Motion-emotion metaphors in English, Swedish and Spanish:

A cross-linguistic comparison

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Abstract

In cognitive linguistics there are three prevalent theoretical perspectives on metaphor: (universal) conceptual metaphors, discourse metaphors and language-consciousness interactionism. This thesis looked for evidence of support for these positions by conducting an empirical study comparing motion-emotion metaphors in English, Spanish and Swedish, focusing on the source domain MOTION. Following the approach of an earlier study by Zlatev, Blomberg and Magnusson (2012) this study used a more systematic method with a clearer procedure improving comparison between the languages by using a Meta-Language Scheme, as well as attesting the metaphors in corpora and dictionaries. The results showed some support for all three perspectives. A considerable degree of similarities supported the universalism of conceptual metaphor theory. On the other hand, clear differences supported a more culturist approach to metaphor and emotion and thus a discourse perspective on metaphor. Weighing together all results gave support for the interactionist view. These varying views can be brought together applying a consciousness-language-culture interactionist model showing a way to resolve opposite views on metaphor and language and rather pointing to their mutual interdependence and influence.

Key words: metaphor, motion, emotion, English, Swedish, Spanish, interactionism, integral linguistics, conceptual metaphor, discourse metaphor.

Resumen

En lingüística cognitiva hay tres perspectivas teoréticas predominantes acerca de metáfora: (universal) metáforas conceptuales, metáforas de discurso y lenguaje-consciencia interaccionismo. Esta tesina buscaba evidencia de apoyo para estas posiciones haciendo un estudio empírico comparando metáforas de movimiento-emoción en Ingles, Sueco y Español. Siguiendo las ideas del estudio de Zlatev, Blomberg y Magnusson (2012) este estudio usaba un método más sistemático con un procedimiento más claro mejorando la comparación entre los idiomas, usando un esquema de Meta-lenguaje, así mismo como atestiguando las metáforas en corpus y diccionarios. Los resultados mostraron cierto apoyo para las tres perspectivas. Un alto grado de semejanzas apoyaba el universalismo de la teoría de metáfora conceptual. Al otro lado las diferencias claras apoyaban un acercamiento más culturista a metáforas y emoción y entonces la perspectiva de metáforas de discurso. Combinando todos los resultados apoyaba la perspectiva interaccionista. Estas perspectivas varias pueden ser reunidas usando un modelo interaccionista de consciencia-lenguaje-cultura mostrando una manera de resolver perspectivas contrarias de metáfora y lenguaje indicando su dependencia y influencia mutua.

Palabras llaves: metáfora, movimiento, emoción, Ingles, Sueco, Español, interaccionismo, lingüística integral, metáfora conceptual, metáfora de discurso.

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Abbreviations/explanations

1	First person
3	Third person
DEF	Definite
DET	Determiner
GEN	Genitive
MEM	Motion-emotion metaphor
MLT	Meta-language type
PASS	Passive
PL	Plural
PRF	Perfect
PRS	Present tense
PST	Past tense
REFL	Reflexive
SG	Singular

In the motion-emotion metaphor examples, *the figure* is expressed in *italics*
and the motion **verb,** including relevant particles and/or adpositions, in **bold.**

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1 Introduction

Metaphoric expressions that have motion as the source domain and emotions as the target domain, i.e. motion-emotion metaphors, are very common in many of the world's languages, as seen in examples (1-4) taken from English, Swedish, Chinese and Spanish, respectively.

(1)   My spirit soared.

(2)   Mitt humör steg.

           my spirit   rise.1SG.PST.

           'My spirits rose.'

(3)   Wo de   qingxu gaozhang.

           I   GEN spirits   rise.

           'I am getting excited.'

(4)   Mi ánimo está   subiendo.

           my spirit   be.3SG.PRS rise.PRF.

           'My spirits are rising.

Metaphors have been discussed in Western culture since Plato, but were mainly seen as a poetic decoration or rhetorical trope until the 20th century. Peirce (1940), among others, emphasized the cognitive role of metaphors and other forms of iconicity. A key publication was the volume *Metaphor and Thought* (Ortony, 1979), with interdisciplinary discussions on the topic. Lakoff and Johnson (1980) argued that metaphors are not merely a matter of language but also, and mostly, a matter of thought, defining the notion of conceptual metaphor as a mapping between conceptual domains (see Section 2.1), which underlie specific metaphorical expressions, such as the sentences in (1-4). The interaction between conceptual and linguistic metaphors, a central topic of the present thesis, is a matter of active investigation: "The use of metaphor seems to be a basic human skill, which develops in interaction with developing world knowledge and linguistic skills" (Cameron, 1996: 49). Specific debates in the literature concern issues such as (a) the universality and culture-specificity of metaphors, (b) how metaphors originate, and (c) the mentioned relationship between metaphorical thought and language (Zinken, 2007; Sanford, 2012; Gibbs, 2013).

Similar discussions concern the topic of *emotion*. Some see emotion concepts as social and cultural constructions and often claim that there are no universal prototypes of basic emotions (Heider, 1991). Others, including many representatives of cognitive linguistics, claim that bodily experiences give rise to basic *image schemas* like CONTAINER and PATH (Johnson, 1987), that can be expected to be universal. When extended, these give rise to largely (though not fully) universal mappings across experiential domains, i.e. conceptual metaphors (Kövesces et al., 2002).

A third theoretical position, called *language-consciousness interactionism* (Zlatev, 2011; Zlatev et al., 2012; Blomberg and Zlatev, 2013; Blomberg, 2014), sees metaphors and emotion concepts, both on the conceptual and linguistic levels, as constrained by universal cognitive factors, but also motivated by culture-specific values and constrained by linguistic conventions. In support for this position Zlatev et al. (2012) studied motion-emotion metaphors in English, Swedish, Bulgarian and Thai, finding both similarities and differences between the attested 114 motion-emotion metaphors. A few metaphors showed near equivalence in all four languages and pointed to some universal motivations like upwards movement describing positive emotions and downwards movement negative emotions. On the other hand, Zlatev at al. (2012) found a large amount of language specific metaphors and importantly that there are more overlap between the languages the nearer they are genealogically and geographically. This supports a view where subjective, personal experience and language use closely interact in forming metaphorical expressions for talking about emotions. Conceptual metaphors (Lakoff and Johnson, 1980) may function as analogies that motivate but do not determine which metaphorical expressions become conventionalized in particular languages and cultures (Zlatev, 2011).

The present thesis contributes to this debate by analysing motion-emotion metaphors in two of the languages that were studied by Zlatev et al. (2012), English, Swedish, but also crucially adding a another language: Spanish. The three are culturally, geographically and genealogically related but in various degrees of proximity. Specific questions concern whether the motion-emotion metaphors in the three languages might be related to similar bodily experiences expressed in conceptual metaphors, thus entailing a certain degree of universality. On the other hand, it also examines how they might relate culturally, genealogically and geographically and what similarities and differences this might reveal.

The approach follows that of the Zlatev et al. (2012) study but applies a more systematic method. In Section 2, relevant theoretical background and concepts concerning metaphors, motion, emotion and motion-emotion metaphors are discussed. Section 3 presents and motivates three different hypotheses, based on the respective theories. Section 4 discusses the method and procedure for the collection of material, the generation and selection of metaphors, their classification and grouping into types, and the meta-language scheme for cross-linguistic analysis. Section 5 presents results and discussion, followed by conclusions and suggestions for future research in Section 6.

2 Theoretical background

This section discusses three different kinds of metaphor theories within cognitive linguistics, followed by explanations of the source domain MOTION and its various dimensions, as well as the target domain EMOTION. Finally, the notion of motion-emotion metaphor is defined, and the motivations for the present study specified.

2.1 Theories on metaphor in cognitive linguistics

2.1.1 Conceptual metaphor theory

As pointed out in the introduction, Lakoff and Johnson redefined the notion of metaphor from a primarily linguistic, to a primarily cognitive phenomenon, claiming that "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (Lakoff and Johnson, 2003 [1980]: 3). According to their influential theory, metaphors show how we conceptualize the world, and how our conceptual systems are "embodied", i.e. grounded in bodily experience. In other words, we think, experience and act to a large extent based on metaphors. In their *conceptual metaphor theory*, metaphor is defined as a mapping between two conceptual domains, with the source domain being more concrete and structured, while the target domain is more abstract and less structured. For example, in the conceptual metaphor IMPORTANCE IS SIZE, there is a mapping from the concrete source conceptual domain SIZE, which people have specific structured knowledge about, to the more abstract domain IMPORTANCE (Siquiera et al., 2009).

In our daily language and thoughts we use basic metaphors such as HAPPY IS UP and MORE IS UP. The understanding of emotions can be exemplified with the metaphor ANGER IS HEAT, where anger is the target domain and heat the source domain, which together with the conceptual metaphor BODY IS CONTAINER, can account for specific metaphorical expressions, as shown in (5-6).

(5)   My blood is boiling.

(6)   ...holländar-en   explodera-de   av glädje när   han gjorde

           ...Dutchman-DET.DEF explode-3SG.PST by joy   when he   make.3SG.PST

           mål-et.

           goal-DET.DEF

           '...the Dutchman exploded with joy when he made the goal.'

Grady (1997) argued that complex conceptual metaphors like LIFE IS A JOURNEY arise from what he named *primary metaphors*. These are experiential correlations between different basic recurrent and co-occurring embodied experiences. An example is DIFFICULTY IS HEAVINESS: people carrying a heavy object experience a certain difficulty and physical strain independently of differences in their cultures. Thus, such primary metaphorical mappings emerging from physical cognitive experiences are potentially universal (Siquieira et al., 2009: 160).

It has been claimed that Grady's approach represents an advance in conceptual metaphor theory, since it allows a large degree of predictability, as opposed to the original theory of Lakoff and Johnson, where metaphorical expressions could be explained but not predicted (Lima, 2006: 121). Thus, Lakoff and Johnson (1999) incorporated primary metaphors into their theory as well as Christopher Johnson's (1997) proposal that children learn primary metaphors on the basis of the conflation of experiences in early life. An additional step of naturalization and universality was added by adopting the so-called "neural theory of metaphor" (Narayanan, 1997). According to this "a neural learning mechanism produces a stable, conventional system of primary metaphors that tend to remain in place indefinitely within the conceptual system and that are independent of language" (Lakoff and Johnson, 2003 [1980]: 255-256).

It should be noted, though, that the universality claim concerns predominantly primary metaphors. Complex metaphors, which are seen as composed of primary metaphors, may use culturally based conceptual frames and differ considerably from culture to culture (Lakoff and Johnson, 2003 [1980]: 257). It is within such a framework that Kövesces (2000) has analyzed metaphors with the target domain of EMOTION, and in particular ANGER. While various cultural models may influence the mapping, he emphasized that they all share a basic structure, which is seen as the result of shared human biology (Kövesces, 2000: 162).

2.1.2 Discourse metaphors

Many object to such strong universalism (and "biologism"), also within cognitive linguistics. In an influential paper, Zinken (2007) argued that rather than being determined by global cognitive factors, an important class of metaphors that he called *discourse metaphors* arise from language use in specific cultural contexts. Zinken acknowledged the existence of cognitive "mappings" across domains, but referred to these as *analogical schemas* (cf. Section 2.1.4), which may motivate the use of metaphors in language, but do not determine them in any way. Analogy plays a crucial role in using and interpreting novel, creative metaphorical expressions ("creative metaphors"), less so for discourse metaphors like *our European home, Fortress Europe* or *DDR – the bastion of socialism*, and least of all in fully conventional expressions, where the original metaphorical/analogical mapping has become forgotten:

> The difference between a discourse metaphor and a creative metaphor is the analogy evoked by a discourse metaphor is part of the primary cognitive model profile directly accessed by the given lexical concept in the appropriate context . . . . While in the case of creative metaphors, encyclopaedic knowledge has to be 'searched' for the hearer to construct a relevant meaning, the relevant analogical schema is easily recalled in the case of discourse metaphors. This means that the meaning construction becomes more similar to conventional meaning construction (Zinken, 2007: 450).

