Introduction

Embodiment via body parts

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1. The goal of the volume

All of the chapters in this volume contribute to the main theme “embodiment via body parts”. In cognitive science, the term ‘embodiment’ refers to “understanding the role of an agent’s own body in its everyday, situated cognition”, namely how our bodies influence the ways we think and speak (Gibbs 2006: 1). The embodiment perspective, which transcends traditional disciplinary boundaries, focuses on the co-evolution between minds and bodies, and on the whole behaving organism in its natural context in which individual humans interact in and across groups (Semin & Smith 2008b). The human body is composed of both external body parts and internal body organs, and it is an organizational system with different components playing different physical, physiological, and even social functions. The contribution of individual bodily components to and the specific roles each plays in embodiment in various cultures, as manifested in their respective languages, are the questions that this volume seeks to address.

In a study of body parts in Chinese expressions of emotion, published in a special issue of Pragmatics & Cognition on “The Body in Description of Emotion” (Enfield & Wierzbicka 2002), Yu (2002) suggests that the explicit use of body-part terminology in emotion expressions is the tip of the iceberg, which is a good place to start if we want to know more about the whole submerged beneath the sea. This suggestion applies not only to the study of human emotion, but also to the study of human cognition in general. Here the “whole submerged beneath the sea” refers to “the body in the mind” (Johnson 1987), “the culture in the mind” (Shore 1996), and “the culture in the body” (Maalej 2004, 2007, 2008), all of which are important theses in the studies of the embodied and culturally situated nature of human cognition, and of the relationship between body, mind, and culture.

In the academic context of Cognitive Linguistics, this volume intends to advance the intellectual momentum created by the recent publication of the twin
volumes on body, language, and mind (Ziemke et al. 2007; Frank et al. 2008), and of a volume devoted to the study of conceptualizations of internal body organs across various cultures and languages (Sharifian et al. 2008). In particular, the present volume complements the latter. The chapters in Sharifian et al. (2008) focus on internal organs, especially the heart and the liver, in contrast to the head (or brain), as the perceived centers of feeling, thought, or cognition at large in numerous cultures and languages. Sharifian and his collaborators divide their chapters into three sections, based on whether the languages studies show abdomen-centering, heart-centering, and/or head-centering conceptualizations of the mind. Thus, the “abdomen-centering” languages include Basque (Ibarretxe-Antuñano 2008), Indonesian (Siahaan 2008), Kuuk Thaayorre (Gaby 2008), and Malay (Goddard 2008); the “heart-centering” languages include Chinese (Yu 2008a), Japanese (Ikegami 2008; Occhi 2008), and Korean (Yoon 2008); and the dualistic “heart/head-centering” languages include Dutch (Foolen 2008), English (Geeraerts & Gevaert 2008; Niemeier 2008), Northeastern Neo-Aramaic (Wolk 2008), Persian (Sharifian 2008a), and Tunisian Arabic (Maalej 2008). The volume makes a collective attempt to explore (i) the ways in which internal body organs have been employed in different languages to conceptualize human experiences such as emotions and/or workings of the mind, and (ii) the cultural models that appear to account for the observed similarities as well as differences in the various conceptualizations of internal body organs (see also Yu 2009a, for a book-length study of the cultural conceptualization of the heart in Chinese).

The contributors to the present volume attempt to address the roles of individual body parts, especially external body parts but some internal body organs as well, in the embodied conceptualization of emotions, mental faculties, character traits, cultural values, etc., in a variety of languages and cultures. In particular, the following issues are addressed:

1. Which individual part of the body is deployed to conceptualize which emotion, character trait, mental faculty, cultural value?
2. What imaginative structure(s) (e.g. metaphor, metonymy, image schema) is/are implemented in the conceptualization?
3. Do different cultures use the same body part to conceptualize the same emotion, character trait, mental faculty, cultural value?
4. What possible implications emerge for mainstream embodiment theory?

It is hoped that the present volume will contribute to the understanding of embodied cognition in general and its specific manifestations in various cultures and languages. Before we present the chapters of the volume, we provide an overview of the literature on embodiment and a section on metaphor and metonymy-related theoretical issues.
2. Embodiment: An overview


A good starting point for our discussion of embodiment is Ziemke and Frank (2007: 1), who characterize it as “the bodily and sensorimotor basis of phenomena such as meaning, mind, cognition and language”. Evidence of embodiment can be found at least in language (as we see in the use of body parts terms in the conceptualization of many target domains discussed in this book) and this linguistic evidence can be used for talking about the embodied nature of mind, cognition, and culture, as demonstrated by the chapters in the present volume.

