On the Figurativity of *Mouth* in Fully Lexically Specified Constructions in English

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Abstract
The study revisits the figurativity of an external body part term, the *mouth* in English. A synchronic Cognitive Linguistics approach to analysing *mouth* as a source domain is adopted, aiming to uncover what target concepts the *mouth* is deployed to figuratively conceptualise. In discussing the target concepts, the focus falls on the role of image schemas and metonymies in building up figurative conceptual complexes (Ruiz de Mendoza and Masegosa 2014), contrasting it with the one of metaphors in [Adj N] constructions with the same body part. A hypothesis is put forward that when used in fully lexically specified constructions in English the *mouth* is predominantly metonymically projected, while metaphoricity is more pronounced in other types of figurative expressions, where the *mouth* has a naming function and is not part of an explicitly described scene.
Keywords: body-based expressions, metonymy, image schemas.

1. Introduction

The study of figures of speech has a venerable tradition[1]. The fascination with figurativity stems from the inexhaustible plethora of mechanisms involved, the encompassing creativity of the human mind and the methodological difficulties in studying cognition and its manifestations. Utilising the analytical apparatus of Cognitive Linguistics and figurative language studies, the current paper revisits the nature of fully lexically specified constructions with an external body part term.

[1] For space limitations the history of the problem will not be covered here. For recent general discussions refer to Dancygier and Sweetser 2014; Gibbs and Colston 2012; Katz, Cacciari, Gibbs and Turner 1998; etc.

The basic premise of Cognitive Linguistics on which the analyses and argumentation are based is the embodiment thesis, which is a fairly recent attempt to bridge the body-mind dichotomy. In the following exposition, embodiment is taken to refer to "understanding the role of an agent's own body in its every day, situated cognition" (Gibbs 2006: 1), or the ways in which the human body influences thinking and speaking.

The paper revisits the role of metonymy in "embodiment via body parts" (Maalej and Yu 2011) and studies the relationship between metonymy, image schemas and metaphor in conceptualisations utilising body parts. The immediate object of analysis is "cultural formulas" (Peters 1983), i.e. fully lexically specified (figurative) constructions containing body part terms, shared to a great extent by the members of the respective cultural group and the conceptualisations engendered in and by them. The hypothesis tested by these analyses relates to the different ways body parts behave in cultural formulas in comparison with other instances of figurative use. The data are lexicographic[2] and the approach qualitative. In Facchinetti's (2012: 1) words, dictionaries "are store-houses of meanings and uses, 'lamp genies' to be set free at the very moment readers set their eyes on their entries".

To achieve the set objective, the following specific research questions are addressed: 1. What abstract conceptualisations (relations, values, emotions, etc.) is the *mouth* deployed to construe in English? and 2. Against the premise that figurative projections with external body parts are not possible without metonymy as an intermediary between image schematic inferencing and metaphoric mappings, does the figurativity of body part-based fully lexically specified constructions and other instances of figurative use of *mouth* as an exclusively naming unit differ?

[2] The data have been extracted from Ayto, John, (ed.), Third Edition, 2009, *Oxford Dictionary of English Idioms*, O.U.P., Oxford. *Collins Cobuild Idioms Dictionary*, Third Edition, 2012, HarperCollins Publishers, New York. *Longman Dictionary of English Language and Culture*, Third Edition, 2000, Pearson ESL, London. *Oxford English Dictionary,* Second Edition on CD-ROM (v. 4.0.0.3), 2009, O.U.P., Oxford. *Oxford English Dictionary Online*, Second/Third Edition, [1989] 2016, O.U.P., Oxford.

The answers are organised in the following manner: Part two presents the adopted interdisciplinary framework of Cognitive Linguistics, with an emphasis on embodiment. Part three discusses the nature of figurativity and the role of metonymy in the former. Part four summarises the results of the analyses of the deployment of *mouth* in the respective culture and the last part contains a brief general discussion of the major findings concerning the emergent interactions between embodiment and the linguistic encoding of figurativity.

2. Language and embodiment from a Cognitive Linguistics perspective

Despite the significant progress within Cognitive Linguistics in the past thirty years (for new developments in the field see Croft 2001, Goldberg 2006, Janda 2013, Ruiz de Mendoza and Masegosa 2014), the fundamental epistemic and ontological bases of "the enterprise" (Evans, Bergen, Zinken 2007) relating to the imagistic nature of language and its emergence from general cognitive abilities, as well as the general methodological assumption that the complex of language and mind should be studied in its inseparable unity has remained stable, notwithstanding the multiplicity of terminological conundrums and alternative theoretical constructs.