Discourse metaphors are thus an intermediate stage in the "life-course" of figurative expressions: from creative to "dead" metaphors. One of their characteristics is that they are *form-specific*, in that only specific linguistic units arouse the analogy. For example, while *fortress* and *bastion* could be regarded as near synonymous, they are far from being interchangeable in the discourse metaphors mentioned above. Further, since it is language use in specific cultural discourses that gives rise to discourse metaphors, metaphor on the conceptual, cognitive level may be seen as arising from language, rather than the other way around, as claimed by conceptual metaphor theory (Zinken et al., 2008).

2.1.3 Interactionist accounts

The approaches outlined in the previous two sub-sections are not fully contradictory. For example, Sanford (2012) proposes interactions between conceptual metaphors and language use:

> If it can be said that linguistic metaphor is predicated on a more general conceptual system, it can as easily be said that it is the conceptual system that is motivated and shaped by language.

Neither statement is entirely true. The cognitive structures that are metaphor emerge over instances of linguistic metaphor in use, which are in turn produced, judged, and processed on the basis of the emergent cognitive structure of metaphor (Sanford, 2012: 387).

Similarly, Zlatev, Blomberg and Magnusson (2012) argued for such a position in their investigation of motion-emotion metaphors in English, Swedish, Bulgarian and Thai. Their consciousness-language interactionism theory implies that emotions are subjective experiences, but that when people need to talk about them they use linguistic expressions based on inter-subjectively observable phenomena. Over time these expressions become conventionalized in a way characterized by their cultural beliefs and discourse practices. This implies that metaphorical expressions with EMOTION as target domain (with MOTION as source, but also others) should be seen as emergent from both pre-linguistic experience and language use.

2.1.4 Issues of debate

Some evidence for the psychological reality of (some) conceptual metaphor come from studies of temporal reasoning using spatial thinking, i.e. asymmetric space-to-time mappings in the way predicted by conceptual metaphor theory (Casasanto and Boroditsky, 2008). Others have, however, argued that TIME IS SPACE is not a universal conceptual metaphor, but is based on cultural practices like calendars (Sinha et al., 2011).

The universality of primary metaphors is not determined by any innate factors, but depends on the universality of the corresponding embodied experiences, which are influenced by cultural practices, like the swaddling of infants. This has varied over time and cultures. In some cultures there is no swaddling and the infant can move itself, arms and legs freely. In other cultures the infants are swaddled up to many months of age, something that surely inhibits their ability to move and to perceive the experiential motion during the first cognitive development differently from non-swaddled infants. In a recent study it was showed that in 53 non-industrialized countries, 39 % practiced infant swaddling (Nelson et al., 2000). According to conceptual metaphor theory, this should imply considerable cognitive retardations, as swaddled infants would be slow to establish both image schemas and corresponding primary metaphors. Yet, no empirical support of this prediction has been reported.

Perhaps most controversial, however, has been the notion (and metaphor!) of "dead metaphors". As pointed out above, Zinken (2007) views the third and final step of the "life-course" of metaphorical expression as fully conventional, on the level of non-metaphorical lexical concepts. For example, this would imply that (if the metaphor has reached this stage) there is nothing metaphorical about the verb *fall*, in the expression *fall in love*. This is in contrast to Lakoff and Turner (1989), who argued that when linguistic metaphors have become so conventional that they no longer pass for metaphors at all (e.g. the expression *long* in *a long time*) this is rather an indication that the conceptual metaphor DURATION IS LENGTH is "alive and well", i.e. still operative in the underlying level. How could this controversy be resolved? At least part of the issue is conceptual, concerning the definition of notions like "conventional" and "dead metaphor". Bowdle and Gentner (2005) distinguish between the four (as opposed to Zinken's three) stages in the "career" of a discourse metaphor, shown in (7). This dimension of metaphor career however shall be seen an continuous and not as discrete.

(7)   Novel > Conventional > Dead[1] > Dead²

When a discourse metaphor first emerges it is highly novel, and it is processed on the basis of comparison or analogy with the source domain concept, as in the first stage of Zinken's theory. Over time, repeated figurative comparisons can lead to the creation of conventional, but still comparison/analogy-based uses of the expression. This stage corresponds to Zinken's "discourse metaphors". When such a conventional metaphor (e.g. the expression *dead metaphor*) shifts from comparison to categorization it enters the stage of dead metaphors. However, Bowdle and Gentner (2005) distinguish between two levels of "metaphor death": on the first level (Dead[1]), the semantic association to the source domain still exists but is not necessary for understanding the expression. Only on the second level (Dead²) has the semantic association completely disappeared.

Given these distinctions, both Lakoff and Turner (1989) and Zinken (2007) could in principle be correct. Expressions such as *fall in love* and *a long time* appear to be Dead[1] but not Dead², as their source domain is easily recovered. In contrast example (8) shows a metaphorical expression that would fall in the category of Dead²:

(8)   För detta fick   dåvarande försvarsminister-n   Sten Tolgfors

for this   have.3SG.PST then   defence-minister-DET.DEF Sten Tolgfors

bära   hundhuvud-et

carry dog-head-DET.DEF

'The defense minister of that time Sten Tolgfors had to take the blame.'

Very few current Swedish speakers are aware of the source domain of the metaphor *bära hundhuvudet* ('carry the dog head'), which is attested since the 16th century. At that time a nobleman that had committed a severe crime had to carry a dog's head to the next county, as a sign of shame, though many avoided this by paying or forcing someone else to do so (Dalin, 1850: 717).

But is there evidence for differences in psychological processing of these stages? Romero Lauro et al. (2013) performed an fMRI study, looking for activation of the motor system of the brain in response to (a) literal, (b) figurative-non-metaphorical, (c) metaphorical and (d) idiomatic use of motion verbs. The results showed that in the first two cases, there was a clear activation of motor cortex; for (c) there was some activation but not as significant, and for (d) idiomatic expressions like *bad blood runs*, there was nearly no activation. In terms of the present discussion, this strongly suggests that at least some idioms involve metaphors that are in the "dead" area of the Bowdle and Gentner (2005) sequence in (7).

Factors such as this lead Zlatev et al. (2012) to exclude idiomatic expressions like *fall in love* in their study of motion-emotion metaphors. Still, while activation of the source domain may not be necessary, it is still possible, unlike the case of expressions like that in (8). In other words, there are reasons to include idiomatic motion-emotion expressions, as long as the source domain and mapping is easily recoverable, which will be the approach taken in the present study.

2.2 Motion: Actual and non-actual

2.2.1 Actual motion

As with metaphor, there are different views on how to understand and define motion, in particular in cognitive linguistics. Talmy (2000) defines it in a very broad way: "[a] situation

containing motion and the continuation of a stationary location alike as a Motion event (with a capital M)" (Talmy, 2000: 25). Further, he analyses a Motion event as constructed of four internal components figure, ground, path and (and fact of) motion, with the figure moving along the path, or being at a site, with respect to ground. These internal components can also be related to so-called co-events containing information on manner or cause of motion (Talmy, 2000: 25-26). This forms the basis for the influential *motion-event typology*, where languages are categorized as being predominantly either satellite-framed (e.g. English and Swedish) or verb-framed (e.g. Spanish and French). In Spanish, path is mostly expressed by the verb-root, like in example (9) with the verb *salir*, as opposed to by the "satellite" *out* in English (10).

(9)   El pato salió   de   la   cueva flotando.
               DEF duck leave.3SG.PST from DET.DEF cave   float.PRF
               'The duck left the cave floating.'

(10)   The duck floated out of the cave.

Talmy did not, however, sufficiently clearly define the concept of motion itself, including the distinction between "translational motion" which implies translocation, and "self-contained motion", which does not (Zlatev et al., 2010). Pourcel (2005) attempted to distinguish between motion events and motion activities: In an event the conceptual focus in on the PATH of motion while for a motion activity it is on the MANNER of motion. Still, what the aspectual distinction event vs. activity amounts to does not become fully clear.

To redress this, Zlatev, Blomberg and David (2010) took a phenomenological approach, focusing on motion as experience. They defined motion as the *experience of continuous change in the relative position of an object (the figure) against a background* contrasting this to stasis, where there is no such change. This also implies contrast to discontinuous change, as for example a flickering light seen in one location, disappearing and suddenly appearing in another location. However, if the time interval is short enough, an observer would see the light as moving between the locations: "[m]otion is in the eyes of the beholder" (Zlatev et al., 2010: 393). Subsequently, Zlatev et al. (2010) propose a taxonomy of motion situations, defined independently of their linguistic representations in languages, based on the following three parameters.

Translocative versus non-translocative motion

Translocative motion involves the perception of continuous change of an object's relative position according to a spatial frame of reference like in example (11). *Non-translocative* motion is where the figure maintains its relative (perceived) position as in example (12).

(11)   I fell into the water.

(12)   Bomb-en   explodera-de.
          bomb-DET.DEF explode-3SG.PST
          'The bomb exploded.'

Bounded versus unbounded motion

In *bounded* motion the figure undergoes a clear transition of its state. This means that it will depart from a Source or pass through a Mid-point, or reach a Goal or all three of these. An example of bounded motion is expressed in the Spanish sentence (13). In *unbounded* motion the motion of the figure is not bound with respect to beginning, middle or end, as in the Swedish example (14).

(13)   Nos llevó   a casa.
          us   bring.3SG.PST to house
          'He brought us home.'

(14)   Ballong-en   sväva-r   i luft-en.
          balloon-DET.DEF hover-3SG.PRS in air-DET.DEF
          'The balloon is hovering in the air.'

Caused versus uncaused motion

In *caused* motion, the figure is perceived to be moving under the influence of an external cause. When there is no external cause making the figure move, the motion is presented as uncaused. The relevant notion of causality concerns the experiential *life-world*, not the objective universe, as understood by physics (Husserl, 1970 [1936]). The sentence in (15) expresses caused, translocative and bounded motion, while in (16) the motion is uncaused.

(15)   Erik kasta-de   boll-en   genom fönstr-et.
          Erik throw-3SG.PST ball-DET.DEF through window-DET.DEF
          'Erik threw the ball through the window.'

(16)   The old house collapsed.

The taxonomy of 8 motion situation types, following the systematic application of these three parameters is shown in Table 1.

Table 1. Classification table showing the 8 motion situation types in English; F = Figure, LM = Landmark, A = Agent, View-C = Viewpoint centred, Geo-C = Geocentric, Obj-C = Object centred Frame of Reference. (based on Zlatev, Blomberg and David, 2010)

	Uncaused motion	Caused motion
+translocative/+bound	F goes from LM (Source) F goes over LM (Mid-point) F goes to LM (Goal)	A takes F from LM (Source) A throws F over LM (Mid-point) A puts F into LM (Goal)
+translocative/-bound	F goes away (View-C) F goes up (Geo-C) F goes forward (Obj-C)	A takes F away (View-C) A pushes F upward (Geo-C) A pushes F forward (Obj-C)
-translocative/+bound	F jumps F blinks	A smashes F A tears F
-translocative/-bound	F waves F walks (on treadmill)	A waves F A bounces F (indefinitely)

2.2.2 Non-actual motion

All examples considered so far have involved *actually* perceived motion, i.e. change in the relative position of the figure against a background, as per the definition of Zlatev, Blomberg and David (2010). However, there are many linguistic expressions, including metaphorical ones, that involve verbs or satellites that express the Talmian categories motion and path, but where no motion exists in the described situation. Blomberg and Zlatev (2013) and Blomberg (2014) refer to such as expressions of *non-actual motion*. A well-known example is that in (17).

(17)   The mountain range goes all the way from Canada to Mexico.