If the existence of embodiment as a researchable topic is uncontroversial, the theory of embodiment does not yet offer a uniform framework. By its very nature cognitive science is multidisciplinary, and thus there are various competing theoretical paradigms within the field. Is it a weakness of a nascent theory that a variety of conceptions exist? The answer is definitely: No. It took the first generation of computationalist cognitive science some time to consolidate, i.e. to establish itself as a theory organized around the concept of the computational mind. We believe that, analogously, the second generation of embodied cognitive science needs time to mature. At present, the theory is struggling to develop adequate concepts, conceptions, and precise formulations whenever arguments and counterarguments arise. Ziemke and Frank (2007: 5), for instance, evaluate the state of embodiment theory as follows: “the current situation might also provoke comparisons with soap bubbles that are destined to burst sooner or later if there is nothing under the surface to hold them together”. This is the nature of theory: hypothesis testing, trial-and-error, discarding old views, adopting new paradigms, and so on. Therefore, diversity of views is often a sign of the good health of a growing discipline.

As a central philosophical underpinning of Cognitive Linguistics, the embodiment thesis challenges Cartesian dualism in Western philosophy, which has long

Johnson (1987: xxxvi) is among the first contemporary philosophers to point to the importance of the body in concepts and conceptualization, stressing the need for “putting the body back into the mind”. Lakoff (1987: 267) characterizes embodiment as “our collective biological capacities and our physical and social experiences as beings functioning in our environment”. In order not to shift from one extreme (mind) position to another (body), Lakoff and Johnson (1980, 1999) argue for ‘experientialism’ (and its variants ‘experiential realism’ and ‘embodied realism’), where experience is always an interactive process, involving neural and physiological constraints from the organism as well as characteristic affordances from the environment. Lakoff and Johnson (1980: 57) acknowledge the cultural basis of experience, claiming that “every experience takes place within a vast background of cultural presuppositions” (emphasis in the original). They have not, however, systematized this stance in their studies because they were more concerned with conceptual and “physical” aspects of physiological embodiment.

Sinha and Jensen de López (2000: 20) claim that despite its many virtues and its superiority to its formalist rival, the embodiment thesis “has failed to pay sufficient attention to the importance of culture and society in human cognition, in the motivation of linguistic structure, and in the acquisition of language”. To remedy what they see as a weakness of the embodiment thesis, they propose “an extended conception of embodiment” that is no longer restricted to the “humanly corporeal” (22), characterizing it in line with “aspects and features of the experientially or ecologically significant, noncorporeal world” (24). Such a conception of
‘cultural embodiment’ is exemplified by an analysis of cross-cultural data that account for the differences in the acquisition of containment by Zapotec, Danish, and English children “in terms of language ‘entrenching’ cognitive differences induced by cultural embodiment and cultural practice” (37). What is especially significant in their study is that they show how cultural behaviors shape habitual patterns of language, whereby the socio-cultural dimension shapes the “cognitive unconscious” (the psychological dimension of embodiment) in ways that could be measured using psychological methodologies. They, therefore, offer a complementary view that socio-cultural factors impact mind and language.

Gibbs (1999a: 153) also argues for a view that stresses the interaction between mind, body, and culture:

Scholars cannot, and should not assume, that mind, body, and culture can somehow be independently portioned out of human behavior as it is only appropriate to study particular “interactions” between thought, language, and culture, respectively. Theories of human conceptual systems should be inherently cultural in that the cognition which occurs when the body meets the world is inextricably culturally-based.

The reason that people from the same community share more or less the same conceptualizations is evidence that, although it is found in individual minds, cognition is a property of cultural groups. That is, an emergent cultural cognition is heterogeneously distributed across the minds in a cultural group (Sharifian 2003, 2008b).

