Metaphor and subjective experience

A study of motion-emotion metaphors in English, Swedish, Bulgarian, and Thai

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The concepts (or "domains") of *motion* and *emotion* are closely related in both language and experience. This is shown by the presence of many metaphorical expressions (e.g. 'my heart dropped') across languages denoting affective processes on the basis of expressions originally denoting physical motion. We address the question *why* this is the case, and distinguish between three kinds of theoretical proposals: (a) (embodied) conceptual universalism, (b) (strong) language/culture dependence and (c) consciousness-language interactionism. After an "eidetic" analysis of motion informed by phenomenology, and to a more limited extent - emotion(s), we describe an empirical study in which 115 motion-emotion metaphors in English, Swedish, Bulgarian and Thai were systematically analyzed and compared. The findings show considerable differences, especially between the Thai metaphors and those in three other languages, but also significant similarities. The results are interpreted as supporting a dialectical, interactionist relationship between language and consciousness, on the one hand, and between motion and emotion, on the other.

Keywords: consciousness; cross-linguistic analysis; culture; 'inner' vs. 'outer' motion; phenomenology; 'private language argument'; translocation; Husserl; Wittgenstein

1. Introduction

Wittgenstein's famous private language argument (Wittgenstein 1953) states that the meaning of linguistic expressions cannot be determined by "private" experiences. The reason for this is that linguistic meaning is *normative*, in the sense of conforming to public criteria of correctness, and (radically) private experiences lack such criteria (cf. Itkonen 2008). This implies that the meaning of words such as *pain* and *joy* cannot be exhaustively constituted by the corresponding states (or processes) of affective consciousness. Rather, their meaning must be at least *co*-determined by intersubjectively

observable phenomena such as "natural reactions" (cf. Racine, Wereha & Leavens this volume), along with features of the contexts in which these words are appropriately used.

We accept the validity of this argument, but we do not think that it excludes the relevance of subjective experience for the meaning of "mental" predicates; it only states that such experience is not *sufficient*. Indeed, one can argue that consciousness, as subjective experience as well as reflection, is a prerequisite for language (Zlatev 2008) without denying that language adds further dimensions to consciousness. The cognitive advantages of a public symbolic system for communication and thought are many, and one of these is that language makes possible, or at least radically enhances the potential for narrative, and thus for autobiographical memory (Stern 1985; Nelson 1996; Hutto 2008; Menary 2008; Gallagher this volume). On the most general level, the goal of this chapter is to investigate the relation between consciousness (understood as subjective, personal experience) and language. We propose to do this by examining linguistic expressions that denote both motion situations and emotions, i.e. *motion-emotion metaphors*, in four languages (and cultures) which vary to different degrees: English, Swedish, Bulgarian and Thai.

The fact that the English words *motion* and *emotion* are so similar is not a coincidence, as can be attested by a glance at their etymology. The word *emotion* is attested in English texts from around 1570–80, apparently borrowed from Middle French *esmotion,* derived from *esmovoir* 'to set in motion, move the feelings', which can be traced back to the Latin verb *ēmovēre*. Such intermixing of expressions for something that can be intersubjectively observed – the motion of objects and animate creatures – and what is subjectively experienced (feelings) is far from being restricted to English and other European languages. In fact, the use of expressions primarily denoting motion to talk about emotions is widely distributed in the world's languages.[1] What is less clear is *why* motion-emotion metaphors are so common. In particular, we can single out the following two questions:

– What role does subjective experience play for establishing such metaphors?
– What role is played by language-specific (and culture-specific) conventions?

Comparing motion-emotion metaphors in the four languages under investigation should allow us to evaluate three types of theoretical positions on the basis of the predictions following from them.

The first position is that of (embodied) *conceptual universalism*, proposing to ground linguistic meaning in pan-human bodily experiences, or their neural underpinnings. This is the case in Lakoff & Johnson's (1980, 1999) Conceptual Metaphor

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1. It may even be a so-called "universal" – though claims of linguistic universals have been much overstated in the past, and the empirical database for semantic universals is much too sparse at present (Koptjevskaja-Tamm et al. 2008; Evans & Levinson 2009).

Theory (CMT), according to which the meanings of non-concrete expressions are based on non-linguistic, and purportedly universal *primary metaphors* such as SIMILARITY IS PROXIMITY IN SPACE (cf. Grady 2005; Johnson & Rohrer 2007). If the motion-emotion metaphors in the four languages under discussion can be shown to be more or less the same, this would lend support to theories of this type.

The second position claims that thinking in general, and metaphor formation in particular, *depends crucially on language* (or discourse). If motion-emotion metaphors turn out to vary extensively and "arbitrarily" across languages this would give credibility to the position that the meanings of emotion expressions are derived primarily from their role in the linguistic-conceptual schemes provided by the languages themselves, rendering subjective experience largely irrelevant. In general, such a position was earlier held by representatives of structuralism, but has lost its appeal for most linguists. However, it has not yet done so for many analytic philosophers (cf. Dennett 1991), who tend to attribute a determinative role to language with respect to consciousness.[2] A weaker form of this position, concerning metaphors specifically, predicts that conventional metaphors would be what Zinken (2007) calls "form-specific", i.e. that the metaphorical meanings would be associated with specific expressions, in the manner of idioms, rather than derive from systematic cross-domain mappings, as in CMT.

The third position can be referred to as *consciousness-language interactionism* (cf. Zlatev 1997, 2003, 2008). It accepts that emotions are indeed basically subjective, even "private" experiences, but proposes that when speakers need to *talk* about their emotional lives, they use expressions referring to intersubjectively observable phenomena. The latter are chosen since they are either *analogous to* or *spatiotemporally associated with* the emotions in question. With time such expressions can become conventional, and in the process, shaped by cultural beliefs and discourse practices, as in the scenario envisioned by Zinken (2007). The predictions from such an interactionist position are therefore that there will be a degree of overlap between conventional motion-emotion metaphors in different languages, but that such overlap will be higher for more closely related languages and cultures (e.g. English and Swedish, and to some extent Bulgarian) than for more distant ones, such as Thai.

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2. Without disregarding the fact that analytic philosophy has aided in making our concepts clearer through an analysis of (ordinary) language, its practitioners have often been at error in extending the rigor of the method to a presumption of the rigidity of the "objects" of study. For example, just because we can define the concepts of mental states more precisely through semantic analysis does not mean that this analysis can substitute for the phenomena themselves, or worse: be read off as a map to the workings of the mind. Taking this for granted has given rise to misguided debates, such as that concerning the relation between "mental representations" and "propositional attitudes" (cf. Dennett 1981; Fodor 1987).

Furthermore, there should be a degree of "form-specificity", but not to the extent proposed by Zinken (2007).[3]

In the study described in Section 4, we test the predictions from these different (kinds of) theories on 115 motion-emotion metaphors from the four languages, derived above all through (near) native knowledge of the four languages, and a number of criteria specifying which expressions are to be considered, described in Section 3. But prior to this, we need to provide a conceptual analysis of the "source domain" MOTION. We do so, utilizing the analysis of *motion situations* offered by Zlatev, Blomberg, & David (2010). Such an exercise is necessary for two reasons. First, we will see that 'motion' is both pre-theoretically and theoretically an ambiguous term, and many misunderstandings derive from unclear or contradictory definitions of it (cf. Sheets-Johnstone, this volume). The second reason is that we require a conceptual framework in order to be able to perform the comparison between motion-emotion metaphors in the four languages in a systematic manner.