(Talmy, 2000: 104)

Talmy (2000) refers to such examples as instances of "fictive" motion, while Langacker (1990) speaks of "subjective" motion, and other terms exist in the literature. Blomberg and Zlatev (2013) argue that this variance is not coincidental, and reflects the fact that the

phenomenon is linguistically and experientially *non-unitary*. By this, they mean that at least three different features of human consciousness motivate such expressions: enactive perception, visual scanning and imagination. Furthermore, different sentences are differentially motivated. (18a) expresses a figure that affords human translocation, while in (18b) it does not, but rather allows for easy visual scanning. It is only examples like (18c), with specific motion verbs in which the figure (here, the path) takes on animate properties that involve imagination. Therefore, Blomberg and Zlatev (2013) propose that only non-actual motion examples such as (18c) are properly speaking metaphorical.

(18)   a. The path goes through the forest.
            b. The telephone line goes through the forest.
            c. The path crawled through the forest.

As noted in Section 2.1.4, there is evidence from neuroscience that "fictive" motion sentences activate motor cortex more than (some) metaphorical sentences, thus supporting such a distinction. Still, it is in line with the "non-unitary" analysis of non-actual motion that there is not a sharp distinction between the different kinds of expression. Considering the Swedish verb *gå* ('walk'), examples 19, 20, and 21, all involve extended senses, and thus can be analyzed as non-actual motion sentences.

(19)   E6 gå-r   till Oslo.
        E6 go-3SSG.PRS to Oslo
        'The road E6 goes to Oslo.'
(20)   Det gå-r   bra   för företag-et.
        it   go-3SG.PRS well for company-DET.DEF
        'It goes well for the company.'
 (21)   Jag tro-r   att det gå-r   att avhjälpa fel-et.
        I   believe-3SG.PRS that it go-3SG.PRS to   repair   defect-DET.DEF
        'I believe it is possible to repair the defect.'

The sentence in (19) is clearly motivated by enactive perception, while the latter two examples, which are also attested later diachronically (Svensk Ordbok, 2009: 1108), are more abstract, and semantically bleeched. In terms of Zinken's and Gentner's sequences (Section 2.1.4), neither of these expressions should be expected to involve analogical mapping to

actual motions. Still, we need to capture the fact that (19) has a more palpable sense of motion than (20) and (21). One of the factors that brings this about is the fact that (19) has a lexical expression of the figure (*E6*), while (20) and (21) only have the grammatical subject *det*, and hence do not express a figure at all. This indicates that we need to pay extra attention to figure-expressions in non-actual motion sentences, and in motion-emotion metaphors in particular. We return to this in Section 2.4 below, after some discussion of the target domain.

2.3 Emotion

As noted in Section 1, there is an ongoing debate on the degree of universality of human emotions. From the perspective of evolutionary theory, as well as the "embodiment" perspective in cognitive linguistics, basic emotions and their expressions should be common to mankind. On the other hand, cultural differences cannot be neglected (Elfenbein and Ambady, 2002), and indeed are accepted even by theorists with universalist tendencies (Kövesces, 2000). It is not the aim here to enter into this debate, but as motion-emotion metaphors in English, Swedish and Spanish are to be examined, let us consider how the superordinate terms for the EMOTION domain are defined in standard dictionaries. English has two words, *emotion* related to motion and *feeling* related to touch, contact. In the *English Webster's Dictionary* (1992) the two are defined as follows.

> **Emotion**: *Any strong manifestation or disturbance of the conscious or unconscious mind, typically involuntarily and often leading to complex bodily changes and forms of behavior; The power of feeling, with or without a corresponding trend of activities.*
> **Feeling**: *The sense of touch or immediate contact; The collective state or general tone of consciousness due to more or less complex and obscure combinations of classes of sensations; Any emotion as apart from the body.*

Swedish also has two superordinate terms: *känsla* ('feeling') related to ability to perceive touch, pressure, heat or pain etc., and *rörelse* ('motion') related to motion. The Swedish dictionary *NEO* (2000) defines them as follows.

> **Känsla**: *(kroppslig) upplevelse som uppkommer av yttre eller inre förnimmelse; utvidgat med tonvikt på den direkta själsliga upplevelsen; personligt, naturligt och spontant uppkommande sätt att värdera eller förhålla sig till ngn eller ngt vilket inte är resultat av tänkande.*

"(physical) experience that is caused by external or internal sensation; extended with emphasis on the direct mental experience; a personally, naturally and spontaneously arising manner of evaluating or relating to somebody or something, which is not result of thinking."

Rörelse: att uppleva stark känsla av ömhet e.d.

"to experience strong feeling of tenderness or the like".

Likewise, Spanish has *emoción* ('emotion') related to motion, and *sentimiento* related to feeling and perceiving. The Dictionary of the Spanish language of the *Real Academia Española* (RAE, 2001), gives the following definitions.

Emoción. (Del. lat. emotío). *Alteración del ánimo intensa y pasajera, agradable o penosa, que va acompañada de cierta conmoción somática.*

"Intense and passing change of the spirit, pleasant or distressing, that is accompanied with certain physical commotion."

Sentimiento: *Acción y efecto de sentir o sentirse; Estado afectivo del ánimo producido por causas que lo impresionan vivamente; Estado del ánimo afligido por un suceso triste o doloroso.*

"Action and effect of feeling (transitive or reflexive verb); Affective state of the mind produced by causes that impresses it intensely; State of mind afflicted by sad or painful events."

One may observe interesting commonalities, as well as some differences in these definitions. First, each language uses two main superordinate terms for the domain, with one of them clearly related to motion (*emotion, emoción, rörelse*), and the other to bodily touch, contact (*feeling, känsla, sentimiento*). Furthermore, the two terms are typically inter-defined, as when *emotion* in English is characterized as "the power of feeling". Finally, whatever emotions and feelings are, they clearly involve consciousness: *disturbance of the conscious or unconscious mind; direkta själsliga upplevelsen* ("the direct mental experience"), *estado afectivo del ánimo* ("affective state of the mind") and not just physical motion. Finally, while Swedish seems to have the sensation-based term *känsla* as the more basic of the two, the definitions of all six terms in the three languages emphasize the dynamic, changing aspect of the phenomenon.

The Spanish definition of *emotion* is the most dynamic one of those given above, focusing on "passing changes of the spirit", which are more salient and easily noticed than more stable states such as moods. As can be noted, the definition also refers also to certain physical commotion, which can be either externally visible or internal, thereby reflecting the close connection between emotion and motion. In sum, all the definitions provided above, but

above all the Spanish definition of emotion, closely correspond to the explication of the concept provided by Zlatev et al. (2012): *changes in the affective consciousness of a person*.

2.4 Motion-Emotion Metaphors (MEMs)

Having defined the source domain of actual motion and the target domain of emotion in the previous two sub-sections, we can define motion-emotion metaphors (MEMs) as *expression types that bridge the two domains, expressing changes in affective consciousness, by means of terms denoting actual motion.* Unlike in conceptual metaphor theory, therefore, it is linguistic expressions themselves that are the metaphors – though not individual utterances, but expression types. As can be seen in examples (22-25), what is essential is that the expression in *italics*, which denotes the "as if" moving figure refers to the self (or a part of the self) of the protagonist, and that there is a motion verb complex (in **boldface**). The other parts of the expressions and the grammatical meanings can vary in an open way in each motion-emotion metaphor.

(22)   *Jag* **attrahera-des**   **av** hennes skratt.

         I   attract-1SG.PST.PASS by her   laugh

         'I was attracted by her laugh.'

(23)   *Mi corazón* **se**   **fue**   **trás** él.

         my heart   REFL go.3SG.PST after him.

         'My heart went after him.'

(24)   *My heart* just **sank**.

(25)   Su muerte **sacudió**   *mi ánimo*.

         her death   shake.3SG.PRET my spirit

         'Her death shook my spirit/mood.'

As noted earlier (Section 2.2) the nature of the expression that denotes the figure is essential for the interpretation of the whole sentence as literal, metaphorical, or perhaps "in between". When the figure expression consists of a personal pronoun as in (22), we can easily see this as a metaphorical expression in which the self is presented "as if" in motion. What about cases like (23-25)? Depending on the cultural conventions of the language, body part like *heart* and *breast* can take on this role of moving figure in MEMs. Likewise, more "metaphysical"

notions such as *the soul*, *själen* (Swedish), *el alma* (Spanish), or *the demon/s*, *anden, demonen* (Swedish), *demonio* (Spanish) could do so. We may also consider emotional life as such to be a "part of self", so MEMs can have as figure expressions such as *mood*, *humöret* (Swedish), *el humour* (Spanish). Specific emotions like anger, fury, joy, on the other hand vary from time to time and sometimes from minute to minute. Hence they are not to be considered as parts of the self, but as temporary states. Therefore expressions such as (26) are not considered as MEMs in the study.

(26)   Joy overpowered him.

2.5 Summary

To sum up, the review of the theoretical background has shown different theoretical perspectives on metaphor (2.1), provided definitions of the source and target domains of motion and emotion (2.2 and 2.3), and characterized the kind of expressions that link these domains: motion-emotion metaphors (2.4). In the next section, we provide three hypotheses concerning motion-emotion metaphors, linked to the three perspectives on metaphor described in Section 2.1, and in the remainder of the thesis we proceed to evaluate these on the basis of an empirical study.

3 Hypotheses

As described in Section 2.1, there are three prevalent theoretical perspectives on metaphor in cognitive linguistics: universal conceptual metaphors, discourse metaphors and interactionism. There is evidence in support for each of these positions. Hence the following hypotheses concerning the relations between motion-emotion metaphors (MEMs) in English, Swedish and Spanish can be formulated on the basis of each of these approaches.

Universalism: Hypothesis 1

There will be a strong overlap – in both source and target domain – between the MEMs in the three languages. This will be especially pronounced in the case of primary conceptual metaphors, where the source domain concepts can be seen as universal basic experiences and image schemas, such as VERTICAL and CONTAINMENT.

Discourse metaphors: Hypothesis 2

As metaphorical expressions are used in particular contexts and discourses, and these are largely different across languages and cultures, there should be many MEMs that are specific for each language with no correspondence in the other languages.

Interactionism: Hypothesis 3

While there may be some universal tendencies, based on general cognitive factors, MEMs are conventionalized in specific languages and cultures. However, due to linguistic and cultural contact, there will be more overlap between languages/cultures with much interaction, than those with less. As English and Swedish are genealogically, typologically (cf. Section 2.2) and culturally closer, there should be more overlap between their MEMs, than between either of these and Spanish.

4 Method

This section describes the procedure for the collection of the linguistic material, including generation and selection of motion-emotion metaphors, and their classification according to the motion taxonomy of Zlatev et al. (2010, see section 2.2.1). Further, we present the Meta-Language Type scheme, used for cross-linguistic analysis.

4.1 Generation of metaphors

Zlatev et al. (2012) mainly used a method based on native or near-native speaker knowledge to identify motion-emotion metaphors. In this study speaker intuition has mostly been used to direct the search, whereas all expressions (except the motion-emotion metaphors taken from the Zlatev et al. (2012) study), are actual examples found in current language corpora. Spanish metaphors were found to a large extent in *Corpus del Español: 100 million words, 1200s-1900s* (Davies 2002), but also *Corpus de referencia del español actual*; Real Academia Española: Banco de datos (CREA), *Diccionario de la Lengua Española* (2001) and *Collins Spanish Dictionary* (1997). For English, *Websters Dictionary* (1997) and *Concise Oxford Dictionary* (1990) were used. The Swedish examples were attested in, *Språkbanken* (2009), *Nationalencyklopedins ordbok* (2000), and *Svensk ordbok* (2009). For all three languages blogs and articles on the internet have also been used, especially in the search of creative metaphors.

