mouth'	he/she lets something slip	WORDS AS OBJECTS
szájára veszi a világ	'the world takes him/her onto its mouth'	he/she becomes the subject of gossip	MOUTH FOR GOSSIP

The examples illustrate different routes from bodily experience to more abstract and culturally interpreted meanings. In *fülig szalad a szája*, the visible configuration of the mouth provides access to an emotional state, illustrating MOUTH FOR EMOTION. *Megnyalhatja a szája szélét* draws on bodily experience associated with eating and anticipated satisfaction, motivating TASTE AS SATISFACTION. In *szájába rág valamit*, the physical process of chewing provides a model for making information particularly easy to understand, giving rise to CHEWING AS UNDERSTANDING.

Other expressions develop from the role of the mouth in speech and social interaction. *Lakat van a száján* conceptualizes keeping a secret through the image of a physically closed or inaccessible mouth (CLOSED MOUTH FOR KEEPING SECRETS). In *kicsúszik a száján*, spoken words are conceptualized as entities that may unintentionally leave the mouth (WORDS AS OBJECTS). Finally, *szájára veszi a világ* associates MOUTH with socially circulating speech and the cultural practice of gossip (MOUTH FOR GOSSIP).

These examples also differ in the degree to which their meanings can be explained directly through bodily experience. Some remain relatively close to the physiological, perceptual, or communicative functions of the mouth, whereas others require additional knowledge concerning social interaction, culturally appropriate verbal behaviour, secrecy, or gossip. The semantic network of MOUTH therefore cannot be reduced to a single conceptual mechanism.

Instead, it illustrates the interaction between embodiment, metonymy, metaphor, linguistic convention, and cultural conceptualization.

Discussion and analysis tasks

Task 1. One body part, different meanings

The same bodily experience may motivate meanings in several conceptual domains. Read the expressions below and match each example with the most appropriate interpretation.
A. physical recovery
B. financial independence
C. intellectual/pragmatic attitude
D. social or interpersonal relationship
E. laziness
F. fear/escape

1. *lábra áll* — 'gets back on his/her feet'
2. *a saját lábára áll* — 'stands on his/her own feet'
3. *két lábbal áll a földön* — 'stands on the ground with two feet'
4. *jó/rossz lábon áll valakivel* — 'stands on a good/bad foot with somebody'
5. *lógatja a lábát* — 'dangles his/her legs'
6. *lábába szállt a bátorsága* — 'his/her courage descended into his/her legs'

Discussion: What remains constant across these different meanings of *láb*? Which interpretations can be explained mainly through bodily experience, and which seem to require additional social or cultural knowledge?

Task 2. FACE, HAND, and BLOOD in your language

Think of expressions in your native language containing the body-part concepts **FACE, HAND, or BLOOD**. Find at least **two expressions for each body part**.

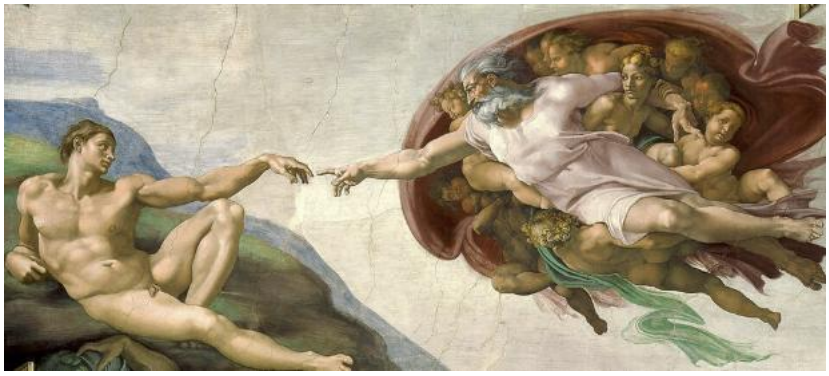
For each expression:

1. Give the expression and its literal English translation.
2. Explain its conventional meaning.
3. Identify the conceptual domain involved (e.g. emotion, personality, honour, power/control, possession, social relationships, ancestry, life).
4. Consider what aspect of bodily experience may motivate the meaning.
5. Decide whether the expression has a close English equivalent.

Compare your examples with those of other students. **Which meanings recur across languages, and which appear to be language- or culture-specific?**

Task 3. Metaphoric extension of body parts

Look at the image, Michelangelo's *The Creation of Adam*, and consider the role of the hand in the scene.



Discussion

Body-part meanings are grounded in shared human bodily experience, yet they may differ considerably across languages and cultures.

1. Which aspects of body-part meaning are likely to arise from shared bodily experience, and which are more strongly shaped by culture?
2. Can the same body part develop different psychological, social, or cultural meanings in different languages? Why?
3. What do such similarities and differences tell us about the relationship between embodiment and cultural conceptualization?

PART IV. THE CULTURAL CONCEPTUALIZATION OF THE BODY

9. Cultural Linguistics and body conceptualization

The human body provides a widely shared experiential basis for conceptualization. As the preceding chapters have shown, bodily structure, perception, physiological processes, and bodily interaction may motivate a wide range of linguistic meanings. Bodily experience alone, however, does not determine how the body is conceptualized in language. Languages and cultural communities may differ in which body parts they distinguish, which bodily functions they foreground, and which meanings and values they associate with particular anatomical regions.

Understanding these differences requires attention to the cultural knowledge through which bodily experience is interpreted. The same bodily structure or physiological process may become associated with different emotions, cognitive functions, social relationships, moral values, or symbolic meanings in different cultural contexts. Conversely, similar cultural meanings may be conceptualized through different parts of the body.

Cultural Linguistics provides a framework for investigating this interaction between language, culture, and conceptualization (Sharifian, 2011, 2017). From this perspective, body-part expressions are not simply isolated metaphors, metonymies, or lexical extensions. They may also provide evidence of culturally shared ways of understanding the body, the person, and the connections between physical, psychological, social, and cultural experience.

This chapter therefore shifts the focus from the conceptual mechanisms of body-based meaning to the cultural organization and interpretation of bodily experience. It examines cultural conceptualizations and cultural models of the body, variation within cultural communities, the cultural salience of particular body parts and bodily features, and the role of the body in cultural beliefs, symbolic representations, rituals, and social practices. It also considers the relationship between shared embodiment and cultural specificity and the ways in which body-related cultural conceptualizations may undergo reconceptualization.

9.1. Cultural cognition and cultural conceptualizations

Cultural Linguistics investigates how language reflects and interacts with cultural conceptualizations: culturally shared ways of understanding and interpreting experience that emerge through interaction among members of cultural communities. Such conceptualizations are shared to varying degrees. They should not be understood as fixed representations held identically by every individual; rather, they form part of the distributed cultural knowledge available to members of a community.

The term **cultural conceptualizations** is an umbrella term for different forms of culturally constructed conceptual knowledge, particularly **cultural categories, cultural schemas,** and **cultural metaphors** (Sharifian, 2011, 2017).

Cultural categories organize experience into culturally meaningful classes and may encompass entities such as objects, colours, emotions, kinship relations, events, and other

aspects of experience (Glushko et al., 2008, p. 129). **Cultural schemas** are culturally shared patterns of knowledge derived from people's recurrent experience of and interaction with their sociocultural environment (Sharifian, 2017; Polzenhagen et al., 2024). They may concern situations, practices, relationships, roles, and expectations. **Cultural metaphors** allow one domain of experience to be understood through another in ways that have become conventional within a cultural community. Together, these forms of conceptualization contribute to the cultural knowledge through which speakers interpret experience and construct meaning.

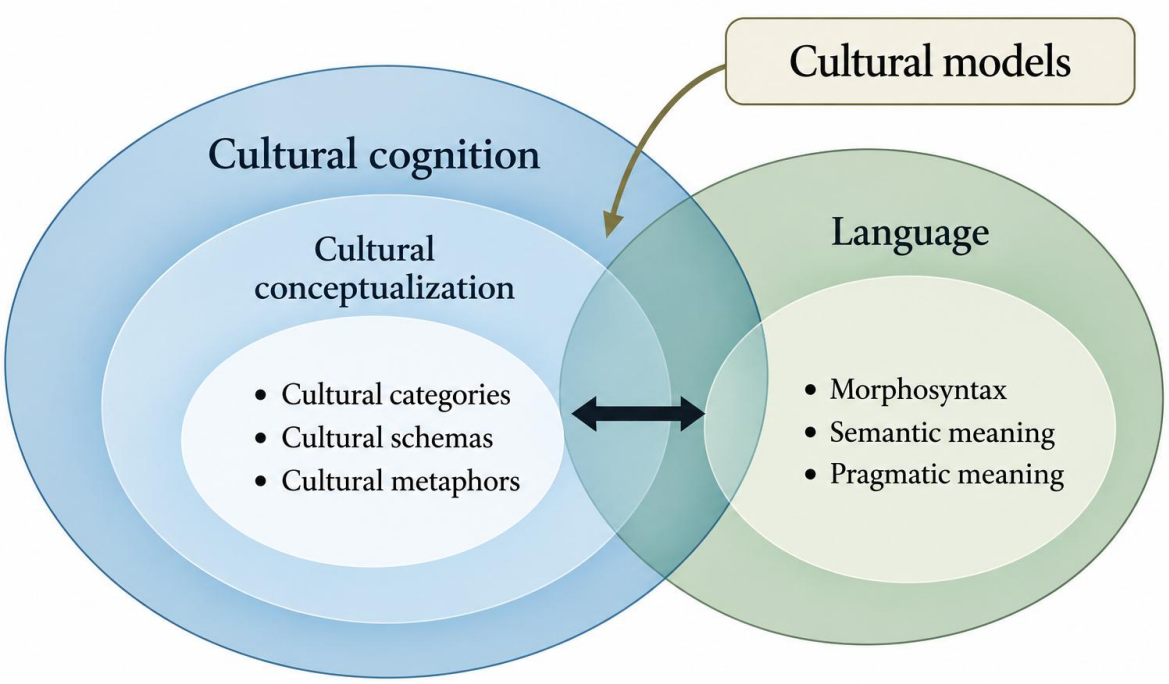


Figure 34. Cultural conceptualizations and their relationship with language. Based on Sharifian (2011).

Language provides an important means through which cultural conceptualizations can be identified. Cultural categories, schemas, and metaphors may be reflected in lexical meaning, grammatical patterns, conventional expressions, and discourse. At the same time, the relationship is not one-directional: language participates in the expression, transmission, and continued negotiation of culturally shared conceptualizations.

Another useful concept is that of **cultural keywords**. Wierzbicka (1997, p. 16) describes cultural keywords as "focal points around which entire cultural domains are organized". Such words are particularly revealing because their meanings are embedded in wider networks of culturally shared knowledge, values, and associations.

Body-part terms may acquire a comparable cultural significance when a particular body part occupies a central position in a community's understanding of the person, emotions, cognition, morality, or social relationships. A term translated as 'heart', for example, may refer not only to an anatomical organ but may also evoke culturally established associations with emotion, thought, memory, courage, morality, or spiritual life. Whether a body-part term can be regarded as culturally salient—or in some contexts as a cultural keyword—therefore depends on

its role within the particular linguistic and cultural system rather than simply on the anatomical importance of the body part itself.

Cultural conceptualizations of the body may concern different aspects of bodily experience and its interpretation. The linguistic segmentation of the body discussed in Part II concerns the organization of anatomical categories. Beliefs concerning the HEART, LIVER, or HEAD as centres of mental and emotional activity may form part of broader cultural models of the person. Expressions involving FACE, EYE, HAND, or BLOOD may activate cultural schemas concerning respect, shame, kinship, social interaction, or morality.

Importantly, cultural conceptualizations are not restricted to language. They may also be expressed and enacted through gestures, rituals, bodily practices, visual representations, and other forms of cultural behaviour. Language nevertheless provides an especially important source of evidence because recurrent linguistic patterns can reveal conceptual associations that have become conventional within a community.

A body-part expression can consequently be analysed at several interconnected levels. At the linguistic level, it involves a particular lexical or grammatical expression. At the conceptual level, its interpretation may involve mechanisms such as metaphor, metonymy, categorization, or schematic knowledge. At the cultural level, it may reflect culturally shared knowledge or a broader cultural model through which the body and human experience are understood.

A particularly revealing example is provided by the cultural conceptualization of HAND in Roman legal and ritual practices. Varga and Baranyiné Kóczy (forthcoming) show that meanings associated with possession, control, and legal authority can be traced to concrete manual actions such as grasping, seizing, touching, and releasing. In early Roman law, these actions were not merely symbolic representations of abstract legal concepts but formed part of performative practices through which ownership and authority were enacted. The resulting conceptual development can be represented as HAND → GRASP → CONTROL → AUTHORITY → LAW. This is an example of how a body-based conceptualization may emerge through the interaction of embodied action, linguistic meaning, cultural practice, and institutional convention.

The task of Cultural Linguistics is therefore not merely to identify figurative expressions involving the body, but to investigate the cultural knowledge and conceptualizations through which particular body-based meanings become intelligible and salient within a community.