If motion is a complex concept, emotion is even more so, and we will not attempt any such general classification as with motion. Thus, only emotion metaphors derived from expressions referring to motion of the self, or of something considered a "part of the self", will be considered. But we will need to define more clearly what we mean by motion-emotion metaphors for the sake of the empirical study, and we do so in Section 3. In the final section, we summarize our findings and relate them to the more general questions concerning the relationships between motion and emotion, and between language and consciousness discussed above.

2.   What is motion?

2.1   Motion: Kinds and perspectives

A dictionary is always a good place to start when dealing with conceptual issues since, however imperfect, circular and variant dictionary definitions are, they give us at least a rough idea of the "common sense" meaning (or meanings) of the words used in a community. The more general, frequently used (and updated) dictionaries are, the better they are for this purpose, and with over 10 million searches daily, the free electronic dictionary of English available at *dictionary.com* is probably as good a place to start as

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3.   This is consistent with the general approach, if not with the specific analysis, of Kövecses (2000:14): "In this work I propose that it is necessary to go beyond both the view that the concept of anger is simply motivated by human physiology and the view that it is simply a social construction. I will suggest that it is both motivated by the human body and produced by a particular social and cultural environment." (emphasis in original)

any. Its first four (and only relevant for our purposes) senses of the noun 'motion' are the following:

a. *the action or process of moving or of changing place or position; movement.*
b. *power of movement, as of a living body.*
c. *the manner of moving the body in walking; gait.*
d. *a bodily movement or change of posture; gesture.*

It is notable that senses (b-d) directly refer to 'bodily movement', while the first is intended to be more general, defining motion as 'changing place or position', and offering 'movement' as a synonym. In earlier work (Sheets-Johnstone 1999), and particularly in her contribution to the present volume, Sheets-Johnstone strongly criticizes a definition of motion such as that in (a): "contrary to the dictionary defini- tion and to popular thought, movement is not 'a change of position'" (this volume: PAGE). Rather, on the basis of a phenomenological analysis of *bodily* movement from a first-person perspective, Sheets-Johnstone argues for a holistic, qualitative concept of movement:

> The qualitative structure of any movement generates a particular dynamic…it flows forth with a certain kinetic energy that may rise and fall in intensity, waxing and waning at the same time as spatializing and temporalizing itself in ways that contour the dynamic: making it explosive, attenuated, smooth, jagged, restrained, impulsive, magnified, narrowed and so on… (PAGE)

We would, however, suggest that Sheets-Johnstone's analysis attempts to capture what is common to senses (b-d) above, while the change-of-position sense (a) is not so much a matter of what she calls "received ignorance", but derives from a different per- spective on motion: a third-person, observational one. Zlatev, Blomberg and David (2010) also attempt to provide a phenomenologically informed definition of motion, but departing precisely from such a third-person perspective:

> From the perspective of the analysis of (the invariants of) experience – *phenomenology* (cf. Husserl 1999 [1907]), motion as such can be defined as the experience of *continuous change in the relative position of an object (the figure) against a background*, in contrast to stasis – where there is no such change – and in contrast to a *dis-continuous* change, as when a light suddenly lights up in position A, "disappears" and then appears in position B."
>
> <div align="right">(Zlatev et al. 2010: 393)</div>

By emphasizing the experience of the observer, this is no less experiential than the internal perspective argued for by Sheets-Johnstone. Such a perspective can also be applied to our own motion/movement, through the process of *perspective change*, well known in phenomenology (Zahavi 2001, 2003), and often mentioned

by cognitive linguists (Langacker 1987). Indeed, this is also acknowledged by Sheets-Johnstone (this volume):

> When we observe our own movement in this way, we precisely *perceive* it, perceive it as *a force or effort to put forth in time and in space*, a force or effort we are controlling or trying to control every step of the way. We do not *feel* our movement as an unfolding dynamic, a kinetic form-in the making…" (PAGE, emphasis in original)

There is a certain degree of similarity between this perspectival distinction (i.e. inner/outer motion) and a distinction made in many of the world's languages, observed by the French linguist Lucien Tesnière, as pointed out by Wälchli (2001: 298):

> Tesnière (1959: 307–310) introduced in passing the semantic distinction between movement ("mouvement") and displacement ("déplacement"). Movement is "inner" motion describing the kind of activity involved in motion (e.g. run, walk, jump, fly, swim). Displacement is "outer" motion and is concerned with how somebody or something changes its location in space, notably with respect to a given point of reference.

Tesnière noticed that Romance languages tend to express displacement ("outer" motion) with their verbs, while Germanic languages had more verbs expressing movement ("inner" motion). Talmy (1985, 2000) came to the same conclusion (apparently independently), but generalized it and proposed that all languages need to choose between one of the two strategies. Since displacement (or what Talmy called "translational motion") was argued to constitute the "frame" of a motion event, languages such as French were called "verb-framing", encoding "path" in verbs such as *monter* and *descendre*, while expressing "manner" adverbially (e.g. *à la nage, en nageant*). On the other hand are "satellite-framing" languages such as English, rich in verbs expressing movement/manner such as *rush*, while using particles e.g. *in, out of, up, down*… to express displacement/path. However, far from being a "binary typology", as Talmy claimed, it is becoming increasingly clear that all languages use a variety of means to express both the movement and the displacement aspects of motion (cf. Strömqvist & Verhoeven 2004; Levinson & Wilkins 2006). There is also experimental evidence that when observers categorize motion events spontaneously, both speakers of French (verb-framing) and Swedish (satellite-framing) may display a similar preference for movement/manner. However, if the two groups first *describe* what they see, a strong preference for displacement/path arises instead (cf. Zlatev, Blomberg & David 2010).

The point is that while languages may reflect the difference between *inner/self-contained motion/manner/movement*, on the one hand, and *outer/translational motion/path/displacement* on the other, and some constructions (and contexts) may focus more on one than the other, both perspectives on motion are relevant. Returning to phenomenology, we would venture to propose that this has to do with the fact that

a so-called motion event can be experienced both as "changing place or position" – when observed from a third-person perspective (in time and space), and as movement, when focusing on the "internal" qualitative dynamics. Of course, not all cases of observed motion involve the movement of an animate being (so-called "biological motion"), and even less so of a human being like oneself, but such motion is certainly a salient sub-type of motion in general. The terms 'outer' and 'inner' motion, used by Tesnière (cf. the quotation by Wälchli above) in fact correspond closely to the two ways of experiencing the lived body, as analyzed by Husserl: *Körper* (3rd person perspective) and *Leib* (1st person perspective). It has been argued persuasively that this duality of the body (corresponding in our proposal to the duality of motion) is essential for our self-consciousness, as well as for understanding others as being essentially "like us", while still remaining others (Husserl 1989 [1952]; Zahavi 2003). We will return to this point, important for the theme of the present volume.