The starting point for the investigation was to make a list of all motion verbs in the Zlatev et al. (2012) study, and to find the Spanish ones with overlapping semantics. Basically all possible expressions that express both motion and emotion in Spanish were considered in the first stage of the procedure. Methodically, verb through verb, a search was made for relevant motion-emotion metaphors in the various databases in the material. Clearly established parameters for the identification of metaphors do not exist, although there are methodological efforts ongoing, like the *Metaphor Identification Procedure* (Pragglejaz, 2007). However, this is primarily aimed at identifying metaphors in a running text, a discourse, and not for searching for specific metaphors. Therefore a mixture of intuition and observation methods

was used in the search and selection of metaphors[1]. In particular, Spanish motion-emotion metaphors encountered on internet sites were especially carefully checked against native speaker intuitions, as some of the expressions found were arguably not genuine. For example, in looking for expressions corresponding to *capture my heart*, a perfect match was found in *capturar mi corazón*. However, this was found to be word-by-word translation of an English Harlequin book into Spanish, and no other instances were found anywhere else. Hence, this and other such examples were discarded.

On the other hand, while comparing the Spanish motion-emotion metaphors with those in English and Swedish, presented in the data of Zlatev et al. (2012) database, new MEMs in English and Swedish were found, and attested in the corpora. With iterative steps and corrections further relevant expressions in all three languages were found.

4.2 Selection

In order to delimit the material for the study and to ensure that the same kinds of expressions were selected in the three languages, the following selection criteria were used, adapted from those mentioned by Zlatev et al. (2012), but more clearly specified.

A. The sentence in which the MEM occurs does not express *actual* motion.
As can be seen, examples (27-29) fulfill criterion A, as there is no figure that changes its relative position in space in any of these cases. On the other hand, examples (30-32) do not qualify: even though they also express emotional states and processes of the protagonists, they also describe changes in physical space.

(27) Mi corazón está hundiendose.
      my heart be.1SG.PRS sink.PRF.REFL
      'My heart is sinking.'
(28) Her mood is rising.
(29) Mitt humör sjönk.
      my spirit sink.3SG.PST

---

[1] The use of intuition is unavoidable in the study of language, and in particular of semantics (Itkonen, 2008).

'My spirits sank.'

(30)   Happily she ran up the stairs.

(31)   Han föll   ned   under begravning-en.

                    he   fall.3SG.PST down during funeral-DET.DEF

                    'He fell down during the funeral.'

(32)   La   mujer   triste saltó   a-l   rio.

                    DET.DEF woman sad   jump.3SG.PST to-DET.DEF river

                    'The sad woman jumped into the river.'

B. Substitution of figure expression in MEM can lead to actual motion sentence.

As can be seen in examples (33-34), when the figure-expression (and the landmark-expression if necessary) is substituted for an expression referring to a physical object, the sentence becomes a description of actual motion. This criterion can be seen as an operational specification of A.

(33)   My heart is sinking. ---> My boat is sinking.

(34)   My spirit is rising. ---> The moon is rising.

C. Motion is expressed by the verb-root and not only in a satellite or preposition.

Sentence (35) clearly fulfills this, but not the example in (36). Although the heart is covertly expressed as having moved, from the breast to the throat, this is not expressed by the verb.

(35)   Hon sväva-r   av lycka.

                    she   hover-3SG.PRS by happiness.

                    'She is hovering with happiness.'

(36)   Jag fick   hjärta-t   i halsgrop-en.

                    I   get.3SG.PST heart-DET.DEF in throat-DET.DEF.

                    'I became very afraid.'

D. The expression of the figure denotes *the self* or a *part of the self* in an MEM.

As stated in Section 2.4, and as implied by criterion B above, the semantics of the expression that denotes the figure, i.e. whatever is presented "as if" moving in a motion-emotion metaphor, is crucial for interpretation. Self-referring expressions like (37) clearly qualify.

Expressions as those in (38-40) which involve culturally construed body parts and metaphysical notions, also qualify.

(37)   Caigo   en una tristeza infinita.
        fall.1SG.PRS in a   sadness endless
        'I fall into an endless sadness.'

(38)   Mi corazón se   fue   trás de tí.
        my heart   REFL go.3SG.PST after of you.
        'My heart went after you.'

(39)   My heart broke.

(40)   Mitt hjärta brast.
        my   heart break.3SG.PST
        'My heart broke.'

On the other hand, examples (41-42) do not qualify, as the notions of "love" in (42) and "fear" in (43), do not represent anything that can be construed as a part of the self, but are rather emotions themselves. Thus, while expressions like this are clearly worthy of study, they fall out from the scope of the investigation.

(41)   Se   marchitó   nuestro cariño.
        REFL go.3SG.PST our   love.
        'Our love went away.'

(42)   Min rädsla blås-te   bort.
        my fear   blow-3SG.PST away.
        'My fear blew away.'

E. Both source (motion) and target (emotion) meanings are accessible to speakers.

As stated in Section 2.1.4, Zlatev et al. (2012) excluded expressions like (44) due to their idiomatic nature. However, as the possible interjection of the adverb *passionately* within the idiomatic phase *fall in love* suggests, the idiom is not fully lexicalized. Further, using the distinction between two different kinds of "dead metaphors" made by Bowdle and Gentner (2005), speakers of English are still able to access both the motion and emotion meaning of *fall in X*, and hence to perceive this as a MEM. On the other hand, the sentence in (44) is, similarly to that idiom given in (8), based on a practice that most current speakers would not

recognize: in the case of chopping wood with an ax, and the knowledge that if the ax head were not tightly fixed to the handle it could easily fly off. Hence, idiomatic expressions like (43), but not those in (44) are considered as MEMs in the current study.

(43)   *He* **fell** passionately **in** love.
(44)   He flies right off the handle for nothing.

After these five selection criteria, many candidate motion-metaphors in the three languages, generated by the previous step, were removed from the analysis. For example, in (45) there is actual motion (criterion A). In examples like (46) and (47), what moves are emotions and not the self (criterion D) while in (48) it is some other agent that moves, and again not the self.

(45)   Antonia le   miraba   esperando ver-le   saltar de alegría.
             Antonia him look.PST wait.PRF   see-him jump of joy
             'Antonia looked at him waiting to see him jump of joy.'
(46)   They were filled with joy and happiness.
(47)   ...y   que hasta ti   subía   un amor consagrado   a idolatrar-te...
             ...and even to   you rise.PST a   love dedicate.3SG.PST to worship-you...
             '...and even to you rose a love dedicated to worship you...'
(48)   Pareció   que me tocaron   el   corazón y   me puse   a
             appear.3SG.PST that me touch.3PL.PST DET.DEF heart   and me put.1SG.PST to
             llorar.
             cry
             'It looked like they touched my heart and I started to cry.'

4.3 Classification

4.3.1 Motion situation types
Using the taxonomy of motion situation types of Zlatev et al. (2010), described in Section 2.2.1, all selected MEMs in the three languages were classified as belonging to one the 8 types shown in Table 2, *on the basis of their source domain*.

Table 2. Classification of MEMs according to the 8 types of motion situations

	Uncaused motion	Caused motion
+translocative/+bound		
+translocative/-bound		
-translocative/+bound		
-translocative/-bound		

For example, using the parameter Translocation, (49) is based on translocative, while (50) on non-translocative motion. Example (51) was classified as (metaphorical) bounded motion, while (52) as unbounded. Example (53) is a metaphorical extension of caused motion, while (54) is based on uncaused motion (even if something else may be causing the process, it is not expressed in the sentence).

(49)   *Nos* puede   **llevar a** engaño.
        us   can.3SG.PRS bring to delusion
        'This can bring us to delusion. '

(50)   Estoy   cansada - musitó   *Anudila*, a punto de **desplomar-se**.
        be.1SG.PRS tire.PRF - mumble.3SG.PST Anudila, at point to collapse-REFL
        'I am tired - mumbled Anudila, on the verge to collapse.'

(51)   Caigo   **bajo** el   poder de su encanto.
        fall.1SG.PRS under DET.DEF power of his charm
        'I fall under the power of his charm.'

(52)   Me **levanta**   *el*   *ánimo.*
        REFL lift.3SG.PRS DET.DEF spirit.
        'My spirits rise.'

(53)   Está   **transportado** de amor.
        be.3SG.PRS transport.PRF by love
        'He is carried away by love.'

(54)   *Mi corazón* **se**   **cae**   a pedazos.
        my heart   REFL fall.3SG.PRS to pieces.
        'My heart is falling into pieces.'

4.3.2 Meta-language types

Zlatev et al. (2012) performed their cross-linguistic comparison on the basis of MEMs (for each language) classified in motion-situation types, such as those in Table 2. This, however, was not optimal as it was ultimately on the basis of the English *glosses* that the issue of semantic overlap/non-overlap was decided. In order to improve on this, the study developed a scheme of Meta-Language Types (MLT), as shown in Table 3. As can be seen these types, written in SMALL CAPS were based on English, however there was no requirement for them to be expressed by single verbs. The MEMs of English, Swedish and Spanish were all classified within this scheme, allowing for two sub-types for each MLT, based on whether it is the self (1) or part of self (0) that is the figure of the expression.

Table 3. Example of Meta-Language Types (MLTs), with self (1) or part of self (0) as figure

figure = self	Meta-Language Type (MLT)
1	FALL INTO
0	FALL INTO
1	BREAK DOWN
0	BREAK DOWN

The basic principle was to have as few MLTs as possible, and to *introduce a new one only when a relevant semantic distinction with respect to motion-emotion metaphors was to be made*. Let us exemplify this process with the following example. During a first analysis, the Spanish MEMs based on the motion verbs *estalla* ('burst, explode, go off, shatter, break out') and *revienta* ('burst, explode, pop, break, smash') were grouped under the MLT EXPLODE, along with Swedish MEMs based on the verb *exploderar* and English ones based on *explode*. However, looking more into detail, the RAE dictionary defines *reventar* as

Dicho de una cosa: Abrirse por no poder soportar la presión interior ("Said about an object: To open because not being able to support the interior pressure"), and *estallar* as

Dicho de una cosa: Henderse o reventar de golpe, con chasquido o estruendo, ("Said about an object: To crack or burst suddenly, with crack or noise"). As can be seen these related but distinct meanings, imply corresponding differences in the MEMs using these source-domain expressions. Thus the MLT EXPLODE was re-defined as something breaking open suddenly (as with a bomb), while the new MLT BURST was introduced and defined as a process that leads

to something breaking open, but as a drawn-out activity (e.g. bursting my pants). A second distinction was made between uncaused (55) and caused (56) versions of these MLTs.

(55)   *He* **exploded** and started swearing.
(56)   *Jag* **explodera-de   av** glädje.
         I   explode-1SG.PST by joy.
         'I exploded with joy.'

Thus, the MEMs in the three languages were distributed over the four MLTs, EXPLODE, EXPLODE X, BURST and BURST X. The MLT scheme was implemented as an Excel-sheet, and allowed for analyses on various levels of granularity. As can be seen in Table 4, the MLT, FALL INTO is shown for F=Self - 1 and for F=Part of Self - 0. A coarse grain analysis doesn't distinguish between the two and FALL INTO is treated as one MLT. On the fine grain level they are distinguished and the MLT, FALL INTO is treated as two separate MLTS. A small part of the MLT-schema with some instances of MEMs, given as motion types are also shown in Table 4, which is based on the motion taxonomy of Zlatev et al. (2010).

Table 4. Part of the Meta-Language Type scheme, with motion-emotion metaphors (MEMs), shown as motion types, in English, Swedish and Spanish. Numbers in parenthesis index with examples in the databases.