9.2. Cultural models of the human body

A cultural model is an organized system of culturally shared knowledge, assumptions, and expectations through which members of a community interpret a particular domain of experience. Such models may be taken for granted within a community (Quinn & Holland, 1987) and may encompass networks of cultural schemas, categories, and metaphors (Sharifian, 2008).

Cultural models of the human body may concern its anatomical organization, the functions attributed to particular organs and body parts, the relationship between body and mind, or the place of the body in social, moral, and religious life. They influence not only how

bodily experience is described but also which aspects of that experience become culturally salient and how they are connected to broader understandings of the person.

The same body part may therefore participate in different cultural models. The HEART, for example, is a physiological organ, but it may also be conceptualized as a centre of emotion, rational thought, memory, courage, conscience, or religious faith. Such associations cannot be explained solely by the physiological functions of the heart. They also depend on culturally transmitted understandings of the body and of human nature.

This relationship can be represented schematically as:

BODILY EXPERIENCE / BODY PART

↓

CULTURAL MODEL

↓

CULTURALLY ORGANIZED MEANING

An important characteristic of cultural models is that they are historically dynamic. The conceptual associations attached to a body part may change as broader cultural understandings of the person, mind, emotion, morality, or spirituality are reorganized.

This historical dimension is methodologically important. A contemporary linguistic pattern should not automatically be interpreted as evidence of a timeless or universal cultural model. Conventional expressions may preserve traces of earlier conceptualizations even after dominant cultural understandings have changed. The historical development of the HEAD–HEART model is instructive in this respect: associations between bodily centres and human faculties such as cognition, emotion, memory, and the soul have shifted considerably over time. This development will be examined in detail in Chapter 10.

Cultural models should consequently not be regarded as fixed systems shared uniformly and unchanged by all speakers. They may develop historically, coexist with alternative models, and leave traces in linguistic expressions after broader cultural understandings have shifted. Body-part language is particularly revealing in this respect, since conventional expressions may provide evidence not only of current cultural conceptualizations but also of earlier ways of understanding the relationship between body, mind, emotion, and personhood.

Variation in cultural models is not only historical. Different conceptualizations may also coexist within the same cultural community, across social groups, generations, contexts, and individual speakers. This intra-cultural variation is examined in the following section.

9.3. Intra-cultural variation in body-part conceptualization

Embodiment provides an important experiential basis for conceptualization, but the human body is not a culture-free or culturally uniform source of meaning. Cultural models may make particular aspects of bodily experience especially salient and influence how body-part concepts are interpreted, evaluated, and connected with other domains of experience.

Variation may therefore occur not only across languages and cultures, but also within the same language and broader cultural community. Different social groups, religious communities, local communities, subcultures, and discourse contexts may draw on partly different systems of cultural knowledge. As a result, the same body part—and even the same general conceptual association—may acquire different meanings or evaluations in different cultural contexts (Baranyiné Kóczy, 2023).

This observation is particularly important for Cultural Linguistics because it prevents us from treating expressions found in one community or discourse as automatically representative of an entire language or culture. Instead, body-part conceptualizations need to be examined in relation to the cultural models, beliefs, values, and practices of the communities in which they occur.

9.3.1. EYE, morality, and social control

A particularly revealing example comes from Lajos's (2021) study of EYE in interviews with elderly villagers from Csíkszentdomokos (Sândominic, Romania) concerning traditional views of sexual life and morality. In the discourse examined by Lajos, EYE was strongly associated with morality and social control, reflecting the importance of monitoring behaviour and maintaining traditional moral standards.

The expression *kinyílt a szeme* 'his/her eyes opened' can be related to the widespread conceptual association **SEEING → KNOWING / UNDERSTANDING**. In the community studied by Lajos, however, the knowledge acquired through 'seeing' was not necessarily evaluated positively. The expression occurred in connection with disapproval of sex education in schools and with changing behavioural norms perceived as threatening the values of the traditional community. The relationship can be represented as:

EYE → SEEING → KNOWING / UNDERSTANDING
↓
CULTURAL MODEL OF MORALITY
↓
CULTURAL EVALUATION OF KNOWLEDGE

A recurrent embodied association such as SEEING → KNOWING does not in itself determine how the resulting knowledge is culturally evaluated. While the experiential basis may be widely shared, the interpretation and evaluation of what is seen or known are shaped by culturally established moral values.

9.3.2. HEART in Christian and secular cultural models

Religious discourse provides another illustration of intra-cultural variation. Pattillo (2023) compares the conceptualization of HEART in English-language Christian music with patterns previously identified in secular English. The comparison shows that the same body-part concept may participate in different semantic networks depending on the cultural model activated by the discourse.

In the Christian model examined by Pattillo, HEART is predominantly God-oriented, whereas in the secular model used for comparison it is more strongly associated with the self and romantic love. Even apparently similar expressions may consequently acquire different meanings.

A revealing example is the conceptualization of a burning heart. In the secular model discussed in the study, this image carries negative associations, whereas in the Christian cultural model it represents the experience of God's presence. The emotional profile of HEART also differs: rather than emotion dominating the Christian conceptualization, character becomes particularly salient, while the emotions associated with HEART are predominantly positive. The contrast may be represented schematically as:

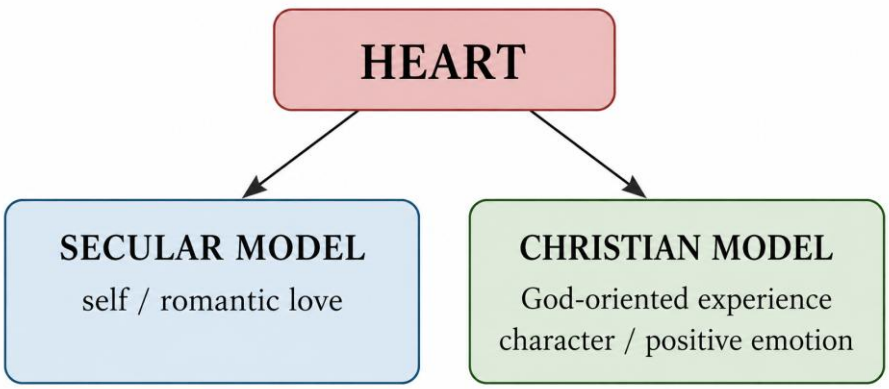


Figure 35. Secular and Christian cultural models of the HEART

The example demonstrates that lexical identity does not imply conceptual identity. Speakers may use the same body-part term and even formally similar expressions while drawing on different culturally available models.

9.3.3. HAND and HAIR in Hungarian archaic prayers

An even more complex example is provided by Baranyiné Kóczy's (2023) analysis of HAND and HAIR in Hungarian archaic prayers. These prayers represent a particular folk-religious tradition in which Christian beliefs are interwoven with elements of older folk belief systems. Body-part conceptualizations that also occur in secular Hungarian may therefore acquire more specific meanings within this religious context.

HAND is central to this pattern. General associations connected with helping, caring, control, and power are integrated into specifically religious schemas:

HAND FOR HELP → the helping hand of the Virgin Mary → SALVATION
HAND FOR CARE → divine care → PROVIDENCE
HAND FOR CONTROL / POWER → divine power → JUDGMENT

The embodied basis of these conceptualizations remains recognizable: hands physically help, support, guide, and control. Their more specific meanings, however, depend on religious knowledge and on culturally established role and event schemas.

Some conceptualizations are even more strongly dependent on such knowledge. The figurative meanings of HAND in the prayers are embedded in event schemas including SALVATION, THE LAST JUDGMENT, PROVIDENCE, EVANGELIZATION, and THE PASSION OF CHRIST. Without access to these culturally shared schemas, the full significance of the body-part expressions cannot be reconstructed.

HAIR displays an especially culture-specific pattern. The hair of Jesus is associated with his torture and humiliation during the Passion, while the Virgin Mary's hair is interpreted through culturally specific role and event schemas. Her loosened hair may represent mourning, death, or glory, and these meanings depend on Hungarian folk beliefs and ritual practices rather than on bodily experience alone. The relationship can be represented as:

BODY PART
↓
EMBODIED ASSOCIATION
↓
CULTURAL / RELIGIOUS SCHEMA
↓
CONTEXT-SPECIFIC MEANING

These examples point to an interaction rather than an opposition between embodiment and culture. Bodily experience provides conceptual resources, while cultural models influence which aspects of those resources become salient, how they are evaluated, and how they are elaborated within particular communities:

EMBODIED EXPERIENCE → CULTURAL MODEL / SCHEMA → CULTURALLY SPECIFIC CONCEPTUALIZATION

The same body part—and even the same broad embodied association—may therefore participate in different conceptualizations within a single language. **EYE → SEEING → KNOWING** may receive a particular moral evaluation in a traditional local community; HEART may be organized differently in secular and Christian discourse; and HAND or HAIR may acquire meanings that depend on folk-religious schemas.

Intra-cultural variation thus reveals a central principle of Cultural Linguistics: cultural conceptualizations are shared but not necessarily uniform. Speakers participate in different communities, belief systems, traditions, and discourse practices, and these may shape the ways in which bodily experience is culturally interpreted. This is particularly visible in religious and traditional folk contexts, where body-part meanings may become closely connected with shared moral values, role schemas, event schemas, and spiritual beliefs.

9.4. Cultural salience and the selection of body parts

Not all body parts and bodily features contribute equally to cultural conceptualization. Particular anatomical regions or physical characteristics may become especially salient because of their perceptual properties, physiological functions, role in everyday activities, or culturally established symbolic associations.

Yu (2004, p. 683) argues that although the body provides a potentially universal source for metaphor and metonymy, cultural models establish particular perspectives from which certain aspects of bodily experience and particular body parts become especially meaningful in the understanding of abstract concepts. Cultural salience therefore concerns not simply whether a body part is named or used figuratively, but the prominence it acquires within a broader system of culturally shared meanings.

The cultural salience of a bodily feature may emerge in different ways. A body part may become significant because of its practical role in culturally important activities, because it participates in a rich network of linguistic expressions, or because it is associated with particular social identities, aesthetic values, beliefs, or symbolic meanings. Cultural salience is therefore not determined by anatomical prominence alone.

9.4.1. Cultural salience and bodily practice

The cultural significance of a body part may develop through its role in recurrent bodily practices. In Dholuo, for example, the expression *chuny wich*, literally ‘heart of the head’, refers to the crown of the head. Ochieng and Baranyiné Kóczy (2026) relate the salience of this region to the traditional practice of carrying loads on the head. The anatomical location of the region provides the bodily basis for the expression, while its practical importance contributes to its cultural relevance. Bodily structure and cultural practice may interact in this way:

BODILY REGION → CULTURALLY RELEVANT PRACTICE → CULTURAL SALIENCE

A body part may thus become conceptually prominent not simply because of its anatomical characteristics but because of what people regularly do with it within a particular cultural environment.

9.4.2. The Hungarian moustache as a culturally salient bodily feature

Cultural salience may also emerge through the accumulation of historical, social, and symbolic associations. A particularly revealing example is the Hungarian *bajusz* 'moustache'. Although facial hair is not a prototypical body part and can be modified or removed, the moustache has historically occupied a prominent position in Hungarian cultural representation and symbolism.

This cultural prominence is reflected in conventional expressions and proverbs. *Magyar ember bajusszal szép* 'A Hungarian man is handsome if he wears a moustache', for example, associates the moustache with Hungarian male identity and attractiveness, while *összeakasztották a bajuszt* 'they clashed their moustaches' refers to conflict. More broadly, linguistic and cultural evidence associates the Hungarian moustache with conceptualizations involving HUNGARIAN NATIONALITY, MANLINESS, AGE, DIGNITY, DOMINANCE, WISDOM, SEXUALITY, CONFLICT, and EMOTION (Baranyiné Kóczy, 2024). The example can be represented schematically as:

MOUSTACHE → HUNGARIAN IDENTITY / MANLINESS / CULTURALLY ASSOCIATED VALUES

A bodily feature such as the moustache may acquire cultural salience not through its biological importance, but through the rich network of linguistic, historical, social, and symbolic associations that develops around it.



Figure 36. The 'Hungarian moustache' as a culturally salient bodily feature. The image shows Zsolt Járomi, winner of the 'Hungarian moustache' category at the European and World Beard and Moustache Championships. Source: *World Beard and Moustache Championships*. *https://www.worldbeardchampionships.com/categories*

9.4.3. Cultural salience and the aesthetic evaluation of bodily features

Cultural models may also make particular bodily features salient through aesthetic evaluation. Characteristics that are positively valued in one cultural context may be neutral or differently evaluated in another. Perceptions of bodily attractiveness therefore cannot be derived from anatomical properties alone.

A relevant example is the maxillary midline diastema, the visible gap between the upper central incisors. Research reviewed by Ahiaku and Millar (2023) indicates that this feature may be positively evaluated in West African populations. Across the studies included in their review, the diastema was associated with an attractive smile, and some participants without a natural diastema expressed a desire to have one artificially created. More recent research involving predominantly Ghanaian and Nigerian participants likewise found a positive aesthetic evaluation of the feature (Ahiaku et al., 2025).



Figure 37. Diastema as a culturally salient bodily feature.
Source: African History Group (2024), Facebook post; original image source not identified.