2.2   A taxonony of motion situations

Given the distinctions made in the previous subsection, and acknowledging that we are taking above all an observational perspective, we can pursue the analysis of *motion situations* presented by Zlatev, Blomberg & David (2010). What we are presenting here is not a "conceptual analysis" based on the analysis of language, but an *eidetic analysis* in the sense of Husserl (1981 [1913]), and one that we would claim to be in principle independent of language. By this, we mean that the distinctions made should be perceivable and understandable by, in principle, anyone. As pointed out in the introduction, such an analysis is a key prerequisite for comparing how different languages and speakers express these situations linguistically. For convenience, we will illustrate the analysis with English examples.

We can depart from general definition of motion quoted from Zlatev, Blomberg and David (2010: 393) in the previous subsection: *continuous change in the relative position of an object (the figure) against a background.* As pointed out, this definition distinguishes motion from stasis, from change that does not involve motion, and from imaginary acts of Star Trek-like "teleportation". Also following our previous analysis, we can distinguish between *three different parameters* according to which motion situations can vary.

2.2.1   *Translocative vs. non-translocative motion*
Translocative motion involves the perception of continuous change of an object's average position according to a spatial frame of reference, while in *non-translocative* motion the figure maintains its average (perceived) position (as in the situation described by the sentence *He waved goodbye*). Here, the concept of spatial frame of reference (FoR) is central. It has been argued by Levinson (2003) that there are three universal frames

of reference, differentially prominent and linguistically expressed in the languages of the world. Levinson defines these for static relations and the horizontal plane. Here, we follow their generalizations to motion situations and the vertical plane, presented in earlier work (Zlatev 2005, 2007).

In the *Viewpoint-centered* FoR the perspective of the observer serves as a reference point, as in example (1). The second FoR is *Geocentric*, relying on geo-cardinal positions as reference points, as in (2–3). Finally, there is the *Object-centered* FoR, which can take as reference point either the position of the focused (and possibly moving) object, the *figure*, or that of an external object, a *landmark*, as in (4–5).[4]

(1)   *Turn right.*
      FoR: Viewpoint-centered

(2)   *Drive West.*
      FoR: Geocentric, Horizontal

(3)   *The balloon flew up in the air.*
      FoR: Geocentric, Vertical

(4)   The demonstration pushed forward.
      FoR: Object-centered, Figure

(5)   *The horse walked into the stable.*
      FoR: Object-centered, Landmark

A particular case of translocation can thus be specified according to one or more of these frames of reference, which provide the reference points allowing us (a) to judge whether the object/figure has indeed changed its average position and, if so (b) to determine its Path or Direction, as described in the following subsection.

2.2.2   *Bounded vs. unbounded motion*
The boundedness of a process undergone by the figure implies that it will inevitably (not just possibly or probably) lead to it undergoing a state-transition (cf. Vendler 1967). This means that in expressions of *bounded* motion, the figure will depart from a Source (as in 6), pass through a mid-point (7), or reach a Goal (as in 5) – or all three as in (8). In *unbounded* motion, this is not the case, and in principle the motion of the figure can go on indefinitely, as in the motion situations described above in

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4.   Note that our use of the term figure (deriving from Gestalt psychology) corresponds to that of Talmy (2000) and Levinson (2003), and the term trajector used by others (Lakoff 1987; Zlatev 1997). On the other hand, our use of the term landmark, is more specific than that used in much of the cognitive linguistic literature (Langacker 1987), in referring to an object, which is typically expressed through a noun phrase in language (cf. Zlatev 2005, 2007).

examples (1–4). In our analysis (and terminology) bounded translocative motion always involves the category Path, with one or more reference points being defined through the object-centred, landmark-defined FoR. In the case of unbounded translocative motion, we have rather the category Direction, specified either as a *vector* according to one of the other FoR conditions (as in 1–4), or as a *trajectory* that can take particular shapes such as AROUND or ALONG.

(6)   *I left the room.*
(7)   *He crossed the road.*
(8)   *The dog ran out of the barn across the field to the house.*

Note, furthermore, that the two parameters discussed so far are independent. We have seen how translocative situations can be either unbounded, e.g. (1–4) or bounded e.g. (5–8). Non-translocative motion can be either unbounded, as (9–10), or bounded – if the motion involved leads to a state-transition, as in (11) or the Swedish equivalent (12), which involves an extended use of the motion verb *gå* ('go').[5]

(9)   *John ran on the treadmill.*
(10)   *John ran in the park.*
(11)   *The vase broke (in pieces).*
(12)   *Vas-en   gick   sönder.*
       Vase-DEF go.PAST broken

2.2.3   *Self-motion vs. caused motion*
The final parameter concerns whether the figure is perceived to be moving under the influence of an external cause or not. The relevant notion of causality concerns the (naïve) human Lifeworld, and not our scientific understanding of the universe. Thus, the situation described in (13) is one of translocative "self-motion" even though the motion of the raindrops is caused by gravity. On the other hand, (14) clearly represents a (translocative, bounded) caused motion situation.

(13)   *Raindrops are falling on my head.*
(14)   *John kicked the ball over the fence.*

This parameter is likewise independent of the other two, so it is possible to have caused translocative, unbounded motion situations (15), caused non-translocative bounded

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5.   One might counter that Examples (11) and (12) do not really express, but presuppose motion, but since the event described will (typically) involve a perception of physical change (against a stable background) these sentences do count as representations of non-translocative bounded motion, in the broad sense used here.

ones (16), and caused non-translocative unbounded ones (17). The self-caused counterparts to these have already been illustrated.

(15)   *Peter pushed the car forward.*
(16)   *Susan tore up the letter.*
(17)   *Mary waved the flag.*

2.2.4   *Summary*

This analysis gives us the 8 types of motions situations in Table 1, illustrated with schematic representations in English.

Table 1. Illustration of the expression of 8 motion situation types in English; F = Figure, LM = Landmark, C = Cause, View-C = Viewpoint centred, Geo-C = Geocentric, Obj-C = Object centred Frame of Reference

	–CAUSED	+CAUSED
+TRANSLOC +BOUNDED	F goes to LM	C throws F into LM
+TRANSLOC –BOUNDED	F goes away (View-C) F goes up (Geo-C) F rolls forward (Obj-C)	C takes F away (View-C) C pushes F upward (Geo-C) C pushes F forward (Obj-C)
–TRANSLOC +BOUNDED	F breaks (up/down)	C breaks F (up/down)
–TRANSLOC –BOUNDED	F waves	C waves F

The tense in the examples in Table 1, the present simple, is only seldom used with any of these situation types (constructions) in English, but it is intentionally used in Table 1 in order to highlight the fact that the different situation types (i.e. specifying the values of the three parameters) can be expressed through one or more of the following means: (a) the lexical semantics of the verb, (b) verb-satellite (particles or affixes), (c) adpositions (prepositions or postpositions), (d) the clause-level grammatical construction (e.g. intransitive vs. transitive).

While tense and aspect markers can make the distinction between e.g. bounded and unbounded situations even clearer, i.e. by rendering the bounded ones in past simple tense as in (14), and the unbounded ones in present continuous as in (13), this is not necessary for making the parameter differentiations. Therefore, we would suggest that morphological aspect introduces an extra dimension of meaning over and above those expressed by (a)-(d), by allowing the profiling of motion situations (translocative or not) either as *ongoing processes* or as *completed events* – whether they are inherently bounded or not. Thus, (13) is also a representation of bounded motion (despite being ongoing), and (17) a representation of an unbounded motion (despite being "in the

past" and thus completed). Examples (18) and (19), taken from the British National Corpus (http://www.natcorp.ox.ac.uk/), show how *fall*, used in the past tense, can be used to express unbounded translocation, despite the fact that the events are being represented as taking place in the past, and thus as "completed".