In keeping with the generally accepted wisdom within "the enterprise", I assume that image schemas, metonymy and metaphor as dynamic cognitive processes are central for the way knowledge is structured and put to use in linguistic conceptualisations and communicative interactions. A further tenet to which I fully subscribe is that "figurative meaning is part of the basic fabric of linguistic structure" (Dancygier and Sweetser 2014: 1). Our encyclopaedic knowledge is structured and experientially based, ultimately grounded in our body, where body is a shorthand term for at least the following: the biological organism, the ecological, the phenomenological, social and cultural body (Johnson 2008). In Johnson's own words,

> [i]f we regard our conception of the body as […] a radial category, then our most central sense of "human body" is the living biological-ecological body as we experience it phenomenologically through proprioception, kinesthesia, and feeling. (Johnson 2008: 166)

This complex conception of the body serves as a basis for "the emergence of human meaning, imagination, and reason from structures of bodily perception and movement" (Johnson 2008: 160).

These notions constitute part of the "embodiment premise" as formulated by Gibbs,

> [p]eople's subjective, felt experiences of their bodies in action provide part of the fundamental grounding for language and thought. Cognition is what occurs when the body engages the physical, cultural world […] Human language and thought emerge from recurring patterns of embodied activity that constrain ongoing intelligent behaviour. We must […] seek out the gross and detailed ways that language and thought are inextricably shaped by embodied action. (Gibbs 2006: 9)

Various researchers have probed into the importance of the body in figurative conceptualisations, e.g. the *mouth* (Nissen 2011), the *guts*, *heart-stomach*, *liver*, etc. internal organs (Sharifian, *et al.* 2008), the *face*, the *head*, the *eye* and *feet* (Maalej and Yu 2011) and *heart* (Yu 2009). All available analyses converge on the idea that body part concepts are cross-culturally utilised in figurative projections encompassing diverse areas of human experience.

From the embodiment premise, which explicitly emphasises embodied action, it is logical to presume that external organs whose structure and function we can monitor and use for various actions are exclusively metonymically deployed as elaboration sites for figurative cultural formulas, while in other figurative uses, such as [Adj N] constructions or metaphoric NPs, they are metaphorically engaged, e.g. *all mouth but no trousers* vs. *potty mouth* or *mouth of a river*. The conventionalised metonymies employed in external body part cultural formulas are based on folk categorisation of the human body and its basic functions, not expert categorisation (on the distinction between the two see Taylor 1995: 68-74ff) and are associated with culturally informed idealised cognitive models (ICMs).

One of the most significant consequences of embodiment is the understanding of figurativity in human language as an emergent, complex adaptive perceptual-symbol system whose comprehension involves embodied enactment by an immersed experiencer or the embodied simulation hypothesis.

3. The role of metonymy and image schemas in body-part based fully lexically specified constructions

3.1. Figurativity in language and thought

As Bergen claims, "[m]eaning, according to the embodied simulation hypothesis, isn't just abstract mental symbols; it's a creative process, in which people construct virtual experiences—embodied simulations—in their mind's eye" (Bergen 2012: 46). These simulations are mostly motor-perceptual, i.e. they involve enactment of visualisations and sequences of actions. The visually prominent simulations are shared by interactants in communicative situations. Language comprehension according to Bergen is dynamic and constructivist in nature, since

> if we use our brain systems for perception and action to understand, then the processes of meaning are dynamic and constructive. It's not about activating the right symbol; it's about dynamically constructing the right mental experience of the scene. (Bergen 2012: 47)

In any act of communication, the interactants create a shared semiotic space and adjust to arising principles of signification among which the representational dimension has a leading role, as linguistic communication is based on alternative signals (perceptual symbols) and is guided by the desire to achieve a maximally closely shared mental experience of the scene. Since "the content of words must be showcased in a form fitting and effective for the transmission of the message at hand" (Everett 2012: 215), in each communicative instance the most appropriate representational design is chosen. Typically, interactants may choose between literal and figurative expressions as befits the immediate context and the intended goals (among various other relevant communicative variables).