A related example occurs in Dholuo cultural discourse. The term *rambanya* refers to a person with a gap between the front teeth, while *ragwel* refers to a bow-legged person. Both terms occur with positive evaluative associations in Dholuo praise discourse, where such physical characteristics contribute to favourable descriptions of individuals (Owiti, 2018).



Figure 38. Contemporary reference to rambanya *and* ragwel *in Luo cultural discourse.*
Source: David Oyola, Facebook post.

These examples illustrate the relationship:

BODILY FEATURE → CULTURAL EVALUATION → AESTHETIC / SOCIAL VALUE

The important point is not that a particular bodily feature is inherently attractive, but that cultural models provide frameworks within which physical characteristics acquire aesthetic and social value.

The cultural salience of a body part or bodily feature can therefore be investigated through several kinds of evidence: the frequency and range of its linguistic extensions, its role in culturally significant practices, the beliefs and evaluations associated with it, and its representation in rituals, visual culture, gestures, or other cultural forms. An isolated linguistic expression may suggest a possible cultural association, but a broader claim about cultural salience requires a recurring pattern or additional cultural evidence.

9.5. Cultural beliefs and symbolic representations of the body

The cultural significance of the human body extends beyond language to cultural beliefs, stereotypes, myths, folklore, and other forms of symbolic representation (Kapitány & Kapitány, 2013). Bodily characteristics such as size, shape, colour, proportion, physical strength, hair, or facial appearance may acquire culturally specific meanings and become associated with particular social identities, personal qualities, values, or symbolic roles.

Cultural models provide frameworks through which such bodily characteristics are interpreted and connected with broader systems of cultural knowledge (Yu, 2004). The focus here is therefore not simply on which bodily features become culturally salient, as discussed in the previous section, but on the meanings, beliefs, and symbolic associations that cultures construct around the human body. This relationship can be represented schematically as:

BODILY CHARACTERISTIC → CULTURAL INTERPRETATION → SYMBOLIC / SOCIAL MEANING

Such associations should not be understood as inherent relationships between physical appearance and personality, intelligence, morality, or social worth. Rather, they reflect culturally and historically situated interpretations of the body.

9.5.1. Bodily appearance and cultural stereotypes

Physical characteristics may become associated with culturally recognized qualities such as social status, strength, virtue, personality, or character (Kapitány & Kapitány, 2013, p. 34). In such cases, bodily appearance is interpreted as providing information about qualities that are not directly observable in the body itself.

PHYSICAL CHARACTERISTIC → CULTURALLY ATTRIBUTED QUALITY

Facial appearance, posture, bodily proportions, physical strength, or other visible characteristics may thus be interpreted as signs of qualities that are not directly observable. Such interpretations may become conventionalized as cultural stereotypes, even though there is no necessary relationship between the physical characteristic and the quality attributed to the person.

This distinction is important. Whereas the previous section examined how bodily features may acquire aesthetic or social value, cultural stereotypes involve the attribution of non-physical qualities to persons on the basis of bodily characteristics. Such associations are culturally and historically constructed rather than biologically determined.

9.5.2. The body in mythology and folklore

Mythology and folklore provide another domain in which bodily characteristics acquire symbolic meanings. Supernatural beings may be distinguished from ordinary humans through exceptional size or strength, unusual bodily proportions, additional or missing body parts, bodily transformations, or combinations of human and non-human features (Kapitány & Kapitány, 2013, p. 33). Such physical differences may signal supernatural power, danger, otherness, exceptional ability, or a special relationship with the supernatural world (Kapitány & Kapitány, 2013, p. 33).

BODILY CHARACTERISTIC → CULTURAL / SYMBOLIC MEANING

These representations demonstrate that cultures may imaginatively transform the human body to express culturally significant forms of identity, qualities, powers, and relations to the supernatural.

Cultural stereotypes and mythological representations illustrate two related forms of cultural interpretation of the body. Actual or perceived bodily characteristics may be associated with culturally attributed social or personal qualities, while imagined bodily transformations may represent extraordinary identities, qualities, or powers (Kapitány & Kapitány, 2013, pp. 33–34).

BODY → ACTUAL BODILY CHARACTERISTIC → CULTURAL INTERPRETATION
BODY → IMAGINED BODILY CHARACTERISTIC → SYMBOLIC MEANING

Such representations may involve categorization, symbolic association, metonymy, metaphor, or combinations of these processes. Their interpretation therefore requires attention to the historical and cultural contexts in which they occur.

9.6. The body in cultural and ritual practice

Cultural conceptualizations of the body are expressed not only through language and beliefs but also through bodily practices and actions. Washing, touching, grasping, using bodily substances, or adopting particular bodily postures may function as culturally meaningful acts. In some contexts, bodily actions represent culturally established meanings; in others, they may actively perform or constitute socially recognized acts and relationships.

9.6.1. The body as a performative instrument

Bodily actions may do more than symbolize culturally established meanings: in ritualized contexts, they may function as performative acts through which social or institutional relationships are enacted. Roman legal practices provide a particularly clear example. Varga and Baranyiné Kóczy (forthcoming) show that actions involving the HAND, such as grasping, touching, seizing, joining, and releasing, formed an integral part of legal and ritual procedures. In *mancipatio*, for example, the physical act of grasping formed part of the ritualized procedure through which ownership was transferred, while *manus iniectio* involved physically laying the hand on a debtor. Such actions were frequently accompanied by prescribed verbal formulas, so that bodily action and speech jointly contributed to the validity of the legal act.

The HAND therefore functioned not merely as a symbol of possession or authority but as an instrument through which possession and authority were socially and legally enacted. This points to a particularly important dimension of cultural embodiment:

BODILY ACTION → RITUALIZED ACTION → SOCIALLY RECOGNIZED ACT → INSTITUTIONAL MEANING

Comparable developments can be observed in Hungarian cultural and legal practices. The HAND is closely associated with agreement, commitment, and the expression of legal intent. The Hungarian term *kezes* ‘guarantor’, for example, is historically connected with the practice of confirming an obligation through a handshake, while *kézjegy* ‘hand-mark’ functioned as a legal sign expressing a person’s intent and could substitute for a written signature. In such cases, bodily action or a manually produced mark does not merely represent agreement but participates in its social and legal validation.

HAND → BODILY / MANUAL ACT → COMMITMENT → SOCIALLY RECOGNIZED AGREEMENT

These examples demonstrate that the body may function not only as a source of cultural conceptualization, but also as a medium through which culturally recognized social realities are performed and constituted.

9.6.2. Ritual purification and bodily cleansing

An ordinary bodily action such as washing may acquire symbolic meaning through ritual practice. It can represent the removal of impurity, sin, or misfortune and mark transitions such as IMPURE → PURE or PROFANE → SACRED. Washing the whole body or particular body parts may, for example, prepare a person for prayer, worship, or participation in sacred activities.

PHYSICAL CLEANSING → RITUAL / SPIRITUAL PURIFICATION

The physical act of cleansing thus becomes a culturally meaningful ritual practice.

The association between physical cleanliness and moral status may also become conventionalized in language. Hungarian expressions such as *tiszta a keze* 'his/her hands are clean' associate CLEAN HANDS with innocence, whereas *véres a keze* 'his/her hands are bloody' and *vér tapad a kezéhez* 'blood sticks to his/her hands' associate the physical state of the hands with guilt and responsibility. The expression *mossa a kezeit* 'he/she washes his/her hands', by contrast, refers to an attempt to avoid responsibility. These expressions illustrate how the physical opposition **CLEAN / UNCLEAN** may be extended to the moral opposition **INNOCENT / GUILTY** (Baranyiné Kóczy, forthcoming-a).

9.6.3. Body parts and bodily substances in ritual practice

Body parts and bodily substances such as hair, teeth, blood, and menstrual blood may be treated as maintaining a symbolic connection with the person from whom they originate. This relationship may support metonymic conceptualizations in which bodily material provides conceptual access to the person:

BODY PART / BODILY SUBSTANCE FOR PERSON

A particularly clear Hungarian example is the Szent Jobb 'Holy Right [Hand]', the preserved right hand of King Saint Stephen I.

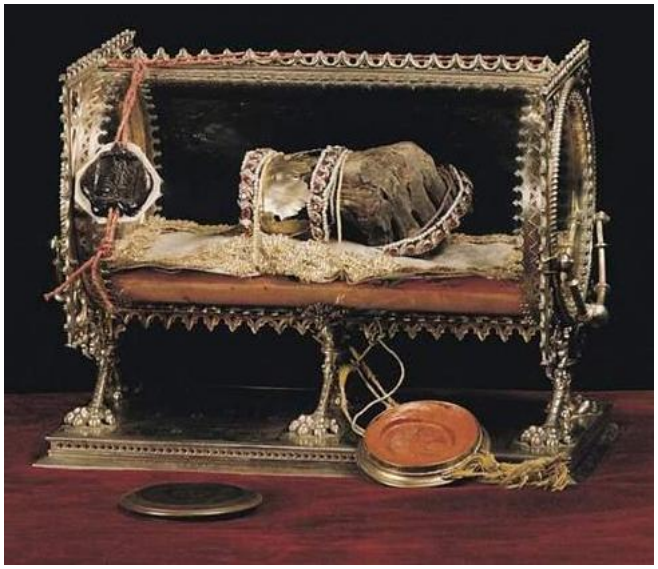


*Figure 39. The Holy Right Hand (*Szent Jobb*), the preserved right hand of King Saint Stephen I of Hungary, venerated as a sacred relic.*

As a bodily relic, the hand metonymically represents the person of the king through **PART FOR WHOLE**, but its cultural significance extends beyond this relation. It is associated with Saint Stephen's royal authority, the foundation of the Hungarian state, the Christianization of Hungary, and broader values of POWER, RESPECT, and SACRALITY (Baranyiné Kóczy, forthcoming-a).

HAND → PERSON → HISTORICAL / RELIGIOUS FIGURE → AUTHORITY / SACRALITY

9.6.4. Body-related taboos and concepts of impurity

Bodily substances such as blood, menstrual blood, saliva, and excrement may acquire culturally specific meanings connected with purity and impurity. Blood, for example, may represent life, kinship, sacrifice, danger, or impurity, depending on the cultural context.

A related example can be found in Jewish traditions concerning menstruation and ritual purity. Within the laws of *niddah*, menstruation is associated with a particular ritual status, and immersion in a *mikveh* (ritual bath) marks the transition from this status after the prescribed period. Importantly, ritual purity and impurity in this context should not be understood simply in terms of physical cleanliness: immersion in the *mikveh* constitutes a religious ritual rather than an act of ordinary washing (Wasserfall, 1999).

Another example is found in traditional Vlax Roma concepts of purity and pollution. In the system described by Leeson (2013), ritual impurity is expressed by the concept *marime*, while *vujo* refers to ritual purity. The body is symbolically divided at the waist: the upper body is regarded as *vujo*, whereas the lower body and substances associated with it, including urine, faeces, semen, and menstrual blood, may be considered *marime* (Leeson, 2013, pp. 276–277).

These distinctions influence everyday practices concerning clothing, washing, food preparation, and contact between objects. For example, clothing associated with the lower body

may be kept separate, and practices of washing and food preparation may be organized to prevent the transfer of ritual pollution (Leeson, 2013, p. 277).

UPPER BODY → RELATIVE PURITY
LOWER BODY → POTENTIAL IMPURITY / POLLUTION

This example demonstrates how anatomical distinctions may become integrated into broader systems of cultural classification and regulate everyday social practices.

9.6.5. Bodily posture in social and religious practice

Bodily posture may also communicate culturally recognized meanings concerning status, respect, authority, submission, or devotion. A recurrent association connects vertical bodily position with social hierarchy:

HIGH / UPRIGHT → HIGHER STATUS / AUTHORITY
LOW / LOWERED → DEFERENCE / SUBMISSION

Bowing the head, bending the body, kneeling, or prostrating oneself may therefore express respect or submission. In religious practices, standing, kneeling, bowing, prostration, raising or folding the hands, and lowering the head may express devotion, humility, or reverence. Their meanings, however, depend on the cultural and religious context in which they occur.

The HAND may likewise participate in culturally conventionalized religious actions. In Hungarian, *áldólag terjeszti kezét valaki fölé* 'he/she extends a blessing hand over someone' conceptualizes the hand as an instrument through which blessing, protection, and authority are directed towards another person. The gesture combines bodily action with the broader conceptualization of HAND as an instrument of protective control and care. These practices illustrate a central principle of cultural embodiment:

THE BODY IS BOTH A SOURCE OF CULTURAL CONCEPTUALIZATION AND A MEDIUM OF CULTURAL PRACTICE.

9.7. Universality and cultural specificity in body-based conceptualization

Human beings share broadly similar bodies and physiological capacities, but bodily experience is interpreted within different cultural environments. As Yu (2004, p. 683) argues, although the body provides a potentially universal source for metaphor and metonymy, cultural models determine which aspects of bodily experience become particularly salient and meaningful.