Underscoring the role of culture in shaping the embodied mind, Gibbs (2006: 13) argues that “bodies are not culture-free objects, because all aspects of embodied experience are shaped by cultural processes”. He points out that a long-standing belief in Western cultures is that human bodies, as defined by the boundaries of skin, are separate from, and independent of, the external world. This belief in the person-world dualism is now rejected by many philosophers and cognitive scientists who advocate that human beings should “be understood, and scientifically studied, in terms of organism-environment mutuality and reciprocity” (16). The physical environment in which people and their bodies move and function is imbued with culture. Therefore, “the body system [...] offers insightful analysis for understanding cultural systems” (36). The body has different symbolic properties in different cultural contexts, with many elementary embodied experiences shaped by local cultural knowledge and practice. Research on embodied cognition should explore the linkages between embodiment and cultural meaning since people actually instill different cultural meanings into bodily processes in changing cultural contexts:

Rather than being a biological given, embodiment is a category of sociocultural analysis, often revealing complex dimensions of the interactions between bodies and personhood. [...] Culture does not just inform embodied experience; embodied experience is itself culturally constituted. (Gibbs 2006: 37)
This, of course, does not mean that people in different cultures have different physiologicalities, but rather that they think, understand, and interpret their bodily experiences differently. Bodily experience, which differs from physiological mechanisms, “cannot, therefore, be defined universally, but is always deeply influenced by cultural variation” and “shaped by cultural practices that resist simple biological explanation” (Gibbs 2006: 39). Gibbs (2006) concludes that one way to integrate the role of cultural activity into a theory of embodied cognition is to recognize, and study, different levels of embodiment in thought, language, and action” (39) such as the three levels of embodiment proposed by Lakoff and Johnson (1999).

As Rohrer (2006) points out, the embodiment hypothesis is especially associated with a particular strand of Cognitive Linguistics, i.e. the cognitive semantic approach to the study of metaphor and metonymy, known as Conceptual Metaphor Theory (CMT), which can be traced back to its origin in Lakoff and Johnson’s seminal book *Metaphors We Live By* (1980). The experiential basis of conceptual metaphors is both bodily and cultural. Our mind is embodied in such a way that our conceptual systems draw largely upon the peculiarities of our body and the specifics of our physical and cultural environment (e.g. Gibbs 1994, 1999a, 2003, 2008; Johnson 1987, 1999, 2007; Kövecses 2005; Lakoff 1987, 1993; Lakoff & Johnson 1980, 1999; Yu 2008b, 2008c). Our body plays a crucial role in our meaning and understanding, and our interaction in and with the physical and cultural world defines the contours of what is meaningful to us and determines the ways of our understanding (Gibbs 1994, 1999a; Johnson 1987, 1999; Yu 2008b). It follows that human meaning and understanding are in part metaphorical mappings from the concrete to the abstract. It also follows that our body, with its experiences and functions, is a potentially universal source domain for metaphorical mappings onto more abstract domains. This is because humans, despite their racial or ethnic peculiarities, have the same basic body structure, and all share some common bodily experiences and functions, which fundamentally define them as human beings.

While the body and bodily experiences are potentially universal source domains for conceptual metaphors structuring abstract concepts, cultural models set up specific perspectives from which certain parts of the body and certain aspects of bodily experience are viewed as especially salient and meaningful in the understanding of those abstract concepts (Gibbs 1999a; Yu 2008b, 2008c, 2009b). That is, cultural models have an interpretative function in viewing the body and its role in grounding metaphor: They may interpret the same embodied experience differently and attach different values to the same bodily experiences or the same parts of the body. Thus, it is possible that, in different cultures and languages, different body parts or bodily experiences are mapped onto the same abstract concepts. Conversely, the same body parts or bodily experiences are selected to map onto and structure different abstract concepts. The convergence and divergence of these
kinds, therefore, give rise to varied conceptual metonymies and metaphors in different languages (Kövecses 2005; Yu 2008b, 2008c, 2009b).

3. Metaphor and metonymy revisited

It is important to note that embodiment is necessarily mediated through metaphoric mappings that link a source domain with a target domain. It is now common knowledge in Conceptual Metaphor Theory (CMT) that “our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature” (Lakoff & Johnson 1980: 3). However, the study of this conceptual system residing in cognition can only be indirect since this system is not open to direct observation. So, “language is an important source of evidence for what that system is like” (3).