Figurative expressions are not exceptional, but differ from literal expressions as defined by Dancygier and Sweetser,

> figurative means that a usage is motivated by a metaphoric or metonymic relationship to some other usage, a usage which might be labeled literal. And literal does not mean 'everyday, normal usage' but 'a meaning which is not dependent on a figurative extension from another meaning'. (Dancygier and Sweetser 2014: 4)

The most important consequence of uniting this definition and the simulation hypothesis is that we can cautiously claim that external body part-based figurative expressions necessarily involve objectification and visualisation and remain firmly grounded in image schematic reasoning, since as Bergen contends, "in each case, […] when you are confronted with sentences about *visible* things, you perform *embodied simulations* of the events they describe — using your brain's vision system" (Bergen 2012: 121; emphasis added). The important thing to note here is that the prerequisite of visibility allows for hypothesising a difference in the figurative functioning of internal and external body part terms that leads to employment of different cognitive processes for the respective figurative projections.

Two further points need to be clarified before providing a summary of the analyses of fully lexically specified constructions. First, the said visualisation in the mind's eye varies. Three possible points of view have been offered by Bergen: "a God's-eye view", "a canonical perspective" and "immersed experience view" (pp. 153-154). The latter postulates that language comprehension is

> akin to actually being there, to experiencing the events that the language describes. In this case, you should again view objects and events from a particular perspective but one that's dependent on the details of the sentence and its context. This idea is sometimes known as the immersed experiencer view. (pp. 153-154)

Effectively, this means that when fully lexically specified constructions with external body parts are chosen as fitting the presentational design of an ongoing communicative exchange, the interactants are immersed in the frame (ICM) evoked by the used body term and the action frames (ICMs) which it includes. In such expressions which necessarily involve a scenic description, though sometimes implicit, the *mouth* is contextualised as an active scenic participant and this triggers the projection of metonymies harmonious with the evoked affordances framed by the scene. When the *mouth* functions as the head in NPs:: *useless mouth*, *mouth of a cave*, etc., it is projected metaphorically as the requisite affordances are not activated and it is used as the label to trigger analogical inferencing. The ICMs cohere along the lines which the affordances (Gibson

2015) of the external body part supply. The second point relates to the fact that the folk categorisation of the human body contains specified perceptually grounded affordances of objects, including external body parts, but not for the internal ones. Affordances are "the perceived and actual properties of the thing, primarily those fundamental properties that determine just how the thing could possibly be used [...] Affordances provide strong cues to the operation of things" (Norman 1988: 9). We have full perceptual access to the mouth and its parts and can consciously control actions in which it is involved. The ICM of the mouth involves all frames that ensue from the affordances projected from the folk categorisation of the mouth as an external body part, as well as the image schematic knowledge underlying the specific affordances. In the figurative projections of *mouth* (and its partonyms) the evocation of both leads to heightened imagery which is present in the most elaborate metamorphoses of the perceptual. As Palmer claims, "[t]he term imagery highlights the fact that concepts originate as representations of sensory experience, even though they may subsequently undergo complex processes of formation and recombination" (Palmer 1996: 46). The immersed experiencer hypothesis leads to the natural conclusion that the imagery in the figurative deployment of the *mouth* in fully lexically specified constructions is captured in the preservation of the image-schematic and affordances-based properties of the organ and its parts in the most elaborate processes of recombination.

3.2. Image schemas, metonymy, figurativity and external body parts

As Gibbs has aptly put it, "image-schematic reasoning does not simply mean doing something with one's mind, but constructing a simulation of experience using one's body" (Gibbs 2005: 115). Even though image schemas are defined not as abstract imagistic skeletons but as patterned, embodied interactions that are at once structural, qualitative, and dynamic (Johnson 2005), they are not directly encoded in linguistic complexes or projected as abstract conceptualisations. The transition from image schemas to elaborate figurative conceptual complexes is achieved via metonymy and metaphor. In keeping with Clausner and Croft's contention (1999), we assume that image schemas, metonymy and metaphor are

construal processes or models of conceptualisation with a plausible hierarchical relationship among them in terms of both complexity and elaboration, though not in terms of dynamicity. Image-schematic inferencing develops into frame correlational metonymies and via chain metonymies[3] (most of which are lost diachronically) conventional metaphors develop.

This has direct implications for the linguistic actualisation of both metaphors and metonymies in which external body parts are involved. Starting from the body image with all the frames capturing the affordances of the external body organs, natural metonymies (which very easily get conventionalised) provide the background for all figurative conceptual complexes, involving conceptual elaborations and lexical extensions.