(18)   *The wind blew and the snow fell, but it didn't matter.*
(19)   *... the devaluation of stock as component prices fell.*

3.   Emotion and motion-emotion metaphors

As with the term 'motion', we can start by considering what a dictionary definition of 'emotion' could tell us. The first three senses found in *dictionary.com* are:

a.   *an affective state of consciousness in which joy, sorrow, fear, hate, or the like, is experienced, as distinguished from cognitive and volitional states of consciousness.*
b.   *any of the feelings of joy, sorrow, fear, hate, love, etc.*
c.   *any strong agitation of the feelings actuated by experiencing love, hate, fear, etc. and usually accompanied by certain physiological changes, as increased heartbeat or respiration, and often overt manifestation, as crying or shaking.*

As we can see in (a) and (b), the popular conception does *not* distinguish 'emotion' from 'feeling' along lines such as those of Damasio (2000), where the first term is reserved for a physiological reaction, and the second for the conscious perception of this reaction. Indeed, 'physiological changes' and 'overt manifestation', mentioned in (c) are regarded as occurring "usually" along with emotions, but not essentially. This common sense view may be criticized for being "dualistic", and philosophers such as Wittgenstein have argued that it is mistaken. "Inner" and "outer" manifestations of emotion are intermingled in experience, and we do not use the second to infer the presence of the first in others, but perceive others' emotions "directly", as emphasized by phenomenologists, as well as Wittgenstein (Zlatev et al. 2008; Racine et al. this volume):

> We see emotion." – As opposed to what? – We do not see facial contortions and *make the inference* that he is feeling joy, grief, boredom. We describe a face immediately as sad, radiant, bored, even when we are unable to give any other description of the features.   (Wittgenstein 1980: #570, emphasis original)

However, we are also capable of making the distinction between the feeling itself, and its "expression". Experientially (and conceptually) when I feel angry from say, someone not replying to my greeting at the department in the morning, what I experience is

not in any obvious way 'increased heartbeat and respiration' but the emotion/feeling of anger, or at least irritation, itself. At the same time, I can notice such concomitant bodily processes, in myself as well as others, and refer to these, "metonymically" when I need to talk about my (or others') emotions (cf. Kövecses 1990, 2000).

We can also notice that in (a), and implicitly in (b), emotion is regarded as a "state", while (c) is closest to the etymological sense of emotion mentioned in Section 1, i.e. as a *process*, a 'strong agitation of the feelings'. This ambiguity (state vs. process) of the concept of emotion is apparent both in experience and in language. Certain emotions and emotion expressions appear more state-like: *happy, sad, calm...* Others like *agitate, calm down, relax...* are more process-like. Arguably, it is the latter that are more focal in consciousness: we typically notice the changes between intermittent states, not the states themselves – analogously to the way we tend to pay attention to motion rather than stasis in the external world. We will not try to make any strong claims for this here, but since it is motion-emotion metaphors that we investigate, we will pursue the (c) sense of emotion in the definition. To summarize, we will regard emotions as *changes in affective consciousness*.

In speaking of such changes, the self, or some relevant "part of the self" can be described *as if* being set in motion, i.e. as the *figure* in the expression of motion situations, such as those given in Section 2. The difference is that in examples such as (20–22), where the metaphorically moving figure is highlighted, there is at best a kind of "metaphorical motion", rather than actual perceived motion (from a third-person perspective).

(20)   ***My spirits*** *are rising.*
(21)   ***My mood*** *is sinking.*
(22)   ***I*** *was attracted by her smile.*

These are the type of expressions that we compare cross-linguistically in Section 4, and refer to as motion-emotion metaphors. We can set up the following set of criteria, some of which were mentioned already, for singling them out in the languages under study:

a.   If the figure-expression refers to the self (or part of it), there is no perceived motion in the "physical world".
b.   If the figure-expression (and the landmark-expression if necessary) is substituted for an expression referring to a physical object, the sentence would be a description of a motion situation (as defined in Section 2).
c.   Motion is expressed by the verb-root (also), and not only in a verb-satellite (prefix or particle).
d.   Both the motion and emotion interpretations (depending on the nature of the figure-expression) are present in the language synchronically (currently).

According to criteria (a) and (b), examples (20–22) would qualify as motion-emotion metaphors, since examples (23–25) are indeed descriptions of motion situations, while there is no actual motion involved in the first set.

(23)   *The moon is rising.*
(24)   *The boat is sinking.*
(25)   *The piece* of metal was attracted by the magnet.

On the other hand, (26) is not a motion-emotion metaphor since apart from concerning emotion it also describes actual (non-translocative) motion. Example (27) is disqualified for another reason: it concerns emotion, involves metaphorical motion, but what is "moving" is not the self (or part of it), but the personification of the emotion itself, which is presented as if external to the self. The motivation for such a metaphor cannot obviously be in perceived motion of the self, or part of the self, and therefore this and similar cases of "external" metaphorical motion fall outside our analysis.

To the extent that there is any metaphorical emotion in (28) and (29) at all, it is connected to the English satellite *up* and the Bulgarian *do-* ('by', 'to'), and not to the verb-root, and thus such examples are excluded by criterion (c). Furthermore, any possible motion interpretation in the Bulgarian example (29) would only be due to the etymology of *do-volen* ('pleased'): *do* ('to') + *volen* ('free'), and thus criterion (d) comes into play as well.

(26)   *She trembled with fear.*
(27)   *He was gripped by fear.*
(28)   *Mary was worked up.*
(29)   *Ivan   e   do-volen*
        Ivan   Cop.3p.SING   pleased.SING.MASC
        'Ivan was pleased.'

These criteria were essential for being able to perform the comparison between the motion-emotion metaphors in the four different languages.

4.   A cross-linguistic study of motion-emotion metaphors

4.1   Method and analysis

Initially, we identified as many motion-emotion metaphors as possible, primarily on the basis of our native (or near-native) speaker intuitions for Swedish, English and Bulgarian, and those of a meta-linguistically aware informant for Thai. The method was basically to consider all possible expressions for emotion in the four languages, and then to eliminate those that did not fulfill the criteria described in Section 3. For Thai, extensive use was made of a compilation of "over 1,000 phrases which are connected

with the heart" (Moore 1998:15): the word *caj* ('heart, mind, spirit…'). Conversely, we made concordances of motion verbs in two corpora[6], looking for uses extended to emotion.

In the next step, we grouped individual motion-emotion expressions into *types*. What characterized each type were differences in (a) the lexical semantics of the verb, (b) verb-satellite (particles or affixes), (c) adpositions, (d) the grammatical construction (e.g. intransitive vs. transitive) – the four means of expressing different motion situations presented in section 2.2.4. Specific sentences instantiating these could vary depending on the figure and landmark expressions and (in most cases) tense-aspect forms. Strongly idiomaticized expressions such as *fall in love* were not considered. The motion-emotion metaphor types were then classified according to the taxonomy of motion situations presented in Section 2, using only one situation type per metaphor (type), based on what appeared to be the basic (most unmarked) form of the metaphor.