CMT accords preeminence to the conceptual dimension of metaphor, arguing that “metaphors as linguistic expressions are possible precisely because there are metaphors in a person’s conceptual system” (Lakoff & Johnson 1980: 6). This direction (conceptual metaphor → linguistic expression) is taken when people produce linguistic metaphors, i.e., it is precisely conceptual metaphors residing in cognition and making up the conceptual systems in a given culture that allow for the linguistic expression of these concepts. At the level of linguistic analysis, however, the opposite route is taken (linguistic expression → conceptual metaphor), whereby the stock of linguistic expressions of conceptual metaphors is studied to gain insights into cognition and conceptual systems. As linguists, however, we should bear in mind that it is not always safe to infer how people think from the way they talk (see e.g. Gibbs 2007). As Casasanto’s (2009) study shows, for instance, linguistic metaphors reveal only a subset of conceptual metaphors that appear to structure our conceptual systems. Nevertheless, “even when linguistic metaphors fail to predict the exact relationships revealed by behavioral tests”, they “point to important links between the source and target domains” and, as such, serve “as a source of hypotheses about the structure of abstract concepts” for further linguistic and extra-linguistic studies (143).

Cognitive linguists often study linguistic metaphors so conventionalized that they are usually called “dead metaphors”. Lakoff and Turner (1989) argue that it is a mistake to think of this stock of linguistic expressions as dead metaphors, claiming that “those that are most alive and most deeply entrenched, efficient, and powerful are those that are so automatic as to be unconscious and effortless” (129). In other words, the stock of “dead” metaphors (such as those in idioms) is actually alive, because it is the fodder which sustains the conceptual system in particular and cognition in general. Thus, CMT makes the distinction between dead and
live/poetic metaphor redundant, showing that the “dead metaphor theory” is guilty of the confusion between metaphors that are conventional and part of our cognitive system, and historical metaphors that no longer exist (Lakoff & Turner 1989: 128–129). Contrary to Black’s (1993) claim that “a so-called dead metaphor is not a metaphor at all” (25), Turner (1991, 1996) demonstrates the link between conventional everyday metaphors and poetic metaphors in literature, where the latter are based on and are extensions of the former.

Turning now to the relation between metaphor and metonymy, classical rhetoric made a clear distinction between the two. In a functionalist framework, Jakobson (1956) maintained this traditional distinction. Based on studies of aphasic patients suffering from similarity vs. contiguity disorders, he concluded that metaphor is a figure of similarity and metonymy a figure of contiguity.

In Cognitive Linguistics the relation between metonymy and metaphor has been investigated in more detail. Current studies focus on the interaction between the two tropes of thought and language. In an important work, Goossens (2002) shows how metonymy and metaphor interact with each other in complex ways in natural language. He calls this phenomenon ‘metaphtonymy’.

Other significant contributions to the study of metaphor and metonymy within a Cognitive Linguistics framework are found in Barcelona (2000a), Dirven and Pörings (2002), Panther and Radden (1999a). For an adequate characterization of metaphor and metonymy the chapters in these three volumes propose such central notions as conceptual domain (including subdomain, matrix domain, and domain matrix), idealized cognitive model (ICM), conceptual frame, and conceptual integration (e.g. Barcelona 2000b, 2000c, 2002; Croft 2002; Dirven 2002; Geeraerts 2002; Grady & Johnson 2002; Radden & Kövecses 1999; Ruiz de Mendoza Ibáñez 2000; Ruiz de Mendoza Ibáñez & Diez Velasco 2002; Turner & Fauconnier 2002).

Three claims regarding the relationship between metaphor and metonymy that are relevant to this volume emerge from the above studies: First, metonymy is seen not merely as a matter of linguistic substitution, but rather as a cognitive phenomenon more fundamental than metaphor and underlying much of our ordinary thinking (e.g. Barcelona 2000b; Gibbs 1999b; Panther & Radden 1999b; Radden & Kövecses 1999; Ruiz de Mendoza Ibáñez 2000; Panther & Thornburg 2003, 2007; Panther 2006). Second, and following from the first point, many metaphors are motivated conceptually by metonymies, which are more immediately grounded in experience (e.g. Barcelona 2000b, 2000c; Niemeier 2000; Radden 2000; Taylor 2002). Third, the boundary between metaphor and metonymy is fuzzy, i.e., they form a continuum (e.g. Barcelona 2000b, 2000c; Dirven 2002; Geeraerts 2002; Goossens 2000, 2002; Niemeier 2000; Radden 2000; Ruiz de Mendoza Ibáñez 2000).
In the light of the above views, it is suggested that metonymy often serves as the link between bodily experience and metaphor in the mapping process from concrete experience to abstract concepts: bodily experience → metonymy → metaphor → abstract concepts (Yu 2008c). As suggested by the word *embodiment* itself, the core of embodiment is the human body. In this volume, the studies focus on specific parts of the body and the associated bodily experiences, and examine how cultures project them, via such cognitive mechanisms as metonymy and metaphor, onto more abstract domains in understanding emotions, character traits, mental faculties, and cultural values, and how this imaginative process of embodiment in human cognition is manifested in the respective languages. It seems that embodiment, as a fundamental cognitive process, is a multifaceted concept. On the one hand, it is rooted in the body; on the other hand, it is motivated by culture. There seems to be a continuum between “physiological embodiment” and “cultural embodiment” (see Maalej 2004, 2007, 2008), which is parallel in relationship to the continuum between metonymy and metaphor. The complex relations between body and culture in embodiment, cast as the interactions between metonymy and metaphor, often leave their traces in language. We are interested in discovering how body interacts with culture as manifested in language in order to gain a deeper understanding of cognition.