In the contemporary debate on metonymy various phenomena are subsumed under this term and diverse definitions provided – of metonymy as a radial or prototypical category; unified ones, contiguity-based, domain-based, mapping-based ones, etc. For precision purposes, I adopt the following working definition of metonymy: metonymy is a cognitive process in which one conceptual entity, the source, evokes immediate mental access to another conceptual entity within the same frame on the basis of natural correlations. Its specificity in relation to other construal mechanisms is that it is specialised for (re)conceptualisation, where the source establishes a perspective for the activation of the target. A typical metonymy is a schematic metonymy whose target (initially a secondary domain within the matrix) is clearly distinct from the source, (Barcelona 2011: 20), based on inferencing grounded in a salient pragmatic link.

A last note on the nature of metonymy is in order here. I fully subscribe to Gibbs' distinction between processing metonymic language and metonymic processing of language. He claims that

> people utilize metonymic schemes of thought to reason appropriately about what is meant. In this sense, then, we must acknowledge a distinction between processing metonymic language (e.g. understanding utterances like *Paris has dropped hemlines this year)* and *metonymic*

[3] On the nature of chain metonymies see Frank 2015; Nerlich and Clarke 2001; Ruiz de Mendoza and Masegosa 2014; etc.

processing of language (e.g. understanding the gaps in [meaning-creation] by inferring some rich source of information, like a [frame], from the simple mention of some salient part of that knowledge). (Gibbs 1999: 69; emphasis added)

All instances of metonymic language result from metonymic processing of language, but metonymic processing of language leads to a variety of front-stage cognition products (Evans 2009) and is not restricted to conventionalised metonymic language (on the conventionalisation of metonymies see Handl 2011 and Kövecses and Radden 2007). External body part figurative fully lexicalised constructions epitomise the intersection of the two.

A further point to be emphasised is the contention that the accessibility of the target from the source correlates with the strength of the metonymic link between source and target, based on the natural[4] conceptual associations between the two. In addition, the strength of the metonymic link depends on the salience of the source (Panther and Thornburg 1998). In the case of *mouth* the source is highly salient. It is essential for human survival, both biological and socio-cultural (for communication). Its centrality for human life explains the versatility of the figurative projections it underscores.

Culturally-informed formulae can be used to establish language-specific perspectives from which the body is projected as salient and meaningful for figuratively understanding abstract concepts (Gibbs 1999, Yu 2009). A summary of prior detailed analyses of cultural formulas with *mouth* is presented in the next section.

4. The *mouth* in figurative expressions

4.1. On the figuration of *mouth*

The mouth is defined as the opening and cavity in the lower part of the human face, surrounded by the lips, through which food is taken in and vocal sounds are emitted and consequently is made up of the following parts – teeth, tongue, cavity, muscular floor

[4] On naturalness of conceptual associations in metonymy see Handl 2011 and Kövescec and Radden 2007.

and roof (palate). While the relationship between the whole and the parts is truly meronymic for most mouth constituent elements, the teeth seem to have a special status. The mouth is perceived as a container for the teeth (with the Containment image schema being fully operational) and they are not considered a natural part of it, as is for example a finger in relation to the hand. The remaining parts are perceived as integral ones and this determines the separate functionalities or the operative perspective associated with these closely related pieces of human anatomy.

A crucial feature of the mouth and its meronymic components is that *homo loquens* and *significus* uses them as one of the natural ways of communication. This specialisation determines a great number of the metonymies involved in figurative formulaic sequences based on *mouth*. In the mapping process from physical experience to an abstract concept the following sequence of schematisation, categorisation and linguistic expression has been established: bodily experience → metonymy → metaphor → abstract concept (Maalej and Yu 2011; Yu 2008). The nature of the most ubiquitous forms of human communication engenders a further metonymic chain associated with the *mouth* and communication, namely speech organ → speaking → speech → language (Radden 2004). Fully subscribing to the suggested metonymic chains, I argue that metaphor is not a necessary component in the figurative extensions of *mouth* and its natural parts. In this line of reasoning, the contention that "all examples of Goossens's metaphtonymy are essentially *metonymic* developments of a situational metaphoric source" (Ruiz de Mendoza and Masegosa 2011: 8; emphasis added), calls for the counterclaim that the sources are not situationally metaphoric (with a few exceptions). What sounds like metaphor is actually the use of an expression in novel contexts where the initial situational context facilitating the inferences is no longer available. In view of the immersed experiencer hypothesis this fact does not have any effect on the comprehension of "what the language actually describes" (Bergen 2012).