This three-step procedure gave rise to 38 motion-emotion metaphors for English, 27 for Swedish, 19 for Bulgarian (though see below) and 31 for Thai, a total of 115. In comparing the motion-emotion metaphors across the languages, we paid special attention to whether a given motion-emotion metaphor had a "near-equivalent" in one or more of the other languages, based primarily on overlap of the literal (motion), rather than the metaphorical (emotion) senses.

4.2   Results

In English we encountered the largest number of motion-emotion metaphors, 38, with the majority of these having corresponding expressions in one or more of the other languages. We found predominance for Caused motion expressions (25 vs. 13). In most cases (rendered in the simple present tense in Table 2) the metaphors were not limited to a specific form of the verb, but in several cases, they were limited to past participles.

The following 12 motion-emotion metaphors were found to be specific to English. Notably, only those exemplified in (30)–(33) express metaphorical translocative motion, while the others are non-translocative. The examples in (30–32) and (35) involve metaphorical self-motion, while the others imply caused motion, commonly (though not necessarily) expressed using a passive construction. Example (34) is intermediate: the figure is expressed by the grammatical subject, and "breaking down" can be thought to occur for internal reasons, but typically, as in the example, an external cause is presumed. In terms of boundedness, half of the expressions involve a (clear) state-transition, and half do not.

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6.   British National Corpus, http://www.natcorp.ox.ac.uk/ and Thai Concordance, www.arts. chula.ac.th/~ling/ThaiConc/

Table 2. Motion-emotion metaphors in English, using the present simple tense (when the metaphor is not form-specific) and past participle (PART) when confined to a specific verbal form. F = Figure, LM = Landmark, C = Cause, (S) = corresponding expression in Swedish, (B) = corresponding expression in Bulgarian, (T) = corresponding expression in Thai, * = lack of corresponding expression (with example in the main text)

	Self motion	Caused motion
+Transloc/+Bound	F falls into LM * F plunges into LM *	C moved F to LM (S) C drives F to LM (S, B) C brings F to LM (B)
+Transloc/–Bound	F soars * F rises (S, B, T) F sinks (S) F creeps F (S) F drops (S, B, T)	F is downcast * – PART C pulls F (S, B) C attracts F (S, B) C repels F (S, B) F is uplifted (S, B) – PART
–Transloc/+Bound	F breaks down * F breaks (S) F collapses (S) F explodes (S)	C puts F off * C throws F off F's feet * C upsets F * C shatters F (S, B, T) C knocks F off F's feet (S) C knocks F out (S) C floors F (S) C tears F apart (B)
–Transloc/-Bound	F flutters * F swells (S)	C presses F * F is unperturbed * – PART C makes F shrink * C moves F (S) C shakes F (S, B, T) C stirs F (S, B, T) C agitates F (S) C calms F (S, B) C relaxes F (B, T)
Total	13 (5*) (8S) (2B) (2T)	25 (7*) (15S) (12B) (4T)

(30)   *I fell into a state of depression.*   (–Caused, +Trans, +Bound)

(31)   *He plunged into despair.*   (–Caused, +Trans, +Bound)

(32)   *My spirit soared.*   (–Caused, +Trans, –Bound)

(33)   *She was sad and downcast at the party.*   (+Caused, +Trans, –Bound)

(34)   *I broke down under the pressure.*   (–/+Caused, -Trans, +Bound)

(35)   *My heart fluttered.*   (–Caused, –Trans, –Bound)

(36)   *His bad manners put me off.*   (+Caused, –Trans, +Bound)

(37)   *Their threats made me shrink.*   (+Caused, –Trans, –Bound)

(38)   *I was thrown off my feet.*   (+Caused, –Trans, +Bound)

(39)   *She was upset by his rudeness.*   (+Caused, –Trans, +Bound)

(40)   *I was pressed by the circumstances.*   (+Caused, –Trans, –Bound)

(41)   *My uncle looked at me, unperturbed.*   (+Caused, –Trans, –Bound)

Of the 27 motion-emotion metaphors found in Swedish and shown in Table 3 again there was a preference for Caused motion expressions. The majority of the metaphors were not confined to a particular verbal form, but a few "unbounded" ones required the use of a present participle. Only five, exemplified in (42–46) were found to be specific for the language.

Table 3. Motion-emotion metaphors in Swedish, using the present tense, when the metaphor is not form-specific, or else a present participle (PART). F = Figure, LM = Landmark, C = Cause, (E) = corresponding expression in English, (B) = corresponding expression in Bulgarian, (T) = corresponding expression in Thai, * = lack of corresponding expression (with example in the main text)

	Self motion	English gloss	Caused motion	English gloss
+Transloc/+Bound	–		C kastar ner F i LM *	*throws down in*
			C rör F till tårar (E)	*moves to tears*
			C driver F till vansinne (E, B)	*drives to madness*
+Transloc/–Bound	F kryper (E)	*creeps*	C trycker ner F *	*pushes down*
	F stiger (E, B, T)		C attraherar F (E, B)	*attracts*
	F sjunker (E, B, T)	*rises*	C är tilldragande (E, B) – PART	*is attractive*
		sinks	C stöter bort F (E, B)	*pushes away*
			C är frånstötande (E, B) – PART	*is repelling*
			C är upplyftande (E, B) – PART	*is uplifting*
–Transloc/+Bound	F bryter ihop/samman*	*breaks down* ('*together*')	C golvar F	*knocks down* ('*floors*')
	F rasar (E)		C krossar F (E, B, T)	*crushes*
	F brister (E)	*rages* ('*collapses*')	C knäcker F (B, T)	*breaks apart*
	F flyger i luften (E)	*bursts explodes* ('*flies up in the air*')	C knockar F (E)	*knocks down*
–Transloc/–Bound	F svävar * F svajar *	*hovers*	C (om)skakar F (E, B, T)	*shakes (up)*
	F sväller (E)	*swings*	C lugnar (ner) F (E, B)	*calms (down)*
		swells	C upprör F (E, B, T)	*agitates* ('*stirs up*')
			C rör F (E)	*moves*
Total	10		17	
	(3*) (7E) (2B) (2T)		(2*) (14E) (11B) (4T)	

(42)　*Han* **bröt**　　***ihop***　　*under*　*begravning-en*
　　　He　broke.ᴘᴀꜱᴛ　together　during　funeral-ᴅᴇꜰ
　　　'He broke down during the funeral.' *(–Caused, –Trans, +Bound)*

(43)　*Hon* **sväv-ar**　　*av*　*lycka*
　　　*She hover-*ᴘʀᴇꜱ *of　happiness*
　　　'She is floating in happiness.' *(–Caused, –Trans, –Bound)*

(44) *Hans humör **svaj-ar** på ett oberäkneligt sätt*
He   mood   swing-PRES on a   unpredictable *way*
'His mood changes in an unpredictable manner.'*(–Caused, –Trans, –Bound)*

(45) *Han **kasta-de-s**   ner i en djup depression*
He   throw-PAST-PASSIVE down in a deep depression
'He was cast into deep depression.' *(+Caused, +Trans, +Bound)*

(46) *Jag **tryck-te-s**   **ner** av omständigheter-na*
I   press-PAST-PASSIVE down by circumstances-DEF
'I was burdened by the circumstances.' *(+Caused, –Trans, –Bound)*

In Bulgarian, we similarly found that only 5 of the identified 19 motion-emotion meta-phors, shown in (47–51), lack corresponding expression in the other three languages. Only the expression in (47), shown with PAST in Table 4, is limited to a specific verb form.