4. The contributions to this volume

Gibbs (2006: 9) suggests that the key feature of the “embodiment premise” is “the idea that understanding the embodied nature of human cognition demands that researchers specifically look for possible mind-body and language-body connections”. The utilization of body-part terms in expressing human conceptualizations of emotions, thought, reason, character traits, cultural values, etc., represents important language-body connections that reflect mind-body connections (see e.g. Yu 2009b, which collects a series of studies in Chinese). Following Gibbs’ dictum, each of the ten chapters in this volume deals with body parts and how different languages and cultures refer to them in profiling emotions, character traits, mental faculties, and cultural values, yielding mostly “culturally driven embodiment” (Maalej 2004). Roughly, the contributions focus on either a single body part (the majority of contributions) or more than one body part (external and/or internal ones). Nevertheless, we have organized the chapters into three parts according to geographic region of the languages and cultures investigated. Part 1 includes European perspectives on body parts, covering Danish, English, Estonian, German (compared to Indonesian), Modern Greek, and Spanish. Part 2 focuses on East Asian perspectives on body parts from Chinese and Japanese. Part 3 concerns
itself with Middle Eastern and North African perspectives on body parts, including mainly Arabic, Persian, and Turkish.

The first part covering European perspectives on body parts has four chapters, the first of which is Sophia Marmaridou’s contribution “The relevance of embodiment in lexical and collocational meaning: The case of prosopo ‘face’ in Modern Greek”. Marmaridou shows that the embodiment hypothesis is significant in two ways. First, it accounts for the interaction of the conceptual metaphor non-physical is physical and the cultural model of the fragmented self in motivating the polysemy of Modern Greek prosopo with various positive and negative connotations of adjectives in collocations, in which prosopo, the human face, exhibits not only embodied personhood, psychological, and social aspects of the self (such as emotion, character, and social standing), but also spatial orientation. Second, on the basis of the participation of prosopo in frequent collocations, the embodiment hypothesis explains the experiential motivation of grammatical collocations, which suggests that prosopo acquires aspects of colloquial meaning.

In “Dynamic body parts in Estonian figurative descriptions of emotion” Ene Vainik demonstrates, first, that in Estonian figurative descriptions there is no specialization of body parts for expressing particular emotions. Instead, there is a continuum of more or less exploitable body parts, internal and external, and more diversely described emotions. In contrast to the internal body parts and fluids such as the heart, blood, and nerves, the external and movable parts of the body such as the head and its subparts (the eyes, the mouth, the nose) and hands are more heavily exploited for the purpose of emotion expression. For Vainik the multiple bodily manifestations of emotions provide a basis for conceptualizing emotions themselves. Second, she finds a strong positive correlation between the types of cognitive mappings (metonymy, metaphtonymy, and metaphor) and the bodily manifestations on which the conceptualizations are based (observable symptoms, bodily sensations, and imaginary events), which depend more on the conceptualizer’s perspective than on the type of body parts (internal vs. external) profiled in the figurative emotion expressions in Estonian. Third, the axiological value of the description depends, Vainik claims, not only on the subjective value of the described emotions but also on the attribution of the value as seen from the observer’s and describer’s viewpoint, suggesting that in the figurative descriptions of emotions via dynamic, observable body parts, activation and evaluation are independent characteristics of emotions that can combine in different ways.