In the discussion developed between Goossens (1995) and Ruiz de Mendoza and Masegosa (2011) it transpires that the patterns in which metaphor and metonymy interact are difficult to classify. Ruiz de Mendoza and Masegosa argue that

biting one's tongue, rather than a metonymy within a metaphoric framework, is part of a scenario in which someone bites his or her tongue to refrain from revealing a secret or otherwise speaking his or her mind. The expression thus stands for the complete scenario that can then be used as a metaphoric source for other situations where people refrain from speaking without actually biting their tongues. (Ruiz de Mendoza and Masegosa 2011: 8)

In other words, if we adopt the constructionist approach, where "each of [the] conventional procedures to produce meaning structure at one level or another is considered a construction, [...] i.e. as a fixed form-meaning pairing whatever its formal or functional complexity" (p. 8), we need not try to analyse how a construction is incrementally designed, provided it is used as a whole with a non-compositional meaning. Combining the two arguments leads to the conclusion that in the case of *bite one's tongue,* what is metaphoric is the use to which the cultural formula is put, not the figuration pattern which engenders the construction that is metonymically motivated. In keeping with the immersed experiencer hypothesis what is actually activated in the comprehension of the fully lexically specified construction is a visualisation of the physical activity described with the ensuing consequences. After all, as Lakoff and Dodge claim,

[p]articularly significant are recent studies which indicate that language (verbs and sentences) denoting actions performed by different body parts (mouth, arms, feet) activates some of the same regions as are active when each type of action is actually performed. (Lakoff and Dodge 2005: 73)

There is no requirement for actual biting to occur for the expression to be aptly used in a communicative exchange. Whenever the expression is chosen it triggers off the requisite interpretation which is based on a metonymy CAUSE FOR EFFECT. The inability or unwillingness to speak ensues in a frame correlational manner from the physical infliction on the instrument in the frame of speaking (which involves physical movement of the tongue).

4.2. The metonymic projection of *mouth* in figurative expressions in English

In the same manner most of the fully lexically specified constructions

with *mouth* in English result from metonymic figuration patterns interpretable on the basis of the frames capturing the affordances of the whole and its parts underscored by image-schematic inferencing as can be seen from the target domains and the figuration patterns with *mouth* listed[5] in Table 1 below.

TABLE 1
Figurative fully lexically specified expressions with *mouth*

TARGET CONCEPT	EXPRESSION	FIGURATION PATTERN	
		METONYMY	METONYMY + METAPHOR
a dependent	*a mouth to feed*	PART FOR WHOLE	
appetite/ anticipation	*one's mouth waters*	EFFECT FOR CAUSE	
authority	*hang on s.o.'s mouth*	EFFECT FOR CAUSE [INSTRUMENT FOR PRODUCT + PHYSICAL ATTACHMENT FOR FOCUSED ATTENTION]	
bad language/ inappropriate verbal behaviour	*trash/toilet/ potty mouth*		SALIENT PROPERTY FOR CATEGORY + THE MOUTH IS AN OBJECT
boasting	*smart mouth, loud-mouthed*	INSTRUMENT FOR PRODUCT	
certain emotions (anger, embitterment, amazement, unhappiness)	*foam/froth at the mouth*	ACT FOR CAUSE + EFFECT FOR CAUSE	
comfortable life	*be born with a silver spoon in mouth*	CAUSE FOR EFFECT [POSSESSION FOR POSSESSOR + BIRTH FOR LIFE SPAN + WEALTH FOR COMFORTABLE LIFE]	

(*continued on next page*)

[5] For lack of space only a summary of analyses of the figuration patterns with mouth and its partonyms is presented here. The analyses involve a detailed study of the figuration pattern of 100 fully lexically specified constructions in English and 103 in Bulgarian, only a handful of which are used here for exemplification purposes. The data and their detailed analyses are available on request from the author.