Trans	Bound	Cause	F=Self	MLT	English	Swedish	Spanish
1	1	0	1	FALL INTO	F falls into LM (1)		F cae en LM (1)
1	1	0	0	FALL INTO			FP cae a LM (41)
1	1	0	1	PLUNGE INTO	F plunges into LM (2)		F sumerge en LM (3)
1	1	0	0	PLUNGE INTO			
1	1	0	1	SINK INTO	F sinks into LM (42)	F sjunker ned i LM (36)	F hunde en LM (2)
1	1	0	0	SINK INTO			
1	1	0	1	FALL UNDER	F falls under LM (43)		F cae bajo LM (4)
1	1	0	0	FALL UNDER			
1	1	0	1	DISAPPEAR			
1	1	0	0	DISAPPEAR	FP disappears (44)	FP försvinner (45)	
1	1	0	1	GO AFTER			
1	1	0	0	GO AFTER			FP va trás LM (5)

The numbers after each MEM/motion types refer to the index of the example in the respective language database, see Appendix A-C. As can be seen, the MEM *F falls into LM (1)* is grouped into the MLT FALL INTO together with the Spanish *F cae en LM (1),* but there is no

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corresponding MEM in Swedish. With SINK INTO we have seen MEMs in each language, and in other cases (not shown here), there were several MEMs corresponding to a single MLT in a single language.

For example, the English (57) and (58) represent two different MEMs, corresponding to the same MLT, BREAK DOWN. As these are expressed by different verbs, both MEMs were present in the MLT scheme. Example (59), on the other hand, is another instance of the same MEM as (58), and was hence not entered.

(57)   *I* **broke down** under the pressure.

(58)   *She* **collapsed** and started crying.

(59)   *Everything* in me **collapsed**.

The Swedish expressions in (60-61) were likewise regarded as expressing the same MEM, as the verb root was identical. Hence, only one MEM was entered in the MLT scheme, classified as REPEL.

(60)   Hans röst   **kan   stöta bort** *vem som helst*.
          his   voice can.3SG.PRS repel away anybody
          'His voice can repel anybody.'

(61)   Hans utseende   **är   frånstötande**.
          his   appearance be.3SG.PRS repelling
          'His appearance is repelling.'

The Spanish examples below were grouped under the MLT RISE. Since they correspond to two different MEMs, expressed by different verbs, both were entered into the scheme.

(62)   Sólo a   José Pedro no **le subía**   de todo *el   humor*.
          only for José Pedro not him rise.PST at all   DET.DEF humor
          'Only for José Pedro did the humor not rise at all.'

(63)   ...**me   levanta** *el   ánimo*, que   es más importante.
          ...myself rise.3SG.PRS DET.DEF spirit,   which is more important
          '...my spirits rise, which is more important.'

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4.4 Cross-linguistic analysis

With the help of the MLT scheme, the MEMs of the three languages could be systematically compared. This was done either on the *coarse grain* − disregarding the distinction between figure=self and figure=part of self, or on a *fine grain*, comparing MLTs separately. On the course grain, there were 84 MLTs. On the fine grain, there were 99 MLTs attested in the scheme (as some of the rows were "empty"). To emphasize, the cross-linguistic analysis was made by comparing the overlap of *the source domain* in the motion-emotion metaphors of the three languages, i.e. the motion domain.

5 Results and discussion

Using the method described in Section 4, a total of 161 MEMs in the three languages were selected, classified and analyzed: 54 English, 48 Swedish and 59 Spanish motion-emotion metaphors. These are first shown per language, using the classification schemes of motion situations (cf. Section 4.3). After that the distribution of the MEMs according to the various parameters are shown and discussed, followed by an evaluation of the three hypotheses presented in Section 3, and finally a more general discussion.

5.1 Overview of MEMs in the three languages

Table 5 shows the 54 English MEMs in schematic form, and Appendix A gives the full expressions. Of these 36 were based on caused motion, while 18 were based on uncaused motion. 38 had self as figure and less than half that number, 16, self as figure.

Table 5. English MEMs: F = Self is Figure, FP = Part of Self is Figure; LM = Landmark, A = Agent

	Uncaused motion	Caused motion
+translocative/+bound	F falls into LM F plunges into LM F sinks into LM F falls under LM FP disappears	A moves F to LM A drives F to LM A brings F to LM A leads F to LM A gives FP to LM
+translocative/-bound	FP soars FP rises FP sinks FP drops FP creeps	F is downcast A pulls F A attracts F A repels F A uplifts FP A blows F away A carries F away
-translocative/+bound	F breaks down F explodes F breaks F collapses FP collapses FP caves in	A puts F off A throws F off feet A upsets F A shatters F A knocks F off feet A knocks F out A floors F A tears F apart A explodes F A bursts F A breaks FP A opens FP A closes FP A releases FP A captures FP
-translocative/-bound	F swells FP flutters	A shrinks F A presses F A moves F A shakes F A stirs F

		A agitates F
		A calms F
		A perturbs F
		A relaxes F

48 Swedish MEMs were found, selected and classified. Again, these are shown schematically in Table 6, with corresponding expressions in Appendix B. Of these 18 were based on uncaused motion and 30 were based on caused motion. 28 metaphors had self as figure and 20 had part of self as figure.

Table 6. Swedish MEMs: F = Self is Figure, FP = Part of Self is Figure; LM = Landmark, A = Agent

	Uncaused motion	Caused motion
+translocative/+bound	F sjunker ned i LM FP försvinner	A driver F till LM A kastar F ner LM A rör F till LM A ger FP till LM
+translocative/-bound	FP stiger FP sjunker FP faller FP kryper	A trycker F ner A stöter bort F A frånstötande F A attraherar F A tilltalar F A upplyfter F A blåser bort FP
-translocative/+bound	F flyger i F bryter ihop F rasar ihop FP brister F exploderar	A knockar F A golvar F A sliter sönder F A exploderar F A spricker F A släpper F fri A krossar FP A knäcker FP A fångar FP A sliter FP i stycken A öppnar FP A stänger FP
-translocative/-bound	F svävar F sväller F kopplar av FP svajar FP går vilse FP klappar FP växer	A lugnar F A (om)skakar F A upprör F A rör F A pressar F A vacklar F A rubbar FP

59 Spanish MEMs, shown in Table 7, were found and selected, see appendix C. The majority of the Spanish MEMs were based on caused motion, numbering 40, and 19 were based on uncaused motion. 28 had self as figure and 31 part of self as figure.

Table 7. Spanish MEMs: F = Self is Figure, FP = Part of Self is Figure; LM = Landmark, A = Agent

	Uncaused motion	Caused motion
+translocative/+bound	F cae en LM F hunde en LM F sumerge en LM F cae bajo LM FP se va trás LM FP cae a LM	A lleva F a LM A se lleva FP de LM A conduce F a LM A suma F en LM A conmueve F hasta LM A se mueve F a LM A baja F a LM A se sacude F de LM A echa F a LM A arranca FP de LM A salta FP a LM A saca FP de LM A entrega FP a LM
+translocative/-bound	FP sube FP se levanta FP se cae FP sale	A pone F A transporta F A arrastra F A atrae F A repele F A levanta FP A sale FP
-translocative/+bound	F revienta F se desploma FP se rompe	A destroza F A revienta F A abate F A rompe FP A parte FP A cierra FP a LM A abre FP a LM A vuelve F loco A estalla FP A aplasta F
-translocative/-bound	FP se agita FP se encoge FP aletea FP palpita FP vibra FP hincha	A hincha F A calma F A presiona F A sacude FP A perturbe FP A sosega FP A comprime FP A crece FP A relaja F A conmueve FP

Looking at the three parameters of the motion taxonomy showed interesting tendencies. Considering the parameter Cause, there were twice as many MEMs based on caused motion than on uncaused motion (106 vs. 55).

The parameter Boundedness, showed a more even distribution (86 bounded vs. 75 unbounded motion). The three languages were very similar in their distributions with respect to these two

parameters. In table 8 is given an overview in the three languages sorted per parameter and figure.

Table 8. Overview of MEMs in the three languages per motion situation parameter and figure.

Parameter	English	Swedish	Spanish	Total
Total MEMs	54	48	59	161
Translocative motion	22	17	30	69
Non-translocative motion	32	31	29	92
Bounded	31	23	32	86
Unbounded	23	25	27	75
Caused motion	36	30	40	106
Uncaused motion	18	18	19	55
Figure = Self	38	28	28	94
Figure = Part of Self	16	20	31	67

For the third parameter, however, there was a difference: in total, 92 MEMs were non-translocative vs. 69 translocative motion metaphors. Here Swedish and English differed from Spanish, with more instances of non-translocative motion while Spanish had a rather equal distribution as illustrated in figure 1.
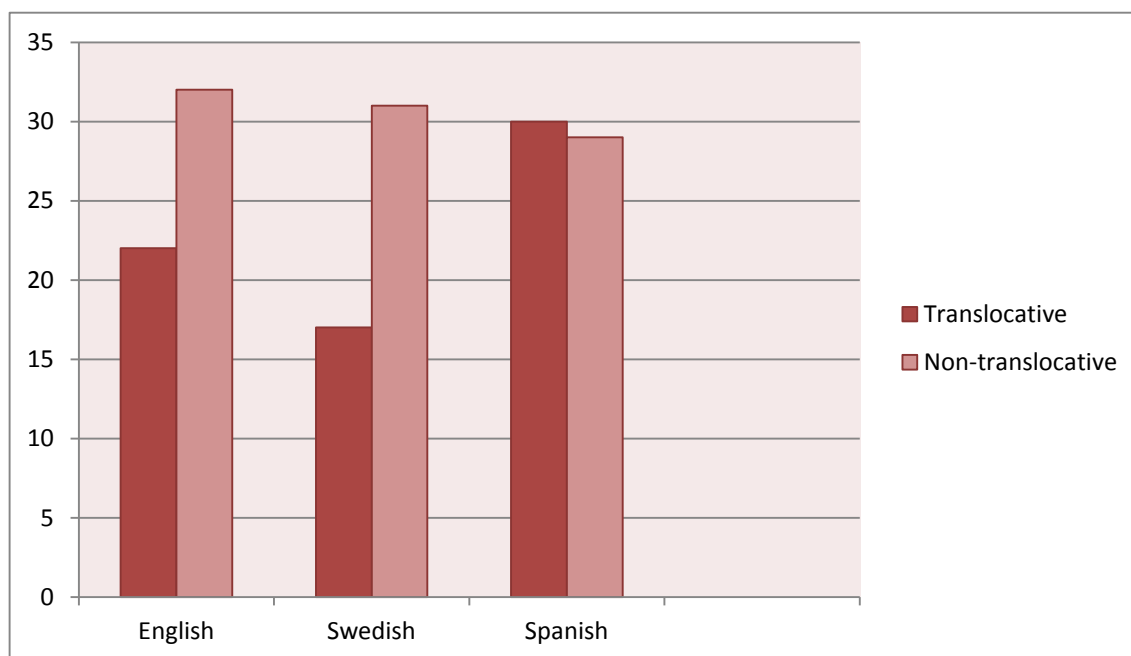

Figure 1. Distribution of MEMs based on translocative vs. non-translocative motion in English, Swedish and Spanish.

5.2 The three hypotheses

Section 3 formulated three basic hypotheses, based on the different perspectives on metaphor in cognitive linguistics, outlined in Section 2.1. The first hypothesis (*Universality*) predicted that there should considerable overlap between the three languages based on the universality of primary conceptual metaphors. The theory that underlies this hypothesis (Grady, 1997; Lakoff and Johnson, 1999) applies to the conceptual level, and does not make any distinctions on the level of linguistic expressions, so this hypothesis was only evaluated on the coarse-grained level, i.e. without considering whether the figure corresponded to self or part of self. 22 MLTs were represented by MEMs in all three languages. Table 9 shows 17 MLTs, grouping 56 MEMs, categorised by what could be seen as corresponding to "primary metaphors" in the first column in Table 9.

Table 9. MEMs attested with examples in all three languages, with hypothetical "primary metaphors".