1. Throughout the volume, italics are used to represent lexical items (i.e. form-meaning pairs), single quotation marks are used for lexical meanings, generally when the focus is on a lexical item in a particular language. Small capitals are used for metaphors, metonymies, cognitive models, image schemas, and the like, and also in cross-linguistic comparisons of body part conceptualizations.
In “Contrasting body parts: Metaphors and metonymies of mouth in Danish, English, and Spanish” Uwe Kjær Nissen takes a cross-linguistic and cross-cultural perspective and demonstrates that nonliteral uses of mouth in English, and its counterparts boca in Spanish and mund in Danish are pervasive in all three. His study clearly supports the view that metonymy and metaphor, which link mappings of mind and body, are powerful tools for generating figurative expressions and that these expressions, although not entirely predictable, are motivated by bodily experiences. Nissen strongly advocates the comparison of Indo-European languages, already subject to analysis by the cognitive linguistic community, with non-Indo-European languages since, although metaphorization and metonymization are frequently based on physiological embodiment, these processes are also influenced by cultural differences, as revealed by his comparison of the three languages that are relatively close to one another.

The last chapter in the European grouping is “head and eye in German and Indonesian figurative uses” by Poppy Siahaan. In her comparative study she investigates the figurative extensions of the two source concepts head and eye in the two genetically unrelated languages German and Indonesian. Her data provide evidence that a given source concept often targets the same conceptual domain in both languages (e.g. (human) leader or character traits); yet her study also reveals interesting language-specific distinctions. Using a corpus-based quantitative approach, Siahaan reveals that the metaphoric and metonymic extensions differ strikingly in frequency of occurrence in her corpus. Her findings show that German speakers have a preference for the function of Kopf 'head' and Auge 'eye' while Indonesian speakers have a preference for the position of kepala 'head' and the appearance or shape of mata 'eye'.

The East Asian section of the book, Part 2, includes three chapters, one on Chinese and two on Japanese. In his chapter “Speech organs and linguistic activity/function in Chinese”, Ning Yu studies the Chinese cultural ways of understanding speech and language based on the metonymic chain from speech organ to language proposed by Radden (2004): speech organ → speaking → speech → language. Yu analyzes Chinese terms for such speech organs as she 'tongue', chi 'teeth', chun 'lips', and zui or kou 'mouth' as they are used metonymically and metaphorically in conventionalized expressions referring to more abstract linguistic action and function. The study focuses on three metonymies, speech organ for speaking, speech organ for speech, and speech organ for language. Yu finds that the first two metonymies are richly manifested in a large number of conventionalized expressions. Yet, the metonymy speech organ for language, widely attested across languages (Radden 2004), is not realized lexically in Chinese. What is particularly interesting is the fact that in Chinese, speech organ for language, while not manifested in its lexicon, is nevertheless realized in its
ideographic writing system as radical components of the characters. That is, the Chinese characters representing ‘language’ and ‘speech’ all contain the ‘mouth’ radical in them. This finding provides an interesting and telling example of how the general cognitive principle of embodiment can be realized in and embraced by a culture-specific environment.

Tomokazu Nagai and Masako K. Hiraga’s chapter “Inner and outer body parts: The case of hara ‘belly’ and koshi ‘lower back’ in Japanese” analyzes and seeks to clarify the relationship between the outer body and inner body parts as sources of motivation for metonymy and metaphor. They argue that hara as an internal body part correlates with metaphor, and expresses figurative meanings having to do with mental and spiritual stability while koshi, an external body part, correlates with metonymy, and expresses figurative meanings having to do with attitude and behavior. To test the validity of this premise, the authors examine verbal and adjectival combinations with koshi and hara to explicate in detail the tropic interplay between metonymy and metaphor in generating figurative meanings. The authors consider also non-human entities and events that can be partially seen as having inner and outer body parts, and discover that the metaphoric productivity of hara becomes weaker, giving rise to metonymic extensions while koshi appears to be more productive with respect to metaphoric rather than metonymic extensions. The authors conclude with a hypothesis: the tropic motivation of the inner and outer body parts may reverse when their meanings have been extended so that they are used to describe things and events in the external world – a claim to be tested in future research.

The second chapter on Japanese is “A cultural-linguistic look at Japanese ‘eye’ expressions” by Debra J. Occhi. Her data show that ‘eye’ expressions in Japanese characterize this body part as both an arbiter, capable of judging and measuring across several variables, and as an object of evaluation. The metaphors eye as mind and eye as person are attested in various sets of data. Notably, the eye is conceptualized in Japanese as the locus of distinctions in the social hierarchy schema, distinctions that govern both linguistic and non-linguistic behavior. The eye is also salient in Japanese expressions of character traits and emotions; gender norms are also revealed through certain ‘eye’-related expressions. Data from Japanese robustly support the notions of physiological, cultural, and culturally tainted embodiment that has been outlined in Maalej (2004).