Table 4. Motion-emotion metaphors in Bulgarian, using the present tense, when the metaphor is not form-specific, and past tense (PAST) otherwise. F = Figure, LM = Landmark, C = Cause, (E) = corresponding expression in English, (S) = corresponding expression in Swedish, (T) = corresponding expression in Thai, * = lack of corresponding expression (with example in the main text)

	Self motion	English gloss	Caused motion	English gloss
+Transloc/+Bound	F pre-mina *	*Passed*	C do-karva F do (E, S) C do-vežda F do (E)	*drives to* *brings to*
+Transloc/–Bound	F idva * F pada (E, S, T)	*comes* *falls*	C pri-vlicha F (E, S) C ot-blăskva F (E, S) C po-vdiga F (E, S, T)	*attracts ('drags to')* *repels ('push from')* *raises ('IMPR-raises')*
–Transloc/+Bound	iz-buhva (E,S) F se V ←	*expodes*	C raz-kăsva F (E) C raz-vălnuva F * - PAST C raz-biva F (E, S, T) C pre-chupva F (S, T) C raz-tărsva F (E, S, T)	*tear apart ('PRF-tear') moved ('PRF-ripples') shatters ('PRF-hit') breaks apart shakes ('PRF-shakes')*
–Transloc/–Bound	F se V ←		C po-bărkva F * C pod-tisva F * C u-bărkva F (E, S, T) C u-spokojava F (E, S) C ot-pusva F (E, T)	*makes crazy ('stirs on') suppresses ('press under') confuses ('stirs in') calms ('calms in') relaxes ('let go from')*
Total	4 (2*) (2E) (2S) (1T)		15 (3*) (11 E) (9 S) (6 T)	

As with English and Swedish, Bulgarian seems to show a dominance for Caused motion, but here there is a complication: each one of the 10 non-translocative, caused motion metaphors can also be used to describe metaphorical self-motion of the figure (F), using the reflexive construction with the particle *se* (see Table 4). In English and Swedish, the corresponding expressions can also apply to the figure, without mentioning the Cause, but in that case one would use a past participle (e.g. C presses F → F is pressed), thus implying external causation. In Bulgarian, on the other hand, the reflexive construction implies self-causation. If these "extra" 10 self-motion expressions were considered, there would be a near complete balance between self-motion and caused-motion expressions.

(47) ***Pre-mina***   *mi*
      PRF-pass.PAST   1P.SING.DAT
      'Passed over for me.' ≈ I feel better *(–Caused, +Trans, +Bound)*

(48) *Natroenie-to*   ***idva-še***
      mood-DEF   come-PAST.PROG
      'The mood was coming.' *(–Caused, +Trans, –Bound)*

(49) *Toj me*   ***po-bǎrvka***
      He   1P.SING.ACC   IMP-stir.PRES
      'He stirs me on.' ≈ He drives me crazy. *(+Caused, –Trans, –Bound)*

(50) *Pesen-ta*   *me*   ***raz-vǎlnuva***
      Song-DEF   1P.SING.ACC   PRF-ripple.PAST
      'The song rippled me.' ≈ moved me *(+Caused, +Trans, –Bound)*

(51) *Samota-ta*   *go*   *pod- tisna*
      Loneliness-DEF   3P.MASC.ACC   under-press.PAST
      'Loneliness depressed him.'*(–Caused, –Trans, –Bound)*

In Thai, as shown in Table 5, the picture is markedly different from that of the other three languages. First of all, we can notice that most of the expressions appear in the category Self-motion. This has to do with the fact that the metaphors combine intransitive or transitive motion verbs and the word *caj* ('heart', 'mind'), which constitutes an important cultural concept in Thai. While related to the word for the biological heart, *hûa-caj* (literally 'head heart'), it denotes not a body-part, but something like the centre of emotional life itself. Thus, the composite expressions can be used intransitively, for example applying to oneself. Therefore, all motion-emotion metaphors in (52–68) may constitute complete sentences, with an elliptic first person pronoun. All of these composite expressions also unambiguously refer to emotion; only without *caj* can the verbs be used to describe corresponding motion situations.

   The second major difference is that only a handful of examples have "near equivalents" in the other languages – the only ones given as glosses in Table 5. The

overwhelming majority, listed below, appear clearly "exotic" from a Western per-spective. Let us consider these by motion situation type. In each of the examples we give a literal translation and approximate English gloss. In some cases (59–61), the glosses are identical, and it would take considerable cultural knowledge to under-stand the appropriate uses of the different expressions (cf. Moore 1998).

Table 5. Motion-emotion metaphors in Thai, all of which involve the word *caj* ('heart', 'mind'). F = Figure, LM = Landmark, C = Cause, (E) = corresponding expression in English, (S) = corresponding expression in Swedish, (B) = corresponding expression in Bulgarian, * = lack of corresponding expression (with example in the main text)

	Self motion	English gloss	Caused motion	English gloss
+Transloc/+Bound	F thǔŋ-caj * F klàp-caj * F caj-hǎaj * F aw-caj-ɔ̀ɔk-hàaŋ *		C sàj-caj F *	
+Transloc/–Bound	F tòk-caj (E, S, B) F chuu-caj (E, S, B)	*frightened* (*'fall heart'*) uplifted (*'lift up heart'*)	C taam-caj F * C aw-caj F *	
–Transloc/+Bound	F thalǎm-caj * F sàdùt-caj * F tàt-caj * F tam-caj * F bàat-caj * F thîm-teeŋ-caj * F ráŋáp-caj * F thɔ̀ɔt-caj * F caj-hǎaj-caj-khwâm* F caj-sàlǎaj (E, S, B) F hàk-caj (S, B)	*devastated* (*'heart shatter'*) *restrained* (*'break in two heart'*)	C phûut dâj cɔ̀-caj F * C khàt-caj F *	
–Transloc/–Bound	F caj-têen * F caj-têen-mâj-pen-jaŋwà* F waaŋ-caj * F plɔ̀ɔj-caj * F sàtuan-caj (E, S, B) F jɔ̀ɔm-caj (E, B)	*deeply hurt* (*'shake heart'*) *relieved* ('relax heart')	C chák-cuuŋ-caj F * C klɔ̀ɔm-caj F * C kuan-caj F (E, B, S)	*disturb* (*'stir heart'*)
Total	23 (17*) (5 E) (5 S) (6 B)		8 (7*) (1 E) (1 S) (1 B)	

Examples (52–55) would, in the source domain of the metaphor, express self-caused, bounded translocative motion.