TABLE 1 (*continued from previous page*)

TARGET CONCEPT	EXPRESSION	FIGURATION PATTERN	
		METONYMY	METONYMY + METAPHOR
frankness	*have one's heart in one's mouth*	CAUSE FOR EFFECT + WORDS FOR EMOTIONS	
hypocrisy	*butter wouldn't melt in one's mouth*		ACT FOR AFFECT + COOLNESS IS INNOCENCE
inability to keep a secret or restrain one's speech for some reason	*big mouth*	INSTRUMENT FOR PRODUCT	
inactivity/lack of integrity	*all mouth but no trousers*	INSTRUMENT FOR PRODUCT + TROUSERS FOR ACTIVE WORK	
incessant and frequently annoying talking	*shoot one's mouth on/off*	INSTRUMENT FOR PRODUCT	
reproach for bad/inappropriate verbal behaviour	*Do you kiss your momma with that mouth?*	CAUSE / INSTRUMENT FOR EFFECT / PRODUCT	
shifting opinions/alliances	*speak out of both sides of mouth*	ACT FOR EFFECT + REVERSAL OF MARKEDNESS	
social awkwardness	*put one's foot in one's mouth*	CAUSE FOR EFFECT + ABSURD PHYSICAL ACT FOR SOCIAL GAFF	
source of knowledge	*right from the horse's mouth*		MEMBER FOR THE CATEGORY + PART FOR WHOLE + HORSES ARE KNOWLEDGEABLE CREATURES
uncomfortable life	*live from hand to mouth*	CAUSE FOR EFFECT (based a series of metonymies grounded in the affordances of the two organs)	
undergoing a chastening reversal	*be laughing on the other side of mouth*	ACT / EFFECT FOR CAUSE + REVERSAL OF MARKEDNESS	

As evidenced in Table 1 there is a marked predominance of metonymic projections in cultural formulas with *mouth*. If metaphor plays a distinct role (in three of the instances), it is superimposed on metonymy. The fact that *mouth* is explicitly included in a rich scenic description in such cultural formulas and all affordances can potentially be activated may explain this, as opposed to expressions where *mouth* functions as a name/label and metaphoricity based on analogy predominates.

4.3. The metaphoric projection of *mouth* in figurative expressions in English

When used as a head of an NP with a naming function, the *mouth* is almost unexceptionally projected metaphorically. Against the unexceptional presence of metonymy in all figurative patterns, there are many expressions of [Adj./N + *mouth*], conceptualising bad language, which are negatively evaluatively marked – *dirty mouth, trash mouth, garbage mouth, toilet mouth, potty mouth, foul mouth*, etc. The metaphoricity of the conceptually independent constituent (in the Langackarian sense, 1997) in the cases of domain adjective constructions as defined by Sullivan (2013: 63-65) is transferred over to the whole construction – *toilet mouth, potty mouth, trash mouth, etc.* In such metaphoric constructions the conceptually dependent construction constituent is always the *mouth* as a body organ without a direct evocation of any action schema – *big mouth*, etc., while the adjective contributes the source in the metaphoric projection. A plethora of such metaphoric expressions involves *mouth* exclusively, not its inherent parts (to the exclusion of *silver tongue* and *sweet tooth*). The predominance of the whole in such metaphoric projections can be explained with its gestalt salience and with the supposition that the whole metonymically entails its parts, while the reverse does not necessarily hold true (especially considering facetisation and active zone evocation (Paradis 2011)).

The prevalence of metonymies in embodiment via external body parts can be explained through the principle of the immersed experiencer which involves a sensorial input schematically associated (in Blewitt's (1993) sense) with the target concept. All of the metonymies at play are concept metonymies as defined

by Kövesces and Radden (2007: 339-341), so frame correlational metonymies (Dancygier and Sweetser 2014) operate in figurative conceptualisations based on the *mouth* partonomy.

5. Concluding remarks

Since the human meaning making capacity is heavily dependent on embodied action, fully lexicalised constructions with external body parts are projected from image schemas via conventionalised metonymies to linguistically encode various areas of human shared experience. In the process, frame-derived concept metonymies operate and guide the metamorphoses of image schematic patterns into linguistically encoded complexes. If metaphors are involved (and in the case of *mouth*-based expressions there are negligibly few), they are for the most part correlational or primary metaphors (Grady 2007). Exceptional in that sense are [Adj.+N] constructions where the whole construction displays a metaphor-within-metonymy pattern, with the noun motivated by metonymy and the adjective conceptualising an elaborate conceptual metaphor.

It might be suggested that "affordances" play an important role in figurativity and can account for differences in the figurative projections of internal and external body parts. This is an empirical question in need of cross-linguistic and contrastive research, which will be a natural continuation of the work in progress presented here. Further experimental and interdisciplinary research is needed to substantiate the hypothesis that metonymy prevails in external body part-based figurative constructions as opposed to metaphor prevalence in internal body part-based ones cross-linguistically. The claim that this can be accounted for in terms of affordances and embodied action-based meaning-making principles within a simulation-based model of language comprehension needs to be experimentally substantiated.

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