"Primary metaphor"	MLT	English	Swedish	Spanish
MIND IS BODY	CALM X	calms F	lugnar F	calma F sosega FP
HAPPY IS UP	RISE	FP rises	FP stiger	FP sube
	LIFT X UP	F is uplifted	F upplyfts	levanta FP
SAD IS DOWN	FALL/DROP	FP drops	FP faller	FP se cae
	SINK INTO	F sinks into LM	F sjunker ned i LM	F hunde en LM
DESIRE IS ATTRACTION	ATTRACT X	attract F	attraherar F tilldragande F	atrae F
DISLIKE IS REPULSION	REPEL X	repels F	stöter bort F är frånstötande F	repele F
UNCOMFORT IS PRESSURE	PRESS X	presses F	pressar F	presiona F
	STIR X	stirs F	upprör F	conmueve FP
UNEASE IS COMMOTION	SHAKE X	shakes F	(om)skakar F	sacude FP
GRIEF IS DESTRUCTION	TEAR X APART	tears F apart	sliter sönder F	destroza F
	CRUSH X	shatters F	krossar FP	aplasta F
	BREAK X	breaks FP	knäcker FP	rompe FP parte FP
	BREAK	FP breaks	FP brister	FP se rompe
	BREAK DOWN	F breaks down F collapses	F rasar ihop	F se desploma
	EXPLODE X	explodes F	exploderar F	estalla FP
	BURST X	bursts F	spricker F	revienta F

As can be seen in Table 9, there is considerable systematicity, with contrasts UP/DOWN, ATTRACT/REPULSE, and increasingly negative emotions, with more intense form of (com)motion. These findings are similar to that of Table 6 in Zlatev et al. (2012), where the MEMs in the analyzed languages' overlap could be analyzed as (possibly universal) experiential motivations.

However, having MEMs for all three languages in the same MLT did not always indicate a (possibly) universal bodily experience, but rather suggested more culturally-specific motivations. The MEMs in Table 10 are of this kind. OPEN/CLOSE and GIVE may be universal human actions, but what the respective MEMs involve are always body-parts (above all: the "heart") which only make sense in certain cultural models. The last two cases involve the self as figure, but it would be an overgeneralization to propose corresponding primary metaphors like HAPPINESS IS LARGER SIZE.

Table 10. MEMs attested with examples in all three languages, with culturally motivated metaphors.

"Culturally motivated metaphors"	MLT	English	Swedish	Spanish
OPEN/CLOSE BODY PART	OPEN X	open FP	öppnar FP	abre FP
	CLOSE X	closes FP	stänger FP	cierra FP
GIVE BODY PART TO X	GIVE X TO	gives FP to LM	skänker FP till LM	entrega FP a LM
DRIVE FIGURE TO SADNESS/HAPPINESS	MOVE X TO	moves F to LM	rör F till LM	se mueve F a LM
INCREASE IN SIZE	SWELL	F swells	F sväller	FP hincha

Despite this reservation, it should be acknowledged that the overlap between the three languages (using the MLT scheme) was considerable: the 22 MLTs in Table 9 and 10, represent 26% of the total 84 MLTs.

The second hypothesis (*Discourse metaphors*) predicted that there should be many MEMs that are specific for each of the three languages, with no correspondence in the other two languages. Since this is a prediction deriving from the perspective of discourse metaphors (Zinken 2007), it is motivated to attest its validity both on the course-grained and the fine-grained levels, i.e. with and without making the distinction between self and part-of-self-figures. Figure 2 shows the distribution of language-specific metaphors for the three languages.
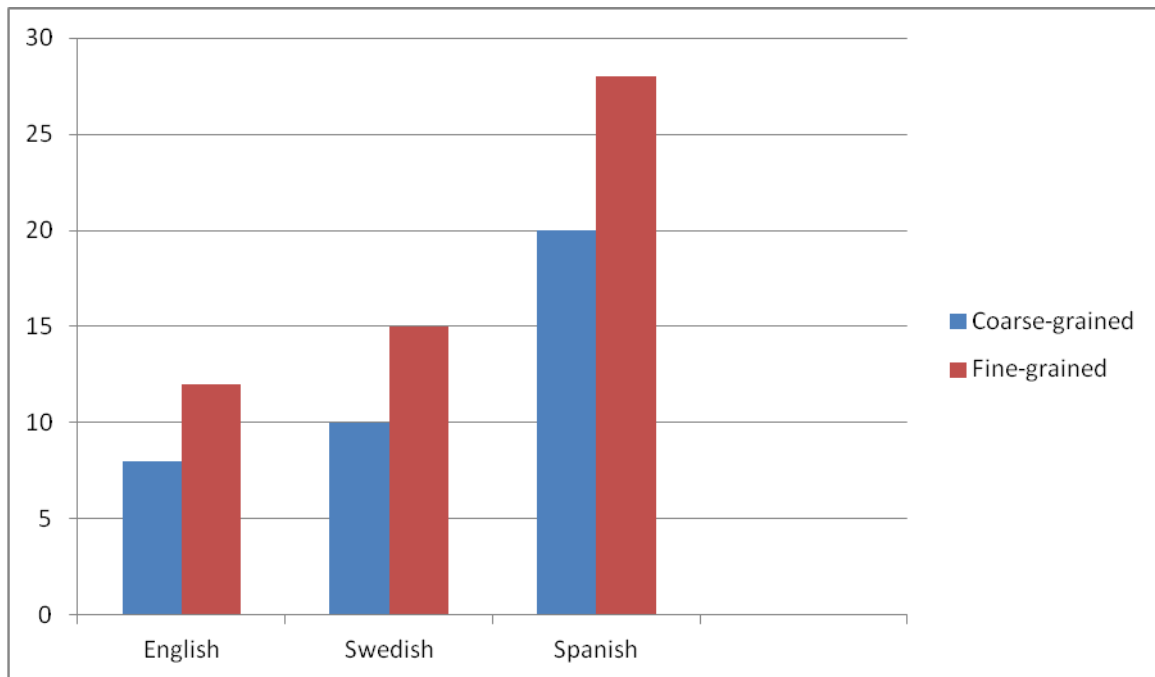
Figure 2. Language-specific metaphors in English, Swedish, and Spanish on the course-grained (blue) and fine-grained (red) levels

On the coarse-grained level, English showed the smallest number of specific MEMs (=8), followed by Swedish (=10) and then a much more extensive jump to Spanish (=20). On the fine grained level, the difference between English and Swedish was similar as the coarse-grained (12 and 15 respectively), while Spanish was again nearly double (=28). When the fine-grained language-specific metaphors were further analyzed, it transpired that the numbers were the same for the case Figure=self (8 English, 8 Swedish, 8 Spanish). On the other hand, for Figure=part of self, the differences between English (=4), and Swedish (=7), on the one hand, and Spanish (=20) were remarkable. Examples of the specific MEMs are given below; English ones (64-66); Swedish (67-69) and Spanish (70-72).

(64)   His bad manners **put** *me* **off**.

(65)   *I* **'m blown away** by her beauty!

(66)   Their threats made *me* **shrink.**

(67)   *Hans humör*   **svajar**   på ett oberäkneligt sätt.
         His   humour swing.3SG.PRS on an unpredictable way.
         His humour swings in an unpredictable way.

(68)   *M*itt hjärta **gick**   **vilse**   i natt-en.

          My heart go.3SG.PST astray in night-DET.DEF.

(69)   *Han* börja-de   **vackla** under motståndare-n-s   argument.

          He   start-3SG.PST totter   under opponent-DET.DEF-PL arguments.

          He started to totter under the arguments of the opponent.

(70)   *Mi corazón* se **fue**   **trás** de tí.

          My heart   REFL go.3SG.PST after of you.

          My heart went after you

(71)   Se   me **salía**   *el*   *corazón* de alegría.

          REFL mi leave.3SG.PST DET.DEF heart   by joy.

          My heart went out with joy

(72)   *Me* estás   **hinchando**.

          Me be.2SG.PRS swelling.

          You are annoying me.

In sum, the existence of language-specific, or at least non-overlapping metaphors, in the three languages gives some support for the second hypothesis. Still, these were less than the MEMs that overlapped, with one or both other languages.

The third hypothesis (*Interactionism*) predicted that there should be a certain degree of overlap between the motion-emotion metaphors of all three languages, with most overlap between English and Swedish, which are most closely related, genealogically, areally and typologically. Less overlap was expected between English and Spanish, but still more than between Swedish and Spanish, due to more language contact between English and the Romance languages. As with the second hypothesis, this hypothesis was evaluated on both levels. The comparison was done exclusively using the MLT scheme (Section 4.4).

On the course-grained level, English was represented by 52, Swedish by 45 and Spanish by 55 MLTs. The result shows that, contrary to expectation, the overlap was as strong between English and Spanish (33 shared MLT) as between English and Swedish (33 shared MLTs). As expected, the overlap between Spanish and Swedish was the smallest (24 MLTs). When analyzed overall on the fine-grained level, the results were similar. The strongest overlap was between English and Swedish (29 MLTs), but very closely followed by English and Spanish (26) and considerably less between Swedish and Spanish (17).

In sum, in line with the hypothesis, the overlap in MEMs between Swedish and Spanish was the least, but the overlap between English and Spanish was greater than predicted, basically on the same levels as that between English and Swedish. However, when these findings are combined with the analysis of language-specific metaphors, as shown in Figure 1, Spanish indeed appears as more distinct from English and Swedish, that are closer to each other.

5.3 Discussion

The result of the analysis of MEMs in English, Swedish and Spanish showed that there are both considerable similarities, but also important differences. As a whole, the findings offered partial support for all three hypotheses. The overlap in all three languages in some cases of hypothetical primary metaphors (see Table 9), supports the idea that linguistic metaphors are motivated by more general conceptual structures, and that basic bodily experiences give rise to basic image schemas and (analogical) mapping across experiential domains. However, these fully overlapping MEMs constituted a minority.

Looking at the differences, out of the total 161 MEMs, 55 were found to be specific to each one of the three languages. This tendency was strongest for Spanish (48 %), followed by Swedish (31%) and English (22 %), of the number of total metaphors in each language. This finding supports the idea that at least some metaphorical expressions arise from culture-specific discourse practices, as claimed by e.g. Zinken (2007). It also gives some credibility to that idea that (some) emotion concepts are social and cultural constructions.

Considering the similarities and differences together, Swedish was found to share the fewest MEMs with Spanish, as expected from an interactionist perspective. The overlap between English and Swedish being nearly the same as English and Spanish, was rather surprising.
The reason for this might be a greater effect of *cultural* interaction than expected. The often intensive contacts in trade and war between England and the Romance cultures, and Spain in particular, might be responsible for this. Still, there was evidence that in several respects (as the number of language-specific metaphors) Spanish is the "outlier" of the three languages

Another indication for this is that both English and Swedish had a majority of figure-as-self metaphors: 37 (71%) for English, and 26 (59 %) for Swedish. Spanish, on the other hand, had an equal distribution: 28 (self) vs. 29 (part of self). Of the latter, 21 involved *corazón* ('heart'); 4 *espíritu/ánimo* ('spirits'), 1 *humor* ('mood'), 1 *pecho* ('breast')*,* 1 *lágrimas* ('tears') and 1 *demonios* ('demons').[2] A possible cultural factor at play here could be the influence of various religious traditions. The Catholic Church uses a highly metaphoric language, with "heart" taking a central place, as in the devotion to the *Sacred Heart* referring to the heart of Jesus as a representation of his divine love for humanity. On the other hand, the Protestant Church is known for its more scaled-down, down to earth practice and language.

Taken together, the various results of similarities and differences between the three languages largely support an extended version of the interactionist view held by Zlatev et al. (2012): interaction between consciousness and language use, and interaction between cultures, so that the closer languages are genealogically and geographically, the larger the overlap between the metaphors is to be expected. In another publication Zlatev (2011) connects this to the *Integral Linguistics* of Coşeriu (1985). Zlatev cites Coşeriu's well-known "matrix", crossing three levels of language with three different points of view on language, shown in Table 11.

Table 11. Coşeriu's matrix, showing three levels of language crossed with three points of view (Coşeriu, 1985: xxix).