Shared embodiment therefore does not produce identical conceptual patterns across languages. The contrast between UNDERSTANDING IS SEEING and UNDERSTANDING IS HEARING makes this variation especially visible. Vision-based conceptualizations of

understanding are prominent in many languages, whereas Evans and Wilkins (2000) demonstrate the importance of hearing-based extensions to cognition and understanding in Australian languages. Tactile perception may likewise provide a basis for knowledge-related meanings, as studies of Swedish, Finnish, and Estonian show (Viberg, 2008; Proos, 2020).

Although these examples concern sensory perception rather than body-part nouns specifically, they demonstrate a principle equally relevant to the body: shared human embodiment provides experiential possibilities rather than predetermined linguistic meanings. Body-based conceptualization therefore reflects an interaction between shared embodied motivations and culturally specific conceptual elaborations.

9.8. Reconceptualization

Cultural conceptualizations are not static. They may be modified, reinterpreted, and adapted as cultural communities come into contact and social and communicative environments change. Sharifian (2017b, p. 5) refers to this process as the "reconceptualisation of cultural conceptualisations" and observes that it is becoming increasingly important as globalization brings different speech communities and their systems of cultural conceptualization into closer contact.

Reconceptualization may involve the adaptation of an existing cultural schema or category to a new cultural environment. Sharifian (2017b, p. 5), for example, discusses the adaptation of the CHRISTMAS schema in non-Christian, non-Western societies, where categories such as CHRISTMAS PARTY, CHRISTMAS GIFT, CHRISTMAS FOOD, and CHRISTMAS DRINK may acquire locally specific forms. More generally, the process can be represented as:

EXISTING CULTURAL CONCEPTUALIZATION → CULTURAL / SOCIAL CHANGE → RECONCEPTUALIZED MEANING

Reconceptualization may also result from historical reinterpretation. Cultural forms inherited—or perceived to be inherited—from earlier periods may acquire meanings that differ substantially from their earlier functions. Varga and Baranyiné Kóczy (forthcoming), for example, show that several hand gestures commonly associated with Roman culture have been reinterpreted in later Western cultural contexts. Apparent continuity of bodily form therefore does not necessarily imply continuity of cultural meaning: a similar gesture may become integrated into a new cultural model and acquire a substantially different interpretation.

SIMILAR / INHERITED BODILY FORM → NEW CULTURAL CONTEXT → REINTERPRETATION → NEW CULTURAL MEANING

Reconceptualization is particularly visible in contemporary multimodal discourse, where linguistic, visual, and other semiotic resources may combine to reinterpret familiar cultural

categories. The following examples illustrate this process through the contemporary reconceptualization of a culturally salient Hungarian bodily feature: the moustache.

9.8.1. Case study: the reconceptualization of the Hungarian moustache

The changing cultural meanings of the Hungarian *bajusz* 'moustache' illustrate this process of reconceptualization. Traditionally, the moustache has functioned as a culturally salient bodily feature associated with Hungarian identity, masculinity, and a range of social values (Baranyiné Kóczy, 2024). It is also widely recognizable as a pictorial symbol of Hungarianness and may therefore function as a visual marker of Hungarian cultural identity.



Figure 40. The moustache as a visual marker of Hungarian identity among Hungarian sports fans. Sources: *https://kedvencpolo.hu/termek/hajra-magyarok-kalap-bajusz-1; https://vasarnap.hu/2023/10/15/rozsa-sandorral-fogadtak-a-magyar-szurkolok-a-szerb-valogatottat-video/; https://polomania.hu/shop?s=team+hungary*

In the early 2010s, a group of Hungarian internet memes creatively reworked these established associations. These ironic multimodal representations, which may be described as "moustached memes" (*bajuszos mémek*), recast familiar characters, titles, and scenes from international films, television series, and popular culture as supposedly Hungarian versions. The original cultural products are presented as humorous cultural "translations" through the addition of a conspicuous Hungarian-style moustache and the use of deliberately exaggerated Hungarian, often drawing on archaic or regional vocabulary and pronunciation. The moustache serves as the recurring visual marker—or semiotic constant—of this process of "Hungarianization."



Figure 41. Dr House in a "Hungarized" multimodal representation. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/26

The Dr House meme demonstrates that the transformation may operate simultaneously at the visual and linguistic levels. The Hungarian word *viskó* denotes a small, poor-quality or neglected house and therefore differs evaluatively from the neutral English *house*. The visual transformation of the hospital sign from H to V reinforces the wordplay, even though the letter *V* itself has no corresponding institutional meaning. The humour thus depends on the interaction between translation, lexical connotation, and visual modification.



Figure 42. Hello Kitty reconceptualized as Adj Isten Kati through Hungarian visual and linguistic cues. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/3



Figure 43. A "Hungarized" version of Men in Black: Setít pandúrok 'dark cops'. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/17

In examples such as *Adj Isten Kati* and *Setít pandúrok*, the humour similarly depends on the replacement of globally recognizable names and titles with forms evoking Hungarian linguistic and folk-cultural associations. In *Setít pandúrok*, *setít* may additionally evoke a colloquial evaluative association with limited intelligence, adding another layer to the literal meaning 'dark'.



Figure 44. Columbo reconceptualized through Hungarian regional and archaizing linguistic features. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/8

The Columbo meme extends the same strategy to a character strongly associated with a recognizable verbal formula, *Just one more thing*. Here, the Hungarianization is reinforced through vocabulary and pronunciation associated with archaic or regional varieties of Hungarian.

Across these examples, the moustache does not simply represent a physical characteristic of Hungarian men. It functions metonymically as a marker of Hungarian culture and provides a visual signal that an international cultural product has been transferred into a stereotypically Hungarian cultural frame:

MOUSTACHE → HUNGARIAN CULTURAL IDENTITY → VISUAL MARKER OF "HUNGARIANIZATION"

The established cultural category MOUSTACHE is thus preserved but assigned a new communicative function in contemporary multimodal discourse.

9.8.2. Reconceptualization through multimodal humour

The "moustached memes" demonstrate that reconceptualization may involve more than the addition of a cultural symbol. Visual and verbal elements may activate different cultural categories, schemas, and mental spaces, creating humour through their unexpected interaction. A particularly revealing example is the transformation of E.T. (Extra-Terrestrial) into *H.Ű.* (*Hunnéngyütt űrbetyár*). The original character belongs to a science-fiction mental space centred

on extraterrestrial life, whereas the transformed figure activates the Hungarian cultural category BETYÁR ‘Hungarian outlaw’. The moustache and traditional hat reinforce this shift towards a Hungarian folk-cultural frame.



Figure 45. E.T. reconceptualized as H.Ű., a Hungarian űrbetyár *‘space outlaw’. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/40*

The two figures can be connected through their shared outsider status: both E.T. and the *betyár* exist outside the ordinary social world, although in very different ways. The *betyár* acquired a romanticized image in nineteenth-century Hungarian culture and could represent rebellion and freedom. The expression *hunnéngyütt űrbetyár* further combines regional or archaizing language with the futuristic domain of space travel. The abbreviation *H.Ű.* itself resembles scientific terminology, producing an additional contrast with the folk-cultural discourse evoked by *betyár*. At the same time, *HŰ!* can be read as a Hungarian exclamation of surprise. Several linguistic and cultural associations therefore converge in the same representation.

A different type of interaction occurs in the Harry Potter example. The series is strongly associated with Latin-sounding magical formulas such as *Expelliarmus* and *Expecto Patronum*. The Hungarian expression *abált szalonna* ‘boiled bacon’ is humorously inserted into this frame through its phonological resemblance to the fictional curse *Avada Kedavra*. A culturally familiar Hungarian food is thereby transferred into the magical frame.





Figures 46–47. Harry Potter and the humorous reconceptualization of magical language. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/29. Hungarian abált szalonna *'boiled bacon', activating the COOKING schema in the Harry Potter wordplay.*

Here the humour results from the interaction of two otherwise unrelated schemas:

MAGIC / WITCHCRAFT ↔ COOKING

A similar but semantically motivated interaction occurs when Superman becomes Erős Pista. Superman activates the HERO schema: he possesses extraordinary physical strength and uses his powers to protect others. *Erős Pista*, by contrast, is a widely recognized Hungarian spicy paprika product and therefore activates a COOKING schema. The Hungarian polysemous adjective *erős* provides the connection because it can refer both to physical strength and to the hot or pungent quality of food.





Figure 48–49. Superman reconceptualized as Erős Pista. Source: https://index.hu/galeria/index/tech/2013/02/08/magyar_memek_tengere/12 Erős Pista, the Hungarian paprika product underlying the cultural wordplay.

The humour therefore emerges from the interaction of otherwise distinct conceptual frames:

HERO / PHYSICAL STRENGTH ↔ COOKING / PUNGENCY

These examples demonstrate that multimodal reconceptualization may involve several interacting mechanisms:

CULTURAL CATEGORIES / SCHEMAS + LINGUISTIC AND VISUAL CUES → MULTIMODAL RECONCEPTUALIZATION

Discussion and analysis tasks

Task 1. What cultural values are hidden in proverbs?

Consider the following Hungarian proverbs and idiomatic expressions:

A földet a gazda lábnyoma hizlalja. 'The land becomes fertile through the farmer's footprint.'
Akinek a fejében nincs, legyen a lábában! 'He who has nothing in his head should have something in his legs.'
Ha valaki nyomja lábod, vedd el onnét, ha bánod. 'If someone steps on your foot, move it away if it hurts.'
Inkább lábad törjék, mint a nyakad. 'Better to have your leg broken than your neck.'

Work in pairs. For each expression, identify:

bodily scenario → figurative message → underlying cultural value or belief

Then discuss:
What image of the "good" or competent person emerges from these expressions?

Task 2. Exploring cultural salience in linguistic data

The Hungarian word *bajusz* 'moustache' occurs in numerous idioms, proverbs, and conventional expressions. Examine the examples below and identify the cultural meaning associated with MOUSTACHE in each case.

Hungarian expression	**Literal / contextual meaning**	**Cultural conceptualization**
Nincsen 134awazo ostor nélkül, 134awazo ember bajusz nélkül.	'No coachman without a whip, no Hungarian without a moustache.'	
Bajusz és szakáll férfiembert illet.	'Moustache and beard make a man.'	

Félre pehely, jön a bajusz!	'Move aside, peach-fuzz, the moustache is coming!'
Bajuszomra mondom.	'Upon my moustache.' / 'I mean it; I am serious.'
Mindenkinek a bajuszát ő akarja pödöríteni.	'He wants to twirl everybody's moustache.'
Bajusz alól édes a csók.	'A kiss is sweet from under a moustache.'
Összeakasztották a bajuszt.	'They clashed their moustaches.' / 'They began to fight.'
Zavarában húzogatja a bajuszát.	'He keeps tugging at his moustache in embarrassment/anxiety.'

Possible categories: HUNGARIAN NATIONALITY – MANLINESS – AGE – DIGNITY – DOMINANCE – SEXUALITY – CONFLICT – EMOTION

Follow-up questions

1. Which meanings appear to be motivated by the physical properties or behaviour of the moustache, and which depend primarily on cultural knowledge?
2. Why can *bajusz* be regarded as a culturally salient category rather than simply as a term for facial hair?
3. Choose one body part or bodily feature in your own language and culture that has similarly rich cultural associations. Give two linguistic examples and explain what cultural meanings they express.

Task 3. Analysing cultural reconceptualization in a meme

Examine the meme in Figure 50, which reconceptualizes *Patrick Jane*, the protagonist of *The Mentalist*, as a Hungarian *táltos*. In *The Mentalist*, Patrick Jane works as an independent consultant for the California Bureau of Investigation (CBI). He solves difficult crimes through exceptional observation, intuition, and psychological insight. Although his abilities may initially appear supernatural, Jane ultimately explains his conclusions through ordinary observations and psychologically motivated reasoning. The *táltos*, by contrast, is a figure of traditional Hungarian folk belief associated with supernatural powers and distinctive physical and psychological characteristics (NéprLex. 5: 168). The cultural category TÁLTOS is embedded in the traditional Hungarian belief system and is associated with the broader cultural schema of SHAMANISM.



Figure 50. Patrick Jane reconceptualized as a Hungarian táltos*.*

Analyse how the meme brings these two cultural frames together. Consider the following questions:

1. What are the most important characteristics of the MENTALIST and TÁLTOS categories?
2. Which cultural knowledge or cultural schemas are activated by the word *táltos*?
3. What similarities make it possible to connect Patrick Jane with a *táltos*?
4. What is the crucial difference between Jane's apparently supernatural abilities and those traditionally attributed to the *táltos*?
5. How does the contrast between psychologically grounded reasoning and supernatural / mystical knowledge contribute to the humour?
6. Which elements of the original character remain recognizable after the reconceptualization?

Finally, represent the process using the following pattern:

MENTALIST + TÁLTOS / SHAMANISM SCHEMA + MULTIMODAL CUES → HUMOROUS RECONCEPTUALIZATION

Task 4. From body parts to cultural values: Swahili proverbs

The following Swahili proverbs use body-part concepts to express broader cultural meanings (Kraska-Szlenk 2014b). Read the literal translations and consider what social value, norm, or cultural understanding is conveyed by each proverb.