(52) *thǔŋ-caj*
reach heart ≈ feel gratified

(53) *klàp-caj*
return heart ≈ feel repentant

(54) *caj-hǎaj*
heart disappear ≈ feel very surprised

(55) *aw-caj-ɔɔk-hàaŋ*
take heart leave far ≈ feel that you are betraying

A much larger number of metaphors involve actions that imply non-translocative motion. Those given in (56)–(64) concern actions with a state-transition, i.e. they are bounded. The examples in (57) and (72) may perhaps be considered metaphors for cognition rather than emotion, but especially in Thai the two phenomena are extremely difficult to separate, as seen by the glosses 'heart' and 'mind' for *caj*.[7]

(56) *thalǎm-caj*
trip heart ≈ feel mistaken in love

(57) *sàdùt-caj*
trip heart ≈ suddenly realize

(58) *tàt-caj*
cut heart ≈ feel discouraged

(59) *tam-caj*
pierce heart ≈ feel betrayed

(60) *bàat-caj*
cut heart ≈ feel betrayed

(61) *thîm-teeŋ-caj*
stab-wound heart ≈ feel betrayed

(62) *ráŋáp-caj*
stop heart ≈ calm down

(63) *thɔɔt-caj*
take-off heart ≈ give up effort to achieve something

(64) *F caj-hǎaj-caj-khwâm*
heart disappear, heart overturn ≈ feel shocked

Examples (65)–(68) may be said to involve metaphorical unbounded, non-translocative motion.

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7. When speaking English, and saying something about "my mind", Thai speakers commonly point to their heart (observation made by the first author, during three years of living in Thailand).

(65) *caj-tên*
      heart dance ≈ feel surprised

(66) *caj-tên-mâj-pen-jaŋwà*
      heart dancing jerkily ≈ feel one's heart to flutter

(67) *waaŋ-caj*
      put down heart ≈ feel trustful (of your partner)

(68) *plɔɔj-caj*
      let-go heart ≈ be in a state of daydreaming

The transitive, "caused-motion" expressions concern actions that are performed with respect to someone else. The "heart" that is being moved (or acted upon) is metaphorically that of another. Thus, these can be said to be "second-person" emotion expressions, relying on empathy with the metaphorical figure, the experiencer (E). Examples (69)–(71) would express literal translocation in the absence of *caj*, with the first one bounded, and the other two unbounded.

(69) *sàj-caj E*
      put in (someone's) heart ≈ take care of someone

(70) *taam-caj* E
      follow (someone's) heart ≈ please someone

(71) *aw-caj* E
      carry (someone's) heart ≈ please someone

The final Thai motion-emotion metaphors (without corresponding expressions in the other three languages) build on non-translocative motion, with the first two bounded (72–73), and the last two unbounded (74–75).

(72) *phûut dâj cɔ̀-caj E*
      make a hole (in someone's) heart ≈ reveal something unpleasant about someone

(73) *khàt-caj* E
      cut (someone's) heart ≈ irritate someone

(74) *chák-cuuŋ-caj E*
      drag (someone's) heart ≈ persuade someone

(75) *klɔɔm-caj E*
      cradle (someone's) heart ≈ soothe someone in distress

4.3   Discussion

The presentation of the motion-emotion metaphors attested in the four individual languages showed both similarities and differences. We can now consider these findings in the light of the three theoretical positions on the relation between metaphor and subjective experience, outlined in the introduction: (a) conceptual

universalism, (b) strong language dependence/specificity and (c) consciousness-language interactionism.

As a reminder, the prediction from (a) was that there would be extensive overlap between the metaphors in the four languages. In fact, a degree of overlap was indeed found, though relatively limited. Table 6 shows correspondences between five motion-emotion metaphors in the four languages, i.e. involving 20 of the 115 expressions. Interestingly, these are fairly systematic: MOVE UP and MOVE DOWN are converse motions, and the target emotions can be subsumed under the headings POSITIVE and NEGATIVE, respectively, which are also "antonymic". The (non-translocative) motions in the other three cases form a sort of hierarchy of intensity: BREAK UP > SHAKE > STIR and it seems that the emotions these map to do so likewise.[8]

Table 6. Cross-linguistic metaphor types attested with expressions in all four languages

Metaphor type	English	Swedish	Bulgarian	Thai
MOVE DOWN → NEGATIVE	F drops *F sinks*	*F sjunker*	*F pada*	*F tòk-caj*
MOVE UP → POSITIVE	*F is rising*	*F stiger*	*C po-vdiga F*	*F chuu-caj*
BREAK UP → VERY STRONG NEG. EMOTION	*C shatters F*	*C krossar F*	*C raz-biva F*	*F caj-sàlăaj*
SHAKE → STRONG NEG. EMOTION	*C shakes F*	*C (om)skakar F*	*C raz-tărsva F*	*F sàtuan-caj*
STIR → NEG. EMOTION	*C stirs F*	*C upprör F*	*C u-bărkva F*	*C kuan-caj F*

At the same time, we should notice that the metaphors in Table 6 do not correspond to one another completely, and are only *near* equivalents. English *sinks* and Swedish *sjunker* ('sink') imply downward movement through a liquid medium, while the other three verbs imply downward movement through air. *tòk-caj* in Thai denotes feelings of intense surprise, rather than emotional discouragement, "down-heartedness" as in the other three languages. The Bulgarian metaphor for MOVE UP → POSITIVE, *po-vdiga* ('raise') is alone in referring to caused, rather than

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8. A generalization, in the style of CMT, could perhaps be made for all these cases. The neutral state of the self, in both physical and emotional experience is that of BALANCE (which of course could be differently valued in different cultures). Various forces may dislocate the self from this position (shake, stir) or even threaten its integrity (break). The negative character of downward motion can be associated with the loss of balance, as when one is overcome by the forces of gravity. What makes upward motion positive (rise) is the experience of being liberated from those forces, of increased mobility thus a sense of "freedom".

self-motion motion. Finally, the Bulgarian expression listed in the last row, *u-bărkva* is less clearly related to emotion than the corresponding ones in the other languages since it describes the "state of mind" of F in general.

Most problematic for conceptual universalism, however, is that a total of 46 metaphors (12 for English, 5 for Swedish, 5 for Bulgarian and 24 for Thai) were found to be language-specific. This, along with a certain degree of form-specificity, could be taken rather in support of language dependence. In the case of Thai, where we cannot use the criterion of a "frozen" tense-aspect form to determine form-specificity (i.e. strong idiomaticity), since the language lacks morphological tense and aspect, we can nevertheless attribute a high degree of conventionality to all the motion-emotion metaphors attested in the language, due to the obligatory conjunction of the word *caj* with the respective verbs and phrases.

At the same time, none of the 46 language-specific (and in a few cases form-specific) expressions can be properly called "arbitrary", since in all cases a relation of similarity (or contiguity) could be found with corresponding motion situations. Otherwise the examples would not have been analyzable according to the framework presented in Section 2, Table 1, into the categories in Tables 2–5. The glosses given for the 24 Thai expressions lacking "near equivalents" in the other three languages (52–75) may give the impression that some of these metaphors are "exotic" (from a European perspective), but their motivation is certainly not incomprehensible.

So despite the considerable number of "language-specific" motion-emotion metaphors in the four languages, the overall impression is that there is considerable overlap between the languages – even between the genetically and geographically most distant ones (see Figure 1 below). And conversely, while the attested language-specificity constitutes negative evidence for conceptual universalism, the cross-linguistic correspondences, and systematicity shown in Table 6 are problematic for the thesis of (strong) language-dependence.