Levels	Activity	Knowledge	Product
Universal	Speaking in general	Elocutional knowledge	Totality of utterances
Historical	Concrete particular language	Idiomatic knowledge	(abstracted particular language)
Individual	Individual discourse	Expressive knowledge	Text

The three levels of language are showed in the vertical direction, and the perspectives on the horizontal. On the universal level, we have the activity of speaking and understanding language in general, general knowledge of the world and the "totality of utterances". On the historical level we find particular languages like English, Swedish and Spanish, with the creative activity of using a particular language (and during that process changing it); in the next column what is specific linguistically and culturally to that language and in the third

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[2] An interlocutor commented this as follows: "Spanish is a Romance language and as such is very romantic with the heart taking a central role".

column the abstracted "lexicon and grammar", which is only a shadow of the living language. Finally on the lowest level, the individual level, we have the individual speaking acts as well as the expressive knowledge used for this and the product saved, being text.

Zlatev (2011) proposes a creative combination of ideas from cognitive linguistics with integral linguistics, suggesting that all three perspectives on metaphor reviewed in Section 2.1 (and serving as the basis for this study), can be seen as compatible – if regarded as representing different levels of Coşeriu's matrix. For example, the analogical schemes underlying metaphors emphasized by Lakoff and Johnson (1999) can be seen as processes on the universal level, while the language-based metaphors (Zinken, 2007), can be found on the historical level. The same goes for the emotion concepts, with basic bodily experiences giving rise to basic image schemas (Kövesces, 2000) on the universal level and emotion concepts as social and cultural constructions (Heider, 1991) on the historical level. Coşeriu's emphasis on the creativity and interaction between the various levels is fully compatible with the kind of interactionism proposed by Zlatev et al. (2012) and Sanford (2013). Applying these ideas to the results of this study give a rather coherent and explicatory view on the similarities and differences of the motion-emotion metaphors in the three languages.

6 Conclusions and further research

This thesis has investigated how three European languages, English, Swedish and Spanish, standing to one another in degrees of genealogical, geographical and cultural proximity, express motion-emotion metaphors (MEMs) like (73).

(73)   You move me!

The study followed the path laid down by Zlatev et al. (2012), but endeavored to make the comparison more systematic, by (a) using a clear procedure, described in Section 4, and (b) attesting all MEMs in corpora and dictionaries. Comparison between the MEMs in the three languages was improved by using a Meta-Language Scheme.

By comparing the source domains concepts of the MEMs, we showed a considerable degree of overlap, especially with respect to basic physical concepts like VERTICALITY and DESTRUCTION, thus supporting to some extent universalist theories like the conceptual metaphor theory. The differences between the languages, on the other hand, gave support to a more culturist approach to metaphor and emotion (Heider 1991; Zinken 2007). This dialectic tension could be resolved through a consciousness-language-culture interactionist model, pointing to a mutual interdependence and influence between the various theories. Such account might be compatible with Coşeriu's integral linguistics, suggesting a way to resolve long-standing debates concerning metaphors, and language in general.

In further investigations of the various factors influencing the production and use of motion-emotion metaphors there are at least two possible directions. The first direction is to continue the inter-language comparisons of languages of different genealogical, geographical and cultural backgrounds. It would be informative to compare the Western European languages analyzed here with Finnish-Ugric languages (e.g. Finnish, Estonian) as well as East Asian languages (e.g. Chinese Mandarin and Vietnamese), as well as with Slavic languages. Hopefully, the procedure developed in this thesis could be of use in this.

The second direction is to dwell deeper into the English, Swedish and Spanish languages in an intra-language comparison. This could exclude the genealogical part, and focus on the

geographical and cultural factors. For English this would mean to look at the so called "inner wheel" of English speaking countries: UK, USA, Australia, South Africa (cf. Svartvik 1999), as well as a fifth group from the "outer wheel" (India). This comprises five very interesting linguistic and cultural groups to compare with respect to motion-emotion metaphors. Analogously, for Swedish it would be interesting to compare Swedish spoken in Sweden and the Swedish spoken in Finland ("Finlandssvenska"). Finally for Spanish a possible set up would be to compare the following four large groups: (a) Spanish in Spain, (b) Spanish in southern Latin America; Argentina, Chile and Uruguay, (c) Spanish in the Andean countries; Perú, Ecuador and Bolivia, (d) Spanish in northern Latin America; Colombia and Venezuela. A special comparison could also be made between Spanish and Portuguese, two languages that share many genealogical, geographical and cultural features, but are still importantly different.

In an interactionist account of motion-emotion metaphors, many possible factors related to cognition, culture, history, contacts and discourse practices are expected to have an effect. Thus, future comparative studies, such as those outlined above, are needed in order to give us insights on the nature of these complex interactions.

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Appendix A. English motion-emotion metaphors database. The MEMs are classified in motion situation types, and with numbers used for indexing.

Uncaused motion		
	Self is figure	**Part of self is figure**
+translocative/ +bound	(1) *I* **fell into** a state of depression. (2) *He* **plunged into** despair. (42) But suddenly today *I* **sunk into** a horrible and deep form of painful depression. (43) Beautiful women of today will hold back from turning their beauty and charm on full to keep unwanted *males* from **falling under** their charm.	(44) And with her *my heart* **had disappeared**.
+translocative/ -bound		(7) *My spirit* **soared**. (8) *Her mood* is **rising**. (9) *My heart* just **sank**. (11) I have a **creeping** *feeling* that this is not going to work. (10) *My heart* **dropped**.
-translocative /+bound	(18) *I* **broke down** under the pressure. (19) *She* **collapsed** and started crying. (21) *He* **exploded** and started swearing.	(20) *My heart* **broke**. (47) Everything in *me* **collapsed**. (48) I didn't really never wanna see you again and *my heart* **caves in** when I look at you.
-translocative/ -bound	(31) *He* **swelled** with pride.	(32) The sound of his voice in the hall made *her heart* **flutter**.
Caused motion		
+translocative/ +bound	(3) He **moved** *me* **to** tears. (4) She **drove** *me* **to** despair. (5) He **brought** *me* **to** a craze. (6) Her story: Losing my mother **led** *me* **to** happiness**.**	(45) **Give** your *heart* **to** love.

+translocative/ -bound	(12) *I* was **downcast** by the whole situation. (13) *I* was **pulled** by her smile. (14) *She* was **attracted** by the sound of his voice. (15) His expression **repelled** *me*. (16) *I* felt **uplifted** by what he said. (52) *I* got **carried away** by your enthusiasm. (17) *I* **'m blown away** by her beauty! As for her hair - perfection!	
-translocative/ +bound	(22) His bad manners **put** *me* **off**. (23) *I* was **thrown off** my feet. (24) *She* was **upset**. (25) *I* was just **shattered**. (26) She **knocked** *me* off my feet. (27) You **knock** *me* **out**. (28) She just **floored** *me*. (29) The injustice will **tear** *you* **apart**. (54) *My parents* were **bursting with** pride when I graduated from college. (55) *Oscar Pistorius* has reportedly "**exploded with** anger"... when asked how he was doing just days...	(49) **Open** your *heart* **to** love. (50) **Close** your *heart* **to** sadness. (51) **Release** your *heart*. (30) An open letter to the woman who b**roke** my *heart*. (53) You've **captured** my *heart*.
-translocative/ -bound	(41) *I* was slightly **perturbed** by the frenetic, obsessive surge of emotionalism that the installation invoked. (33) Their threats made *me* **shrink**. (34) *I* was **pressed** by the circumstances. (35) *I* was **moved** by her story. (36) *I* was **shaken** by the news. (37) It **stirred** *me* deeply. (38) *I* was **agitated** by the film. (40) The music **relaxed** *me* fully. (39) The music **calmed** *me*.	

Appendix B. Swedish motion-emotion metaphors database. The MEMs are classified in motion situation types, and with numbers used for indexing.

Uncaused motion		
	Self is figure	**Part of self is figure**
+translocative/ +bound	(36) Begär du verkligen på största allvar att jag ska vara helnöjd med att se *honom* **sjunka ned i** depression mer och mer för varje dag som går? (sink down into)	(45) Jag gav henne ringen och det kändes som om också hälften av *mitt hjärta* **försvann.** (disappear)
+translocative/ -bound		(2) Mitt *humö*r **steg**. (rise) (3) Mitt *humör* **sjönk**. (sink) (40) Jag hade en **krypande** *känsla* av obehag. ('creeping') (37) Varje gång jag tänker på dig med någon annan känns det som att mitt *hjärta* **faller**. (fall)
-translocative/ +bound	(6) När allt hängde upp sig **flög** *han* **i** luften. (blow up) (22) *Han* **bröt ihop** under begravningen. (collapse) (21) *Hon* **rasar ihop**. (break down) (50) Sker inte det jag önskar blir *jag* till slut vansinnig och **exploderar**.	(7) *Mitt hjärta* **brast**.(break)
-translocative/ -bound	(13) *Hon* **svävar** av lycka. (hover) (23) *Han* **sväller** av stolthet. (swells) (48) *Maria* **kopplar av** med resor. (disconnect)	(12) *Hans humör* **svajar** på ett oberäkneligt sätt. (sway) (24) M*itt hjärta* **gick vilse** i natten. (go astray) (33) *Hjärtat* **klappar** för kärleken på denna vår jord. (beat) (34) Mitt *hjärta* **växer** för att jag älskar er . . . (grow)
Caused motion		
+translocative/ +bound	(18) Hennes sätt kan **driva** *mig* **till** vansinne. (drive to) (1) *Han* **kastades ner i** en djup depression. (throw down into) (17) Han **rör** *henne* till tårar (move to tears)	(47) Anna Henderson var typen som **skänkte** sitt *hjärta* **till** den hon älskade och sådana kvinnor höll sig Cesare på behörigt av stånd ifrån. (give to)

+translocative/ -bound	(4) *Jag* **trycktes ner** av omständigheterna. (press down). (5) Hans röst kan **stöta bort** *vem som helst*. (repel) (41) Hon hade ett **tilldragande** sätt. (attracting) (42) Hans utseende är **frånstötande.** (repelling) (19) Hennes röst **attraherade** *mig*. (attract)	(43) Vi fick lyssna till en **upplyftande** predikan. ('uplifting') (46) För övrigt kan jag säga att *alla mina känslor* **är bortblåsta** efter att jag märkt att hon är så dryg och tråkig nu på sistone. (blow away)
-translocative/ +bound	(8) Hennes skönhet **knockade** *mig*. (knock down) (9) Hennes beteende fullständigt **golvade** *honom*. (floor) (26) *Jag* **slets sönder** av tvivel på hennes kärlek. (tear apart) (29) *...holländaren* **exploderade** av glädje när han gjorde målet. (explode) (30) **Släpp** *mig* **fri** från känslan att bli retad. (release) (49) **Spricker** *du* **av** glädje när det närmar sig jul?	(10) Hon **krossade** mitt *hjärta*. (crush) (11) Misslyckandet **knäckte** min *självkänsla*. (break) (27) Så här **fångar** man mitt *hjärta*. (capture) (28) Hennes röst **sliter** *mitt hjärta* i stycken**. (tear apart) (31) **öppna** sina *hjärtan* för att söka efter och välja kärleken. (open heart) (32) Människor har utnyttjat mig under mitt liv och därför har jag **stängt** mitt *hjärta* för alla. (close heart)
-translocative/ -bound	(14) Jag **lugnade** *mig*. (calm) (16) *Jag* var djupt (**om**)**skakad**. (shaken) (15) Hans handling **upprörde** *mig*. (stir) (20) Hans sätt **rör** *mig*. (move) (39) *Pressar* man *honom* för hårt blir han aggressiv och hotfull. (press) (25) *Han* började **vackla** under motståndarens argument. (totter)	(44) – Jag trodde livet var slut. Hela *min självkänsla* **rubbades** och jag fick börja om från noll igen, säger Martin. (dislodge)

Appendix C. Spanish motion-emotion metaphors database. The MEMs are classified in motion situation types, and with numbers used for indexing.