Swahili proverb	Literal translation
Ukenda kwa wenye 137awazo, vunja lako jicho.	'When you go among one-eyed people, destroy your own eye.'
Ndiwe ulotia moto sasa moshi umo machoni mwako.	'You were the one who started the fire; now the smoke is in your eyes.'
Asiyekuwapo machoni, na moyoni hayupo.	'The one who is not in the eyes is not in the heart.'
Mapenzi hayana macho.	'Love has no eyes.'
Vita havina macho.	'War has no eyes.'

For each proverb, identify: bodily image → figurative meaning → cultural value or social message. Then choose one proverb and explain why the body-part concept makes its message particularly vivid or memorable.

Compare one of the Swahili proverbs with a proverb or conventional expression in your native language. Do the two languages use bodily experience to express similar cultural values, or do they foreground different aspects of bodily experience?

Discussion

1. If human beings share broadly similar bodies, why do body-part concepts develop different meanings across cultures?
2. How can we distinguish between a meaning motivated primarily by **embodied experience** and one that requires **cultural knowledge**?
3. Can a body-part expression tell us something about the cultural model of a community, or is broader linguistic and cultural evidence always necessary?
4. Think of one body part that is culturally salient in your own community. What kinds of linguistic expressions, practices, beliefs, or symbols provide evidence for its cultural significance?

10. Cultural models of cognition, emotion, and the person

One of the clearest areas of cultural variation in body-based conceptualization concerns the relationship between bodily organs and human faculties. Languages may associate emotion, cognition, memory, decision-making, courage, conscience, and spiritual life with different anatomical regions. These associations reflect cultural models of the person, that is, culturally shared understandings of how physical, cognitive, emotional, moral, and spiritual dimensions of human experience are related.

10.1. The heart and other internal organs as centres of emotion and cognition

The heart is associated with emotional experience in many languages, but it is neither universally the principal bodily centre of emotion nor exclusively associated with feeling. Cross-linguistic research distinguishes holistic, dualistic, and continuum-type models according to the relationship between emotional and cognitive faculties and the bodily centres associated with them (Kraska-Szlenk, 2014a).

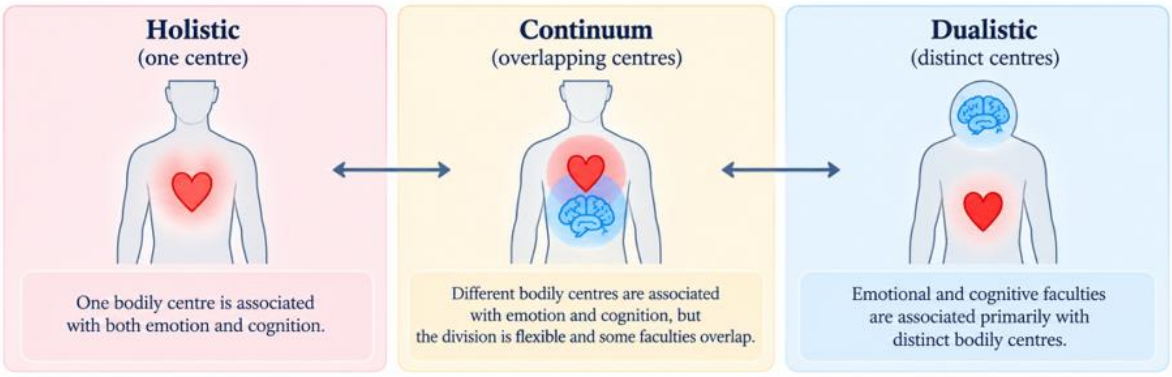


Figure 51. Holistic, Continuum, and dualistic models of the body–mind relationship

The figure represents these models in terms of the degree to which emotional and cognitive functions are associated with the same or with different bodily centres. Rather than forming sharply bounded categories, the three models can be understood as different patterns in the organization of bodily centres and human faculties. Table 24 summarizes their principal characteristics and provides cross-linguistic examples of each pattern.

Table 24. Holistic, continuum, and dualistic
models of emotion and cognition across languages

Model	Principal characteristic	Examples discussed in the cross-linguistic examples
Holistic	One bodily centre is associated with both emotion and cognition.	Tsou *koyu* 'ear'; Ifaluk gut; Indonesian and Malay *hati* 'liver'; Chinese *xin* 'heart'; Thai *jai* 'heart'.
Continuum	Different bodily centres are associated with emotion and cognition, but the division is flexible and some faculties overlap.	Persian *del*; Kazakh *júrek*; Kurdish *dil*; Buryat *zürxen*; Swahili *moyo*; Fulfulde *ɓernde*; Tunisian Arabic heart expressions.
Dualistic	Emotional and cognitive faculties are associated primarily with distinct bodily centres.	English HEART–HEAD; Marind HEART/LUNGS–EAR; Kuuk Thaayorre BELLY–EAR.

These models are analytical generalizations rather than rigid classifications applying uniformly to every speaker or expression.

In holistic models, a single bodily centre may be associated with a broad range of emotional and cognitive faculties. Tsou *koyu* 'ear', for example, functions as a locus of both cognition and emotion (Huang, 2002), while the Ifaluk gut is associated with both domains (D'Andrade, 1987). Indonesian and Malay *hati* 'liver' similarly combines emotional and intellectual functions (Siahaan, 2008; Goddard, 2001). In Indonesian cultural models, the significance of the liver has also been related to traditional practices of liver divination, in which the organ was regarded as a medium through which spiritual beings communicated with humans (Siahaan, 2008). Chinese *xin* 'heart' is conceptualized as a centre of both emotion and cognition and, in the cultural model discussed by Yu (2007, 2008), as the ruler of the body. Thai *jai* 'heart' provides another example of a heart-centred conceptual system (Berendt & Tanita, 2011).

In dualistic models, emotional and cognitive faculties are associated primarily with different bodily centres. Contemporary English provides the familiar contrast between the emotional HEART and the intellectual HEAD (Niemeier, 2000, 2008). Other languages organize the distinction differently. In Marind, *kambét* 'ear' is associated with thinking, knowledge, and memory, while *békai* 'heart and lungs' is associated with emotion (De Witte, 1948). In Kuuk Thaayorre, *kaal* 'ear' is associated with intellectual faculties, whereas *ngeengk* 'belly' is associated with emotion, spirit, and life force (Gaby, 2008).

Continuum-type models demonstrate that emotion and cognition cannot always be sharply separated. Persian *del*, for example, is associated with emotions as well as thoughts and memories (Sharifian, 2008). Kazakh *júrek* 'heart' may be associated with secret thoughts and decision-making, but its semantic range also extends to courage and fear. Associations between HEART and courage are also found in Tatar, Kurdish, Yoruba, and Fulfulde (Baranyiné Kóczy &

Sipőcz, 2023). These examples suggest that the functions attributed to internal organs may extend beyond a simple emotion–cognition opposition to include aspects of character and culturally valued personal qualities.

The continuum perspective raises an important analytical question: Can faculties such as memory, doubt, intention, and decision-making always be classified as exclusively cognitive or exclusively emotional? Cultural models should therefore be reconstructed from the meanings of particular expressions rather than imposed through a predetermined emotion–cognition distinction.

10.2. The HEAD–HEART model: historical and cultural change

The familiar association of the HEAD with rational thought and the HEART with emotion is neither universal nor historically stable. The conceptual functions attributed to these body parts have changed together with broader cultural models of the human person and the relationship between cognition, emotion, body, and soul.

In Old English, the distinction between emotional and intellectual faculties was less pronounced than it is today. The heart was associated with both the mind and the soul, while *mood* encompassed cognition, emotion, and will (Geeraerts & Gevaert, 2008). During the Middle English period, a cardiocentric model became prominent, in which the heart occupied a central position in psychological and bodily functioning and was associated with sensation, thought, and bodily movement (Geeraerts & Gevaert, 2008).

This understanding was compatible with the traditional theory of the four humours, an ethnomedical model in which physical health, temperament, emotions, and behaviour were believed to depend on the balance of four bodily fluids (Geeraerts & Gevaert, 2008).

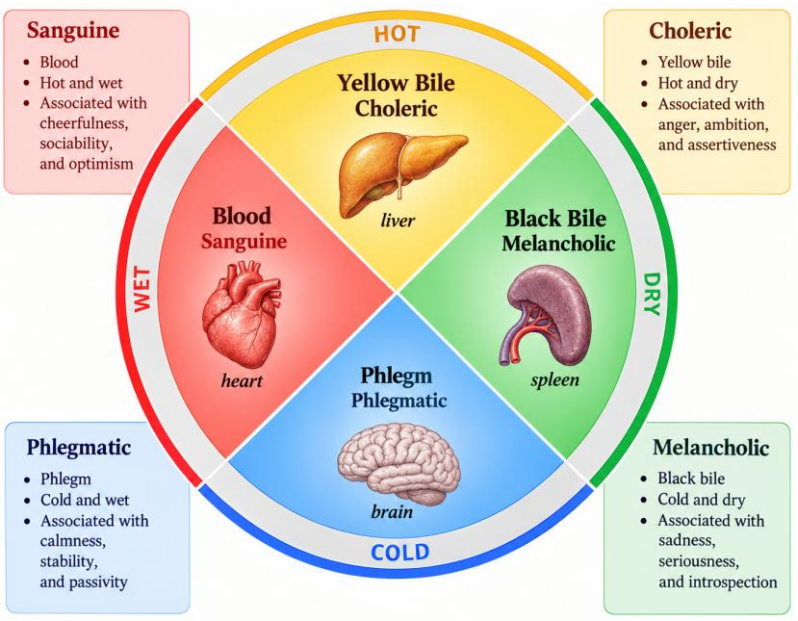


Figure 52. The Classical Theory of the Four Humours and their corresponding temperaments

Temperament	Predominant bodily fluid
Sanguine	Blood
Choleric	Yellow bile
Melancholic	Black bile
Phlegmatic	Phlegm

Within this model, bodily substances and psychological disposition were closely interconnected. The model therefore did not establish the sharp separation between rational cognition and emotion characteristic of the later HEAD–HEART opposition.

A major change occurred in the seventeenth century with the increasing influence of Cartesian dualism. Descartes and his successors promoted a dualistic view of mind and body, drawing on earlier Judeo-Christian traditions and Greek philosophy (Niemeier, 2008, p. 366).



Figure 53. René Descartes (Latinized name: Renatus Cartesius; 1596–1650), French philosopher, natural scientist, and mathematician.

Within this cultural model, rational thinking was increasingly conceptualized as distinct from emotional experience. The HEAD became associated with intellect, rationality, and cognition, while the HEART became primarily associated with emotion and feeling (Niemeier, 2008):

HEAD → INTELLECT / RATIONALITY / COGNITION
HEART → EMOTION / FEELING

The contemporary HEAD–HEART opposition can therefore be understood as a historically developed cultural model rather than a direct consequence of human anatomy.



Figure 54. The HEAD–HEART dichotomy in contemporary visual humour.
Source: Nick Seluk, The Awkward Yeti.

The humorous effect of such multimodal representations may arise from the interaction of visual and verbal elements and from the playful juxtaposition of culturally shared conceptual models. From the perspective of incongruity theories of humour, humorous effects may emerge when expected conceptual patterns are disrupted and otherwise distinct conceptual domains are juxtaposed in an unexpected way (Prodanović Stankić, 2023). In the HEAD–HEART cartoons, the humour relies precisely on such a contrast: culturally familiar models of rational thought and emotional experience are personified and placed in conflict with one another. More generally, the interpretation of certain memes requires familiarity with cultural conceptualizations, including cultural categories, cultural schemas, and cultural metaphors, which provide the background knowledge necessary for interpreting their humour (Prodanović Stankić, 2017, 2023; Nemesi, 2022; Baranyiné Kóczy, 2024).

Earlier conceptualizations may nevertheless survive in conventional language. English *learn by heart*, for example, associates memory with the heart rather than the head and may preserve traces of an earlier model in which the heart was also associated with cognitive faculties (Niemeier, 2008, pp. 355–356).