The third and last grouping of the volume, Part 3, contains three chapters on Middle Eastern and North African perspectives on body parts. Farzad Sharifian’s contribution “Conceptualizations of cheshm ‘eye’ in Persian” undertakes a contrastive study of body part terms expressing emotions in Persian and English. The main argument of the chapter is that in contemporary Persian this body part and the act of perception appear to be associated mainly with emotions, feelings,
personality traits, attention, intuition, knowing, and to a limited extent, with thinking. The analysis of Persian expressions containing the body-part term cheshm do not reflect understanding is seeing as a dominant conceptualization in everyday use of language by Persian speakers. The findings of this study, along with those of other studies, point to the role of language as a “memory bank” and “archive” for cultural conceptualizations.

In “Figurative dimensions of 3ayn ‘eye’ in Tunisian Arabic” Zouheir A. Maalej analyzes the role of ‘eye’ as a cognitive source for an embodied cultural model constituted by imaginative structures such as image schemas, metaphors, and metonymies. This cultural model shares with English, Chinese (Yu 2003b, 2004), and Persian (Sharifian, this volume) cultures the means by which mental faculties (THINKING/UNDERSTANDING/KNOWING IS SEEING) are conceptualized via vision. Regarding emotions, the eye functions metaphorically as a container for love, desire, and guilt, in keeping with the image schema THE BODY IS A CONTAINER FOR EMOTIONS. Moreover, the eye is conceptualized as a metaphorical source for the emotions themselves: love, desire, anger, and envy. In short, with emotions the eye seems to waver between being a container for love and loved ones, and a dangerous object or perceptual organ that is easy to manipulate. Similar to emotions, character traits are also referenced by ‘eye’ metaphors in Tunisian Arabic. For example, the conceptualization of ambition exploits properties of the eye such as size, spaciousness, and depth. Conceptualizations of naïveté and alertness metaphorically expand the CLOSED-OPEN image schematic structure of the eye.

The last chapter in this perspective and in the volume is titled “The apocalypse happens when the feet take the position of the head: Figurative uses of ‘head’ and ‘feet’ in Turkish” by Mustafa Aksan. This author addresses the embodiment of social stratification in Turkish, in which verticality is exploited through the schematic organization (UP-DOWN) of the two body parts of baş ‘head’ and ayak ‘foot’ as located at the opposite ends of the body. The head profiles the cultural metonymies HEAD FOR ORDER, HEAD FOR RULER, HEAD FOR TALENT. The foot profiles conceptual metaphors such as LESS IS DOWN, LOW STATUS IS DOWN, and BEING SUBJECT TO CONTROL OR FORCE IS DOWN. The author discusses cases where terms for ‘head’ and ‘feet’ combine in a number of metonymies and metaphors. In such expressions, the contrast on a verticality scale based on particular locations of body parts is used to conceptualize contrast in social stratification.

The grouping of chapters in this volume is motivated, quite obviously, by the geographic location of the languages and cultures studied. Alternatively, the chapters could have been arranged according to the body part concepts themselves. For instance, two chapters study ‘head’ in three languages (German, Indonesian, and Turkish), two chapters study ‘mouth’ in four languages (Chinese, Danish, English, and Spanish), and four chapters study ‘eye’ in five languages (German, Indonesian,
Japanese, Persian, and Tunisian Arabic). While the chapters investigating the same body parts do so from different perspectives, all the chapters in this volume emphasize the intricate interplay between body and culture (embodiment) in generating metonymies and metaphors to express central aspects of the human condition such as emotions, character traits, mental faculties, and cultural values. As mentioned above, we align ourselves with the view that metonymy and metaphor form a continuum (e.g. Barcelona 2000b, 2000c). This continuum seems to correlate with another continuum between two types of embodiment, the physiological and the cultural (Maalej 2004, 2007, 2008). While metonymy tends to exhibit a more physiologically grounded kind of embodiment, metaphor, which is often metonymically based, tends to create a more culturally oriented kind of embodiment. Thus, when we talk about embodiment, we always mean “embodiment via body and culture.”

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