On the other hand, the findings can be naturally interpreted as supporting a dialectical theory of type (c), consciousness-language interactionism. It should be remembered that it also made the prediction that the degree of overlap between the metaphors in the four languages will correspond to the degree to which the languages/cultures are related: English and Swedish are most similar, both genetically and culturally. Bulgarian, a Slavonic language from South-Eastern Europe is more distant, while Thai is clearly the "outlier" in the group.

As shown in Table 7, this prediction seems to be confirmed. 23 of the English metaphors were also represented in Swedish, while only 14 had a "near equivalent" in Bulgarian and 6 in Thai – despite that Thai had nearly as many motion-emotion metaphors as English. From the perspective of Swedish the situation was similar – extensive overlap with English (21 of 27 metaphors), less so with Bulgarian (11), and much less with Thai (6). Bulgarian overlapped nearly identically with English (13) and Swedish (11), with about two-thirds of its motion-emotion metaphors, and less so with Thai

(7). The degree with which Thai motion-emotion metaphors had counterparts in the other languages was relatively small, and nearly identical for all three languages.

Table 7. Degree of overlap between the motion-emotion metaphors in the four languages

Language-to-language overlap	*English*	*Swedish*	*Bulgarian*	*Thai*
English	38 (12*)	23	14	6
Swedish	21	27 (5*)	11	6
Bulgarian	13	11	19 (5*)	7
Thai	6	6	7	31 (24*)

If we disregard the fact that relationship "overlap with language X" was not completely one-to-one – since several near synonymous expressions in one language can correspond to a single one in another – we can illustrate this degree of overlap between the languages as in the (approximate) representation in Figure 1.
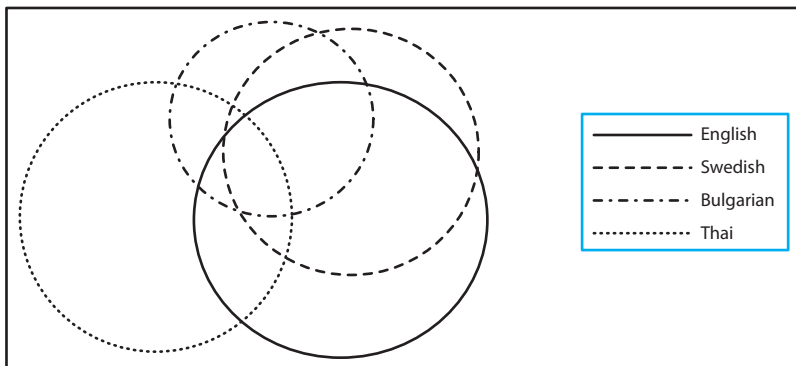
Figure 1. Graphical representation of the overlap between motion-emotion metaphors in the four languages

In fact, Thai overlaps less with the other three languages than what the tables and Figure 1 show, since similarity in the "source domain" meaning of several of the Thai metaphors listed as counterparts to those in the other languages were not matched with similarities in their metaphorical meanings. As with *tòk-caj*, mentioned above, *hàk-caj* ("break heart") has a different conventional emotional meaning compared to the other three languages (to restrain oneself).

5.   Conclusions

In this chapter, we relied on cross-linguistic evidence in order to broach a difficult topic: the relationship between subjective experience and metaphorical expressions,

focusing on metaphors connecting the "domains" of motion and emotion. Departing from Wittgenstein's so-called private language argument, we pointed out that while the meaning of linguistic expressions cannot be reduced to subjective experience, the latter may, and indeed should be relevant for many expressions denoting states and processes of consciousness. Public criteria for the correct use of expressions provide "half the story". While "an 'inner process' stands in need of outward criteria" (Wittgenstein 1953: #580) to determine the conditions for appropriate language use, we could reverse this and say that "outward criteria stand in need of an inner process", or else words denoting mental phenomena would be gutted of their experiential content, and their meaning reduced to use. Linguistic expressions of emotions appear as a prime "test case" for investigating this dialectics of the "inner" and the "outer".

The study of motion-emotion metaphors in four differentially related languages (and cultures) here described gives support for a view according to which personal, subjective experience and language (use) closely interact in the formation of metaphorical expressions used to talk about, and at least to some extent think about, emotions. In brief, this position implies a scenario on the "evolution" of emotion metaphors such as the following.

People can and do experience emotions (or feelings) of various sorts even independently of language, but to be able to talk about them, these less "tangible" experiences must be expressed by words whose meaning is public. The most natural way to do so is to use expressions which refer to publically observable phenomena, but which are in some ways either *similar to* (analogy, iconicity) or *spatiotemporally related to* (contiguity, indexicality) the subjective experiences. Expressions denoting motion situations are convenient for this purpose for two reasons, corresponding to the two kinds of motivation. First, due to their dynamic character, motion situations may be found to be (phenomenologically) similar to emotions (i.e. changes in affective consciousness). Second, due to the close association between feelings and co-occurring bodily processes and sensations, the latter become "metonymic" or "indexical" of the first. Hence, in historical time some speakers could creatively use expressions referring to such analogous or contiguous (motion) events in the "external world" in order to describe their "inner worlds", and hearers could understand them, due to the motivated nature of the expressions. With cultural transmission, both within and between generations, such expressions become conventional (though still motivated) and thus convenient language – and culture-specific "moulds" for construing emotional experience.

The empirical findings and the theoretical position of this chapter are in harmony with the theme of the present volume – the fundamental roles of motion and emotion for "consciousness, intersubjectivity, and language". First of all, emotion and (the perception of) motion were analyzed as central aspects of (human) consciousness. Concerning intersubjectvity, however, a qualification to what has been said so far needs to be made. In referring repeatedly to "subjective experience" we may have

given the impression of emotions as fundamentally private phenomena, at least prior to their expression in language. While with Husserl, and phenomenology in general we would insist on the irreducible character of consciousness, (human) subjectivity is tightly connected to inter-subjectivity. Thus, we would maintain that our first-person experience of emotions (i.e. feelings) is indeed basic, but it is not radically "private" in the sense that Wittgenstein criticized, since our emotional capacities have evolved and develop through communal life. Bodily expressions of emotion such as postures, cries and facial expressions are intrinsically public, and through empathy, we are literally capable of "sharing into" the emotions of others (Gallagher, this volume). As pointed out in Section 2, the dual nature of the body – on the one hand perceived from the outside, and on the other, as a lived body, *Leib*, experienced subjectively, is probably fundamental for achieving this. However, this is done without thereby abolishing the distinction between self and other. As stated clearly by Zahavi (2003: 114): "To demand more, to claim that I only experience an Other the moment I gain access to the first-person givenness of the Other's experiences is a fundamental misunderstanding that far from respecting the transcendence of the other … seeks to abolish it."

With language, however, the individual differences in subjectivity become less relevant than the collectivity of the common senses (meanings). The motion-emotion metaphors such as *my heart dropped* discussed in this chapter are of this kind: conventional, without being arbitrary, since they are doubly grounded in both (inter)subjective emotional experience and in conditions for appropriate usage.

Acknowledgements

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