The cultural history of the HEART also has a religious dimension. Foolen (2008) discusses how, in the post-Cartesian cultural context, the heart became particularly associated with religious faith in Catholic culture. In Christian discourse, it may therefore represent not only emotion but also faith, morality, holiness, and desire directed towards God.
The historical development can be summarized as follows:

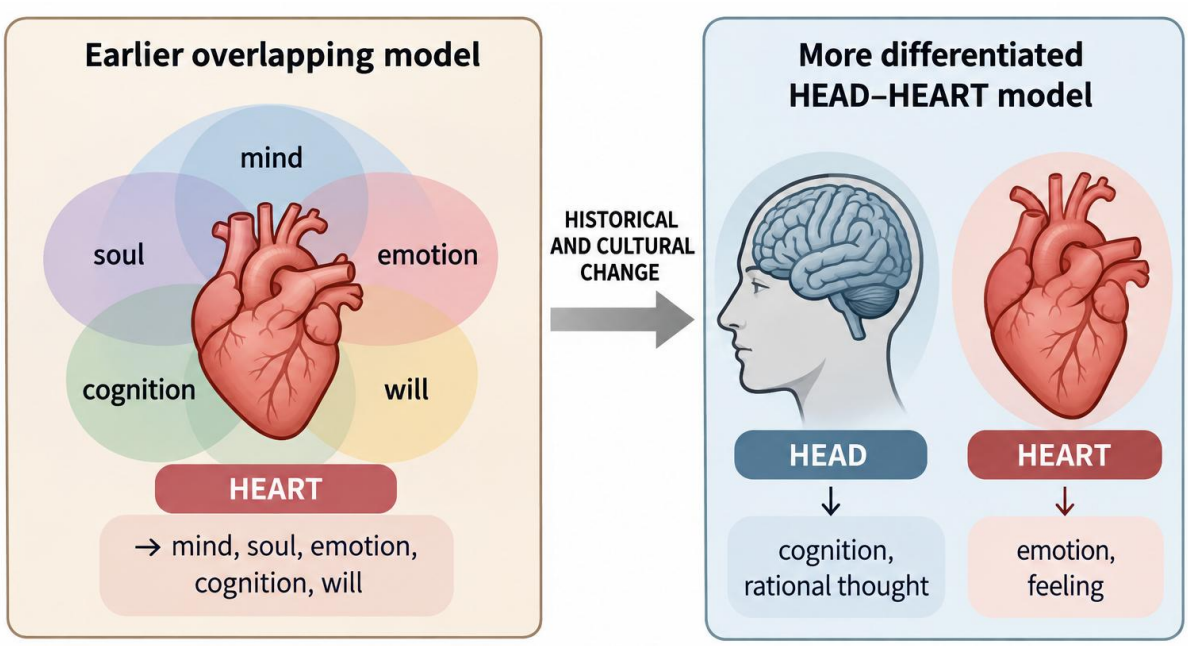


Figure 55. Historical change in cultural models of human faculties: From an overlapping HEART model to a differentiated HEAD–HEART model

The historical development points to a broader principle of cultural embodiment: while the anatomical body remains relatively stable, the conceptual functions attributed to its parts may change substantially as cultural, philosophical, medical, and religious models change.

10.3. The HEAD, EYES, and FACE in cultural conceptualization

The head, eyes, and face provide particularly rich sources for cultural conceptualization because they are associated with cognition, perception, interpersonal interaction, social identity, and the public presentation of the person.

As discussed above, the HEAD is commonly associated with intellectual activity in cultural models that distinguish cognition from emotion. Its cultural meanings, however, extend beyond cognition. Its position at the top of the body may motivate associations with prominence, authority, and leadership, while its visible appearance contributes to individual recognition and social identification.

As discussed in Chapter 8, the EYES provide a bodily basis for visual perception and its extensions into attention, cognition, and evaluation. At the level of cultural conceptualization, these associations may become integrated into broader understandings of interpersonal conduct, morality, and social evaluation.

While the HEAD and EYES illustrate the cultural elaboration of cognition and perception, the FACE is particularly important in the social and cultural conceptualization of the person, as discussed in the following section.

10.3.1. The FACE as a social and cultural concept

The FACE participates in the conceptualization of both emotional experience and social evaluation, as demonstrated in Chapter 8. At the level of cultural conceptualization, its significance extends beyond individual expressions or figurative meanings. As one of the most visible and socially salient parts of the body, the FACE may represent the socially presented self, providing an experiential basis for the broader concept of SOCIAL FACE: a person's socially recognized image, standing, or dignity.



Figure 56. Cultural representations of the female face

Although the bodily basis of this association is widely accessible, its cultural elaboration varies considerably across communities. Yu (2001), for example, demonstrates the particular importance of FACE in Chinese cultural conceptualization, where it is closely connected with culturally structured understandings of social identity, interpersonal relations, and social value.

FACE thus shows how a universally experienced and highly visible body part can become integrated into culturally specific models of the self and its relationship to others. The relevant conceptual network may be summarized as follows:

FACE → SOCIALLY PRESENTED SELF → SOCIAL IDENTITY / STANDING → CULTURAL VALUES

10.4. The symbolic meanings of the HEART

The HEART is one of the most productive body-part concepts in figurative language. In addition to its associations with emotion and cognition discussed above, the HEART may be conceptualized in terms of imagined physical properties. These properties provide experiential

resources for conceptualizing personality, moral qualities, emotional states, and interpersonal attitudes. Particularly productive dimensions across languages include SIZE, COLOUR, TEMPERATURE, TASTE, and SOLIDITY.

10.4.1. Heart size

The metaphorical SIZE of the HEART may be associated with personality and social behaviour. Across languages, a large or wide heart may be associated with generosity, openness, and emotional capacity, whereas a small or narrow heart may evoke meanness, restriction, or lack of generosity. The specific associations, however, depend on culturally conventionalized models of the HEART.

Language	Size	Physical property	Figurative meaning
Buryat	big		courage
Chinese	small		taking care, being mindful
Finnish	big		open-heartedness
	small		meanness
Fulfulde	wide	← →	tolerance
	narrow	→ ←	intolerance
Hungarian	big		open-heartedness
	small		meanness
Kazakh	wide	← →	generosity, benevolence
	thin	↕	heartbreak
Kurdish	big		generosity, courage
	small		coward
Mansi	big		open-heartedness
	small		low intensity of feelings
Polish	big		generosity, compassion, courage
Serbian	big		generosity
Tunisian Arabic	big		generosity
	small		mean
Turkish	vast	← →	high intensity of feelings
	shallow	↕	low intensity of feelings

Figure 57. Figurative meanings of heart size across languages

The general pattern can be represented as:

LARGE / WIDE HEART → GENEROSITY / OPENNESS
SMALL / NARROW HEART → MEANNESS / RESTRICTION

10.4.2. Heart colour

The imagined COLOUR of the HEART may likewise provide a basis for conceptualizing emotional or moral character. Colour associations are particularly sensitive to cultural convention: the same colour does not necessarily carry the same evaluative meaning across languages.

Color	Language	Physical property	Figurative meaning
red / naked	Buryat	red / naked	hope with all one's heart
gold		gold	kindness
grey	Chinese	grey	disheartenment
black	Fulfulde	black	wickedness
gold	Hungarian	gold	generosity
white	Kazakh	white	fairness, honesty, open-heartedness
black		black	ill intention, grief, unhappiness
black	Kurdish	black	insincerity
gold	Mansi	gold	kindness
gold	Polish	gold	generosity, compassion
black	Tunisian Arabic	black	spitefulness
white		white	forgivingness
black / dark	Udmurt	black / dark	anger
black	Yoruba	black	being devilish
white		white	honesty, sincerity

Figure 58. Figurative meanings of heart colour across languages

10.4.3. Heart temperature

TEMPERATURE provides another productive dimension of HEART conceptualization. Bodily experiences of warmth and cold may motivate associations with emotional and interpersonal states, while the specific meanings attributed to a warm, hot, or cold heart are culturally conventionalized.



Figure 59. Figurative meanings of heart temperature across languages

The general relationship can be represented as:

HEART + TEMPERATURE → EMOTIONAL / INTERPERSONAL STATE

10.4.4. Heart taste

The HEART may also be conceptualized in terms of TASTE. Sensory qualities such as sweetness and bitterness may be extended to emotional, evaluative, or interpersonal meanings, although their specific interpretations depend on cultural convention.

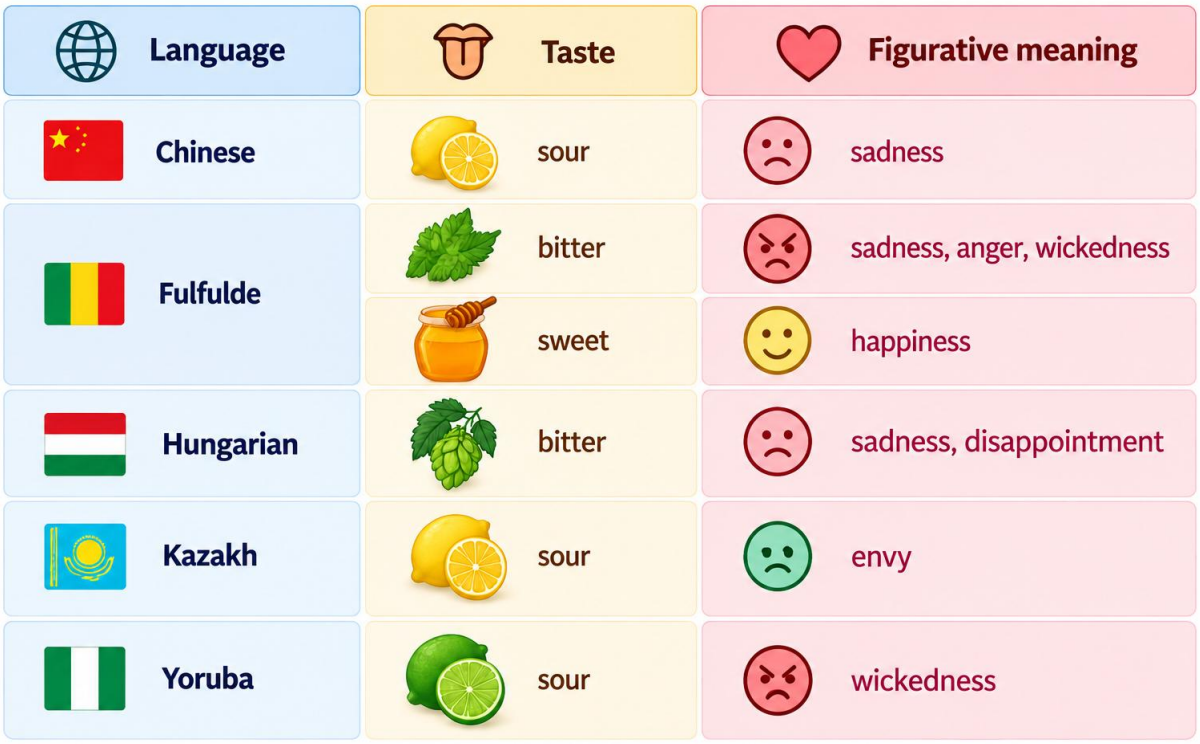


Figure 60. Figurative meanings of heart tasteacross Languages

10.4.5. Heart solidity

Finally, the HEART may be conceptualized in terms of SOLIDITY. Contrasts such as hardness and softness may provide an experiential basis for conceptualizing interpersonal behaviour and character:

HARD HEART → LACK OF COMPASSION / CRUELTY
SOFT HEART → KINDNESS / COMPASSION

These patterns demonstrate an interaction between embodied motivation and cultural conventionalization. Physical dimensions such as size, colour, temperature, taste, and solidity provide experiential resources for figurative conceptualization, but languages select and

elaborate these resources in different ways. The same bodily concept may therefore give rise to both recurring cross-linguistic patterns and culturally specific meanings.

Discussion and analysis tasks

Task 1. Comparing the symbolic meanings of the HEART across languages

The physical properties attributed to the HEART may provide a basis for figurative meanings, but languages do not necessarily conventionalize these properties in the same way.
Choose one of the following dimensions:

SIZE – COLOUR – TEMPERATURE – TASTE – SOLIDITY

Select three languages from the examples discussed above and compare the figurative meanings associated with the selected property.
Complete the table:

Language	Physical property of HEART	Figurative meaning	Positive / negative / context-dependent
1.			
2.			
3.			

Then answer the following questions:

1. **What similarities can you identify across the three languages?** Is there a recurring conceptual association?
2. **What differences do you find?** Does the same physical property have different figurative meanings across the languages?
3. **What might provide the embodied motivation for the association?** Consider bodily experience and general perceptual properties such as warmth, hardness, size, or taste.
4. **Which aspects appear to be culturally conventionalized?** Could the figurative meaning be predicted from bodily experience alone?
5. Based on your examples, formulate one or more conceptual patterns, for example:

WARM HEART → AFFECTION
HARD HEART → LACK OF COMPASSION

Do these patterns apply to all three languages? If not, modify them so that they accurately represent your data.

Discussion

Compare your results with those of students who selected a different physical dimension.
What does the comparison suggest about the relationship between embodiment and cultural variation?
In your answer, distinguish between:
shared bodily motivation and **culture-specific conventionalization**.

Task 2. Is the HEART only emotional? The Swahili moyo

In Swahili, *moyo* 'heart' is associated not only with emotions but also with thoughts, memory, courage, personal decisions, and the inner self. Consider the following corpus examples.

Swahili example	Meaning
moyo wake ulijaa hisani	'his heart was filled with kindness'
moyo uliojaa 150awazo ya namna hiyo	'the heart full of such thoughts'
moyoni ... kulikuwa swali moja	'in [his] heart there was one question'
moyo wangu unanituma...	'my heart is sending/telling me to...'
moyo wake ulikataa...	'his heart refused...'

The examples are based on corpus data discussed by Kraska-Szlenk (2014b). *Moyo* may contain emotions such as joy, grief, compassion and courage, but also *150awazo* 'thoughts', *shaka* 'doubts', *maswali* 'questions' and *kumbukumbu* 'memory'. It may even function as a person's inner self, capable of telling the person what to do or refusing a course of action.

1. For each example, decide which aspect of the person is primarily associated with *moyo*:

EMOTION – COGNITION – CHARACTER – DECISION / INTENTION – INNER SELF

More than one answer may be possible.

2. Do these examples support a strict distinction between **emotion** and **cognition**? Explain your answer.

3. Why might Swahili be described as displaying a **continuum-type model** rather than a strictly dualistic HEAD–HEART model?

4. Compare Swahili with your native language. Which body part or internal organ is associated with thinking, remembering, deciding, feeling, and the inner self? Are these functions associated with one bodily centre or several?

Task 3. HEART or HEAD? Where does reasoning end and emotion begin?

The distinction between emotion and reasoning is not always clear-cut. Consider the following Hungarian expressions involving *szív* 'heart'.

Hungarian expression	**Literal / approximate English translation**
emléke örökké szívünkben él	'his/her memory will live in our hearts forever'
az emlék belevéződött a szívébe	'the memory was engraved into his/her heart'
a szíve mélyén tudta	'he/she knew deep in his/her heart'
mindenki úgy gondolkodhat, ahogy a szíve diktálja	'everyone can think as their heart dictates'
Olvass nyitott szívvel!	'Read with an open heart!'
szívem szerint…	'according to my heart / if it were up to me…'
Kinek-kinek szíve tanácsadó.	'Everyone's heart is their advisor.'
nyugodt szívvel dönteni	'to make a decision with a calm heart'
nyugodt szívvel állíthatom, hogy…	'I can state with a calm heart that…'

These expressions associate the HEART with activities that might normally be classified as cognitive: remembering, knowing, thinking, understanding, forming opinions, giving advice, and making decisions.

1. **Place each expression on the continuum below. There is no single correct answer. Be prepared to justify your decision.**

EMOTION ←——————————→ REASONING

2. **Choose three expressions that were particularly difficult to classify. What makes them ambiguous**? Consider whether the HEART represents:

emotion · moral conscience · intuition · personal involvement · the inner self · reasoning

3. Compare these two expressions:

a szíve mélyén tudta ‘he/she knew deep in his/her heart’
nyugodt szívvel dönteni ‘to make a decision with a calm heart’

Does the HEART perform the same conceptual role in the two expressions? Is it the source of knowledge, a participant in reasoning, an emotional state influencing reasoning, or a moral verifier of the decision?

4. Now reconsider the three cultural models: HOLISTIC – DUALISTIC – CONTINUUM.
Hungarian strongly associates the HEAD with intellectual activity and the HEART with emotion, but the expressions above show that the HEART also participates in apparently cognitive processes.
What would you need to know before deciding whether Hungarian is best described as dualistic or continuum? Is the presence of HEART in expressions of reasoning sufficient evidence?

5. Compare with your native language. Is there an expression in which the HEART—or another body part—participates in knowing, thinking, remembering, understanding, judging, or deciding? Translate it literally into English and discuss whether its meaning is primarily emotional, cognitive, moral, or a combination of these.

PART V. APPLYING THE FRAMEWORK

11. Research methods in the study of body-part concepts

The study of body-part concepts requires a combination of linguistic, conceptual, and cultural methods. Depending on the research question, the analysis may begin with a particular body-part term, a semantic domain, or a set of expressions identified in dictionaries or corpora. The aim is not simply to collect figurative expressions, but to determine how bodily concepts are extended to other domains of experience and how recurrent linguistic patterns may reflect broader conceptual and cultural models.

A useful analysis therefore proceeds through several interconnected stages: identifying relevant linguistic data, establishing their conventional meanings, examining semantic and conceptual relationships, identifying recurrent patterns, and, where appropriate, interpreting these patterns in relation to cultural knowledge. Quantitative methods may complement qualitative analysis by showing the relative frequency and distribution of particular meanings or conceptual associations.

11.1. Two directions of analysis

Research on body-part concepts can proceed in two main directions. The choice depends on whether the investigation begins with a body part as the source of conceptual extension or with a target domain that may be conceptualized through different parts of the body.

In a body-part-oriented analysis, the researcher selects a particular body-part concept, such as HEART, EYE, HAND, or HEAD, and investigates the domains to which it extends. The central question is: body part → which target domains? For example, an analysis of HEART may identify expressions associated with EMOTION, COGNITION, COURAGE, MORALITY, or INTERPERSONAL RELATIONSHIPS. The resulting semantic network can reveal which conceptual associations are particularly productive in a language or cultural community.

In a target-domain-oriented analysis, the direction is reversed. The researcher begins with a domain such as EMOTION, COGNITION, COURAGE, SHAME, or KINSHIP and investigates which body parts participate in its conceptualization: target domain ← which body parts? This approach makes it possible to examine how a single experiential domain may be distributed across several bodily centres. COGNITION, for example, need not be associated exclusively with the HEAD: as discussed in earlier chapters, languages may locate cognitive functions in the HEART, LIVER, EAR, BELLY, or other bodily regions.

The two approaches are complementary. A body-part-oriented study reveals the semantic range of a particular bodily concept, whereas a target-domain-oriented study reveals the bodily organization of a particular area of experience. In both cases, the research question should determine the direction of analysis and the type of data to be collected.

11.2. Lexicographic and corpus-based analysis

Dictionaries provide a useful starting point for identifying established meanings, idioms, and conventional expressions involving body-part terms. Corpus analysis complements this information by showing how these terms are actually used in context. Tools such as Sketch Engine allow researchers to examine concordance lines and recurrent collocations.

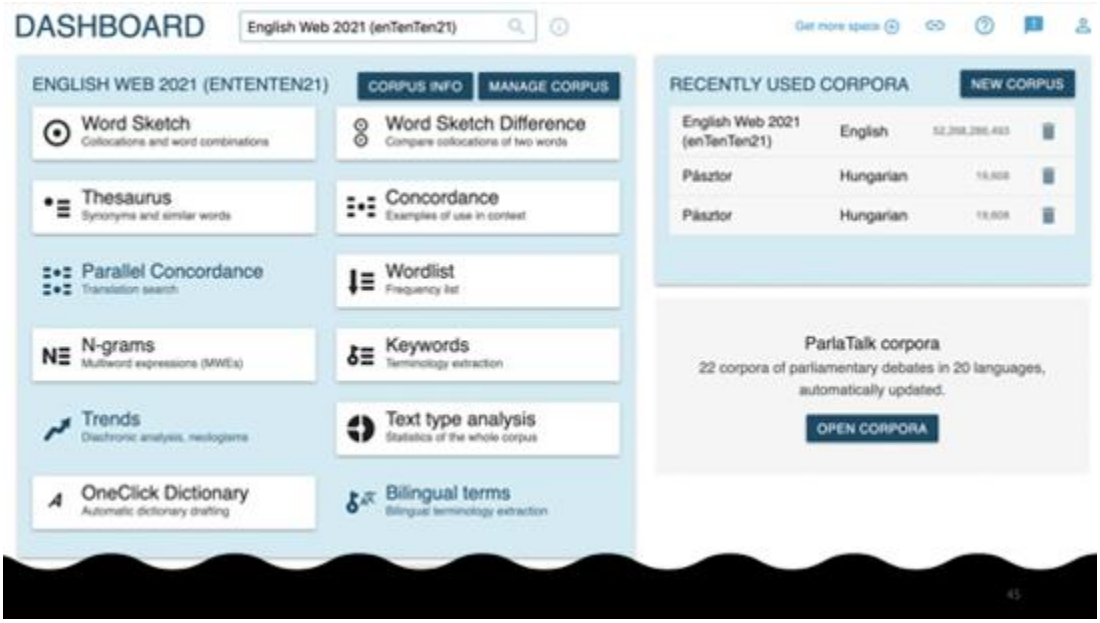


Figure 61. The Sketch Engine interface and its main corpus analysis tools

Concordances help identify meanings in context, while Word Sketches reveal typical grammatical and collocational patterns. These data can then be grouped according to semantic or conceptual domains.

dictionaries → established meanings and expressions
corpora → contextual meanings and recurrent patterns

11.3. Using quantitative corpus data to assess semantic salience

Corpus examples may be annotated according to categories relevant to the research question, such as literal and figurative uses, semantic domains, or conceptual associations. Their frequencies can then be used to establish the semantic profile of a body-part term. When the number of corpus occurrences is too large for manual analysis, a random sample may be selected. The categories should be clearly defined, and ambiguous cases should be recorded rather than forced into a category without sufficient evidence.

The quantitative analysis of Hungarian HEART expressions provides an example: occurrences of *szív* 'heart' can be classified according to the domains they express, allowing their relative prominence to be compared.

Table 25. Semantic distribution of Hungarian *szív* 'heart' in the corpus sample

Semantic domain	Frequency
HUMAN ORGAN	14
EMOTION	56
CHARACTER TRAIT	8
REASONING	7
PERSONALITY / SELF	5
RELIGIOUS FAITH	4
MORALITY / CONSCIENCE	2
LIFE FORCE	2
GEOGRAPHICAL CENTRE	1
ANIMAL ORGAN / FOOD	1

Frequency, however, should not automatically be equated with cultural salience. A frequent expression may simply be highly conventionalized, while a less frequent pattern may carry particular cultural significance. Quantitative findings should therefore be interpreted together with qualitative evidence. Frequency patterns should always be interpreted in relation to the corpus, period, register, and sample from which the data were obtained.

11.4. Semantic and conceptual analysis

Conceptual analysis should begin with the conventional meaning of an expression rather than with a predetermined metaphor or metonymy. Once the meaning has been established in context, the researcher can identify the conceptual relationship underlying the expression.

EXPRESSION → CONVENTIONAL MEANING → CONCEPTUAL RELATIONSHIP

Table 26. From conventional meaning to conceptual relationship in body-part expressions

Expression	Conventional meaning	Possible conceptual relationship
the foot of a mountain	Lower region of a mountain	A bodily region provides a model for a geographical region.
Use your head!	Think carefully.	HEAD provides access to the mind and thinking.
az én szememben	'In my eyes'; according to my evaluation	EYE and visual perspective provide access to personal evaluation.
chuny wich	'Heart of the head'; crown of the head	HEART is extended to the central region of another anatomical unit.

Individual expressions can then be classified according to the mechanisms discussed earlier, including metaphor, metonymy, and other forms of semantic extension. Related meanings may also be organized into semantic networks, showing how literal anatomical meanings are connected to more abstract or culturally specific uses.

Several expressions may also reveal a shared conceptual pattern. Hungarian *szívébe zár valakit* 'to hold someone close to one's heart', *kitárja a szívét* 'to open one's heart', and *csordultig tele van a szíve* 'one's heart is overflowing with emotion', for example, conceptualize the HEART as a location or container of emotional experience. Such recurrent expressions can provide evidence for a shared conceptual pattern. The aim is therefore not simply to assign labels such as METAPHOR or METONYMY, but to reconstruct the relationships among the different meanings of a body-part concept.

11.5. From linguistic patterns to cultural conceptualizations

Recurrent linguistic patterns may provide evidence for broader cultural conceptualizations. However, a conceptual relationship identified in individual expressions should not automatically be interpreted as a cultural model. The researcher should look for systematic patterns across expressions and contexts.

LINGUISTIC PATTERNS → RECURRENT CONCEPTUAL RELATIONSHIPS → CULTURAL CONCEPTUALIZATION

Interpretation should also distinguish between bodily motivation and cultural knowledge. Bodily experience may motivate a conceptual association, while its particular form and significance may be shaped by culturally shared beliefs, values, and practices. Where possible, linguistic evidence should therefore be complemented by cultural, historical, ethnographic, or other contextual evidence. This helps establish whether a recurrent linguistic pattern forms part of a broader cultural model rather than representing an isolated semantic extension.

11.6. Comparative and diachronic analysis

Cross-linguistic comparison can reveal how body-part concepts are organized differently across languages and cultures. The same body part may be associated with different semantic and conceptual domains, while the same domain may be conceptualized through different bodily centres.

SAME BODY PART → DIFFERENT CONCEPTUAL ASSOCIATIONS
SAME DOMAIN → DIFFERENT BODILY CENTRES

Comparison should therefore focus on the semantic range, relative prominence of meanings, conceptual patterns, and cultural associations of body-part terms.

Diachronic analysis adds a historical dimension by examining how these associations change over time. Expressions may preserve earlier conceptualizations even after broader cultural models have changed. English *learn by heart*, for example, reflects an older association between the HEART and memory that survives in contemporary language.

Comparative and diachronic analysis can thus reveal both cross-cultural variation and historical change in the conceptualization of the body.

11.7. Combining methods

The most informative studies often combine several methods. Dictionary data may identify conventional meanings, corpus analysis may reveal patterns of actual use, quantitative analysis may establish their distribution, and conceptual analysis may reconstruct semantic relationships. Cultural and historical evidence can then support their interpretation.
A typical research process can be summarized as:

RESEARCH QUESTION → DATA COLLECTION → SEMANTIC ANALYSIS → QUANTITATIVE / CONCEPTUAL PATTERNS → CULTURAL INTERPRETATION → COMPARISON

The choice of methods should always be determined by the research question and the available data rather than by the assumption that every study requires the same analytical procedure.

Discussion and analysis tasks

Task 1. Research task: reconstructing a system of embodied measurement

The following examples are taken from an ongoing corpus-based study of Hungarian hand-based measurement expressions. The study uses data from the Hungarian Web 2023 corpus

(huTenTen23) and investigates how different parts and configurations of the hand function as reference points for measurement in contemporary Hungarian.
Do not begin with predetermined categories. Examine the examples first and try to reconstruct the system from the linguistic data.

Expression	Corpus example	Approximate English translation
ujjnyi 'finger-sized'	*Egy ujjnyi olajat forrósítok…*	'I heat a finger's depth of oil…'
ujjnyi 'finger-sized'	*…kevesebb mint két ujjnyi hellyel a matrac és az ágy oldala között.*	'…with less than two finger-widths of space between the mattress and the side of the crib.'
hüvelyknyi 'thumb-sized'	*…8–10 cm hosszú és hüvelyknyi vastagságú.*	'…8–10 cm long and thumb-thick.'
arasznyi 'span-sized'	*…egy arasznyira sem tértem ki más irányba.*	'…I did not stray even a span in another direction.'
tenyérnyi 'palm-sized'	*…a tarlók, szántások, kukoricások tenyérnyi szögletes foltok.*	'…the stubble fields, ploughed fields, and cornfields appear as palm-sized square patches.'
tenyérnyi 'palm-sized'	*Két tenyérnyi lyuk az alján…*	'Two palm-sized holes at the bottom…'
ökölnyi 'fist-sized'	*…a méhed ökölnyi méretűből görögdinnye méretűre nő.*	'…your uterus grows from fist-sized to the size of a watermelon.'
maréknyi 'handful'	*…egy marék dióval naponta.*	'…with a handful of walnuts a day.'
maréknyi 'handful'	*A koncerten csupán egy maréknyi ember vehet részt…*	'Only a handful of people will be able to attend the concert.'

The examples represent attested patterns from the corpus analysis.

1. Start with the data. For each example, identify what is being measured. What property of the referent does the expression allow the speaker to estimate? Do not use predefined categories yet.
2. Look for recurrent patterns. Group the examples according to similarities in the type of measurement they express. Give each group a name of your own.
3. Now consider the body. What property, configuration, or possible action of the **finger, thumb, span, palm, fist, or cupped hand** might motivate each group? Are the expressions based only on the shape of the body part, or does bodily action also matter?

4. Formulate a hypothesis. Based only on these examples, complete the following statement:
Hungarian hand-based measurement appears to be organized according to.

_____.
Support your hypothesis with at least three examples.
Now Test Your Analysis!

Consider the following additional data:

- *tenyérnyi kert* 'palm-sized garden'
- *tenyérnyi daganat* 'palm-sized tumour'
- *arasznyi idő* 'a span of time'
- *egy arasznyit sem lépett* 'did not move a single span' → 'made no progress'
- *maroknyi tüntető* 'a handful of protesters'
- *maroknyi remény* 'a handful of hope'

These uses illustrate the context-dependent evaluation and semantic extensions found in the corpus. *Tenyérnyi*, for example, can construe a garden as small but a pathological formation as relatively large; *arasznyi* extends from spatial measurement to time and progress; and *maroknyi* frequently applies limited physical quantity to human groups and abstract concepts.

5. Do these new examples fit the system you reconstructed in Tasks 1–4, or do you need to modify it?
6. Compare *tenyérnyi kert* 'palm-sized garden' and *tenyérnyi daganat* 'palm-sized tumour'. The bodily reference is the same. Why does it produce an evaluation of **SMALL** in one case but potentially large in the other? Where does the evaluative meaning come from?
7. Compare *maréknyi dió* 'a handful of walnuts', *maroknyi tüntető* 'a handful of protesters', and *maroknyi remény* 'a handful of hope'. At what point does the hand cease to function primarily as a physical measuring device? Can you draw a boundary between literal measurement and semantic extension, or is a **continuum** a better model?
8. Based on all the data, propose a small set of analytical categories that you would use to annotate 100 new corpus examples. Explain why your categories would capture the important differences in the data.

12. Student Research Project

This final chapter provides some practical guidance for developing a small research project on body-part conceptualization. The aim is to help you turn the ideas and methods introduced in this coursebook into a focused and manageable study of your own. A successful student project does not need to cover a large number of body parts, languages, or conceptual domains. In fact, a relatively small set of well-chosen data often provides a better basis for analysis than a large and heterogeneous collection of examples. The important thing is to begin with a clear question and select data that can help you answer it.

12.1. Choosing a research question

Start by deciding what aspect of body-part conceptualization you find particularly interesting. Try to narrow this interest down to a question that can realistically be investigated within a small project. Topics such as *the body in Hungarian* or *body metaphors across cultures* are too broad. More focused questions might concern the use of *szem* 'eye' in Hungarian expressions of evaluation, the conceptualization of courage through internal organs in two languages, or differences in the boundaries of ARM and HAND across languages.
It may be helpful to decide whether you want to begin with a particular body part and explore its meanings, or with a conceptual domain and investigate the bodily concepts associated with it:

BODY PART → What meanings and conceptual domains are associated with it?
TARGET DOMAIN → Which body parts are used to conceptualize it?

A good research question should make clear what phenomenon and which language or languages you intend to study.

12.2. Collecting your data

The next step is to decide what kind of data will help you answer your question. Depending on the topic, you may use dictionaries, corpora, published linguistic studies, or data collected from speakers.

Dictionaries can be useful for identifying conventional meanings and expressions, while corpora allow you to examine how these expressions are actually used in context. If you are interested in how speakers divide the body into named regions, you may need to collect data directly from speakers. A project dealing with cultural conceptualizations may also benefit from historical, ethnographic, or other cultural sources.

As you collect your examples, keep a clear record of where they come from and what they mean in context. The following table may be useful:

Table 27. Suggested data-recording template for a student research project

Expression	Literal gloss	Meaning in context	Body-part concept	Proposed conceptual relationship
az én szememben	'in my eye'	According to my evaluation	EYE	Visual perspective and personal evaluation
szívébe zár valakit	'closes someone into his/her heart'	Holds someone dear	HEART	HEART as a container for emotional attachment

Your initial analysis does not have to be final. It is quite normal to revise categories and interpretations as new examples are added to the dataset.

12.3. Analysing the data

Begin with the meaning of each expression in its context. Once this has been established, consider how that meaning is related to the body-part concept and which conceptual mechanism may be involved. A useful way of thinking about the process is:

EXPRESSION → MEANING IN CONTEXT → CONCEPTUAL RELATIONSHIP → RECURRENT PATTERN

As the analysis develops, look for patterns across your examples. Several expressions may reflect a similar metaphorical or metonymic relationship, or they may form part of a broader semantic network. At the same time, pay attention to examples that do not fit the emerging pattern. Such cases may be just as informative as the more regular ones.

If a recurrent pattern appears to have a cultural dimension, consider what evidence supports this interpretation. Cultural practices, beliefs, historical sources, or other forms of cultural evidence may strengthen the analysis. A single expression, however, is not sufficient to establish a broader cultural model.

12.4. Presenting your project

When preparing your presentation, organize it around your research question and the patterns that emerged from the analysis. You do not need to present every example you collected. Select the data that best illustrate your main findings and use tables, diagrams, body maps, or visual material where these help make the comparison clearer.

A simple structure may include:

1. **Research question** – What did you investigate and why?
2. **Data and method** – What data did you use and how did you analyse them?
3. **Main findings** – What patterns did you identify?
4. **Comparison and interpretation** – What similarities or differences emerged, and how can they be explained?
5. **Conclusion** – What does your analysis suggest, and what are its limitations?

Throughout the presentation, distinguish between what you observe in the data and how you interpret those observations. Your conclusions should remain proportional to the evidence available.

12.5. Final research projects

Choose ONE of the three projects below. Each project allows you to apply the concepts and methods introduced in this coursebook to a small-scale empirical investigation of body-part conceptualization. Where possible, work in pairs, preferably with speakers of two different languages or cultural backgrounds. Base your analysis on authentic linguistic and/or visual data and clearly identify your sources. In interpreting your findings, consider the relationship between bodily experience, conceptual extension, and cultural knowledge.

Project 1. Body parts and the conceptualization of emotion

Investigate how body parts are used to conceptualize and express emotions in two languages. Choose at least five emotions, such as happiness, sadness, anger, fear, worry, or excitement, and collect expressions involving body parts that are relevant to these emotions in the two languages. For each expression, identify the body part involved, establish its meaning in context, and consider the conceptual relationship underlying it. Where relevant, examine metaphor, metonymy, image schemas, physiological responses, or other forms of bodily motivation.
Compare the patterns found in the two languages. Consider:

- Which body parts are associated with particular emotions?

- Are the same body parts used for similar emotions in both languages?
- Does the same body part have different emotional associations?
- Which similarities may be related to shared bodily experience?
- Which differences may require language-specific or cultural knowledge?

Focus on two or three particularly informative similarities or differences rather than presenting every example individually. At least one emotion should be examined in greater detail across the two languages.
You may also create a visual body map of emotions showing the bodily regions associated with different emotions in each language.

Project 2. Cultural significance of body parts

Investigate how particular body parts acquire culturally salient meanings in two linguistic or cultural communities.
Choose two or three body parts or bodily features that appear particularly relevant to your comparison, for example HEART, HEAD, FACE, EYE, HAND, BACK, LIVER, BELLY, HAIR, or MOUTH.
Collect recurring linguistic expressions involving these body parts and look for additional cultural evidence that may help explain their significance. This may include gestures, rituals, customs, religious beliefs, taboos, beauty ideals, social practices, historical representations, art, literature, or media.

Consider:

- What meanings and values are associated with the selected body parts?
- Are the same body parts salient in both communities?
- Does the same body part have different cultural associations?
- Which patterns can be related to bodily experience?
- Which interpretations require culturally specific knowledge?
- How may practices, beliefs, or social values contribute to the patterns you find?

Distinguish carefully between:

EMBODIED MOTIVATION → CONVENTIONAL LINGUISTIC MEANING → CULTURAL INTERPRETATION

Do not infer a broad cultural model from an isolated expression. Cultural interpretations should be supported by recurrent linguistic patterns and, where possible, independent cultural evidence.

For your presentation, select one or two particularly revealing body parts for detailed comparison. Relevant visual or historical material may be included where it contributes to the analysis.

Project 3. Figurative meanings of body parts in visual communication

Investigate how body parts contribute to figurative meaning in visual communication.
Choose one visual genre, such as advertisements, posters, magazine covers, memes, social-media images, public-awareness campaigns, or brand logos. Collect a small and reasonably coherent dataset from two linguistic or cultural contexts so that the examples can be compared.
For each example, consider the body part represented, its visual prominence and configuration, and the meaning associated with it. Relevant visual features may include size, position, orientation, movement, facial expression, gesture, or interaction with other elements.
Ask whether a literally represented body part carries a figurative or symbolic meaning. Possible patterns might include:

HAND → HELP / POWER / CONTROL
EYE → ATTENTION / SURVEILLANCE
HEART → LOVE / EMOTION

Compare the two datasets and consider:

- Are particular body parts especially prominent in either dataset?
- Are similar body parts used to communicate similar concepts?
- Does the same bodily representation acquire different meanings?
- To what extent can the patterns be related to bodily experience?
- What cultural knowledge is needed to understand the images?

Do not attribute differences to culture simply because two individual images differ. Look for recurrent patterns in the data and support cultural interpretations with additional evidence where appropriate.
In your presentation, use a small number of representative images to illustrate the main patterns rather than describing every image separately. Your comparison should focus on the most significant similarities and differences between the two datasets.

General Requirements for all three projects:

Prepare a **12–15 minute presentation** based on one of the three projects. Focus on the most important patterns in your data rather than presenting every example individually.

Clearly identify all linguistic, corpus, visual, and scholarly sources. Distinguish between observations based on the data and your own conceptual or cultural interpretations, and make sure that your conclusions are proportionate to the evidence available.
Throughout the project, keep in mind the relationship that has guided this coursebook:

SHARED BODILY EXPERIENCE → CONCEPTUAL EXTENSION → CULTURAL ELABORATION

13. Conclusion

The human body provides one of the most fundamental experiential foundations for language and conceptualization. At the same time, the studies discussed throughout this coursebook have shown that bodily experience does not determine meaning in a uniform way. Languages differ in how they categorize the body, extend body-part meanings to other domains, and associate particular bodily regions with emotion, cognition, social relationships, values, and cultural knowledge.

Understanding body-part concepts therefore requires attention to several interacting levels: bodily experience, linguistic convention, conceptual organization, and cultural conceptualization. Cross-linguistic and cross-cultural comparison is particularly valuable because it reveals both recurring embodied patterns and the different ways in which communities elaborate and conventionalize them.

The analytical methods introduced in the final part of this coursebook provide tools for investigating these relationships empirically. Rather than treating body-part expressions as isolated idioms, they allow us to examine them as parts of larger and culturally situated systems of meaning.

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