Uncaused motion		
	Self is figure	**Part of self is figure**
+translocative/ +bound	(1) ..., y **caigo en** una tristeza infinita. ..., fall.1SG.PRES in a sadness endless. ..., and I fall into an endless sadness.	(5) *Mi corazón* se **fué trás** de tí. My heart REFL go.3SG.PRET after of you. My heart went after you.
	(2) ...cuando *se* sintió **hundir en** un abismo de desesperanza. ...when herself feel.3SG.PRET sink into an abyss of despair. ...when she felt sink(-ing) into an abyss of despair.	(41) *Mi corazón* se **cae a** pedazos por no tenerte entre mis brazos. my heart REFL falls into piece.PL for not have.you between my arm.PL my heart falls into pieces for not having you in my arms.
	(3) ...y volviéronse a **sumergir en** su negra melancolía. ...and return.3PL.PRET to plunge into their black melancholy. ... and they returned to plunge into their black melancholy.	
	(4) ...**caigo bajo** el poder de su encanto;... ...fall.1SG.PRES under power.DEF of his charm,... ...I fall under the power of his charm;...	
+ translocative/ -bound		(6) Sólo a José Pedro no le **subía** del todo *el humor*. Only for José Pedro not him rise.PAST at all humor.DEF. Only for José Pedro did the humor not rise at all.
		(7) ...me **levanta** *el ánimo*, que es más importante. ...myself rise.3SG.PRES spirit.DEF, which is more important. ...my spirits rise, which is more important.

		(42) Como abrí sin precaución tu carta, dueño querido, **se cayó** *tu corazón*;... as open.1SG.PRET without precaution your letter, master beloved, REFL fall.3SG.PRET your heart;... As I opened your letter without precaution, dear master, your heart fell;...
		(30) Se me **salía** *el corazón* de alegría. REFL mi leave.3SG.PAST heart.DEF by joy. My heart went out with joy.
-translocative/ +bound	(9) A punto de **reventar** abrí la boca y se me escapó un caudal de risas que inundó la pieza. On point to explode open.1SG.PRET mouth.DEF and me escape.3SG.PRET a torrent of laughter.PL that fill.3SG.PRET room.DEF. Just on the point to explode I opened my mouth and a torrent of laughter escaped and filled the room.	(57) El año en que se *mi corazón* **se rompió**. the year in which REFL my heart REFL break.3SG.PRET. The year that my heart broke.
	(10) Estoy cansada - musitó *Anudila*, a punto de **desplomarse** -, ¿ sabes? Be.1SG.PRES tired - mumble.1SG.PRET. to point of collapse.REFL - , know.2SG.PRES? I am tired - mumbled Anudila, on the verge to collapse -, you know?	
- translocative/ -bound		(12) Se me **encogió** *el corazón*. REFL me shrink.3SG.PRET heart.DEF. My heart shrank.
		(13)Un corazón que anda bien, jadeante, *un corazón* que **aletea** y se fuga, que se desgarra, que se contrae con la sospecha,

		con el terror de las...
		A heart that go.3SG.PRES well, breathless, a heart that flutter.3SG.PRES and that RELF escape.3SG.PRES. that contract.3SG.PRES. with suspicion.DEF, with terror.DEF of the...
		A heart that works well, breathlessly, a heart that flutters and that escapes, that breaks, that contracts with the suspicion, with the terror of the...
		(11) *Mi corazón* se **agitó**. My heart REFL stir.3SG.PRET My heart was stirred.
		(46) Luis sintió **palpitar** *su corazón* de un modo desusado, y que una nube cubría sus ojos. Luis feel.3SG.PRET beat his heart of a manner unused, and that a cloud cover.3SG.PAST his eye.PL. Luis felt his heart throb/beat in an unusual way and that a cloud covered his eyes.
		(53) *Mi corazón* **vibra** con la música, una buena peli, el amor y ante una hermosa mujer,,,, my heart pulsate.3SG.PRES with the music, a good movie, the love and before a beautiful woman... my heart pulsates with the music, a good movie, the love and before a beautiful woman...
		(63) **Hincha** *el pecho* de Udaeta cuando dice que « hemos logrado un importante patrocinio privado:... Swell.3SG.PRES breast.DEF GEN Udaeta when say.3SG.PRES that "have.1PL.PRES. succeed.PERF an important support private:... Udaeta's breast swells when he says that "we have succeeded to get an important private support:...

	Caused motion	
+translocative/ +bound	(14) ...y eso *nos* puede **llevar a** engaño, y a envanecernos. ...and this us can.1SG.PRES bring to delusion, and conceit us. ...and this can bring us to delusion, and to make us conceited.	(20) *El corazón* me **bajó a** los talones y allí se puso a palpitar como loco. Heart.DEF me bring.3SG.PRET down to heel.PL.DEF and there REFL put.3SG.PRET to beat as mad. My heart dropped to my heels and started to beat madly.
	(16) ... capaz de **conducir a** una tristeza también sin fin? ...able to lead to a sadness also without end? ...able to lead to an also endless sorrow?	(15)Se me **llevaron** *los demonios* cuando vi que me habías manchado el vestido nuevo. REFL myself take away3PL.PRET devil.PL.DEF when I saw that you had soiled my new dress. I went mad when I saw that you had soiled my new dress.
	(17) El desastre *le* **sumió en** la tristeza. Disaster.DEF him plunge.3SG.PRET into sadness.DEF. The disaster plunged him into sadness.	(23) Niño brasileño **arranca** *lágrimas* de emoción al papa Francisco. Child.MASC brasilian pull.3SG.PRES tear.PL of emotion to pope Francisco. Brasilian boy moves Pope Francisco into tears.
	(18) ...serían capaces de **conmover hasta** *las lágrimas*,... ...be.3PL.COND able to move upto tear.PL.DEF,... ..they would be able to move even to tears,...	(56) Los poemas de juventud de Nobel hablan de una chica buena y bonita que le **entregó** *su corazón*,... the poem.PL of youth of Nobel talk.3PL.PRES of a girl good and beautiful that him give.3SG.PRET her heart,... Nobel's youth poems talk about a good and beautiful girl that gave him her heart,...
	(19) La denuncia del complot a mí *me* **mueve a** risa. Denunciation.DEF of conspiracy.DEF to me me move.3SG to laugh. The denunciation of the conspiracy makes me laugh.	51) Si pudiera abrir el pecho, **sacar** *el corazón* y ponerlo ante vuestros ojos, veríais cómo estabais allí, presente siempre en mis sentimientos y en mi vida;... if can.1SG.PRES.SBJV open the breast, extract the heart and put.it before you.2PL.POSS eye.PL, see.2PL.COND how be.2PL.PAST there, present always in my feeling.PL and in my life;...

		If I could open my breast, take out my heart and put it before your eyes, you would see how you were there, always present in my feelings and in my life;...
	(22) *Nos* **echamos a** reír. REFL throw.1PL.PRET to laugh. We burst out laughing.	(52) Cada llamado de ese origen inexplicablemente me hacía **saltar** *el corazón* **a** la garganta. each call from this source inexplicably me make.1SG.PAST jump my heart to the throat. each call from this inexplicable source made my heart jump to the throat.
	(21) *La* **sacudió** *a ella* **de** su depresión. 3SG.ACC.FEM shake.3SG.PRET to she of 3SG.POSS. depression He shook her out of her depression.	
+translocative/ -bound	(24) Se **puso** loco de ira. REFL put.3SG.PRET of rage. He went mad with rage.	(29) ...la visión de un cuadro puede **levantar** *el espíritu*. ...sight.DEF of a painting can.3SG.PRES lift mind/spirit/soul.DEF. ...the sight of a painting can lift the mind/soul/spirit.
	(25) **Está transportado** de amor. Be.3SG.PRES carry.PERF by love. He is carried away by love.	
	(26) *Le* **arrastró** una oleada de pasión. Him drag.3SG.PRET a wave of passion. A wave of passion dragged him.	
	(27) Y la amo con frenesí, con locura, como a una coqueta casquivana que *me* **atrae**, me repele, me acaricia y me burla a un mismo tiempo... And her love.1SG.PRES with frenzy, with madness, like a coquette scatterbrained that me attract.3SG.PRES, me repel.3SG.PRES, me caress.3SG.PRES and me deceive.3SG.PRES at a same time... And I love with frenzy, with madness, like a scatterbrained coquette that attracts me, repels me, caresses me and deceives me at	

	the same time...	
	(28) Y la amo con frenesí, con locura, como a una coqueta casquivana que me atrae, *me* **repele**, me acaricia y me burla a un mismo tiempo... And her love.1SG.PRES with frenzy, with madness, like a coquette scatterbrained that me attract.3SG.PRES, me repel.3SG.PRES, me caress.3SG.PRES and me deceive.3SG.PRES at a same time... And I love her with frenzy, with madness, like a scatterbrained coquette that attracts me, repels me, caresses me and deceives me at the same time...	
	(60) **Estoy abatido** por el dolor. Be.1SG.PRES downcast for pain.DEF.SG I am downcast because of the pain.	
-translocative/ **+bound**	(31) Te vas a enfrentar con gente inteligente, ...con abogados que te van a pasar por encima, que *te* van a **destrozar**! You go.2SG.PRES meet with people intelligent, ...with lawyers.PL that you go.3PL.PRES. to pass above, that you go.3PL.PRES to tear apart! You will encounter smart people, ...with lawyers that will pass above you, that will tear you apart!	(34) ...queréis **romper** *mi corazón* como una frágil caña... ...want.2PL.FUT break my heart like a fragile reed--- ...you would want to break my heart like a fragile reed..
	(32) *El pobre tío Robustiano* creyó **reventar de** orgullo y alegría al ver y oír aquello,... Poor uncle.DEF Robustiano believe.3SG.PRET burst/explode with pride and joy when see and hear that,... Poor uncle Robustiano thought he should burst with pride and joy when seeing and hearing that,...	(47) ...; brota en mi alma una llama abrasadora, que inflama mi sangre y hará **estallar** *el corazón*,... ; appear.3SG.PRES in my soul a flame burning, that ignite.3SG.PRES my blood and will make explode up the heart. ; appears in my soul a burning flame that ignites my blood and will blow my heart up;...

	(33) Nunca *te* dejes **abatir** por una negativa. Never 2SG.REFL let.2SG.PRES knock down by a negative. Never be discouraged by a negative.	45) ...; ahí las hijas, antes de **abrir** *su corazón* **a** la ternura de un hombre,... ..; there the daughter.PL, before open their heart to the tenderness of a man;... there the daughters, before opening their heart to a man's tenderness;...
	(62) *Me* **aplasta** la tranquilidad. Me crush.3SG.PRES tranquility.DEF. The tranquility crushes me.	(54) Pero yo luché, y al cabo de poco tiempo de ese empeño en **cerrar** *mi corazón* **a** las aficiones que pudieran llegar a dominarle,... but I fight.1SG.PRET, and at the end of little time of this undertaking in close my heart to the fondness.PL that can.3PL.SBJV.PAST come to dominate it,... But I fought, and after a short while of this undertaking in closing my heart to the fondness that could come to dominate it,...
	(59) Ese chico *me **vuelve** loca* . This guy me turn around.3SG.PRES mad. This guy drives me mad	(35) *El corazón* se me **parte** de dolor y sentimiento al ver que estás en el mundo... Heart.DEF REFL me split.3SG.PRES of pain and emotion to seeing.DEF that be.2SG,PRES in world.DEF... My heart breaks of pain and emotion seeing that you are in the world...
- translocative/ -bound	(37) *Me* estás **hinchando**. Me be.2SG.PRES swelling. You are annoying me.	(40) Su muerte **sacudió** *mi ánimo*. Her death shake.3SG.PRET my spirit. Her death shook my spirit/mood.
	(38) La mayoría trataba de **calmar***me* **con** una sonrisa condescendiente. Majority.DEF try.3SG.PAST to calm me with a smile kind. The majority tried to calm me with a kind smile.	(43) Bien me he dado cuenta de ello ayer, cuando te complaciste en **perturbar** *mi espíritu*;... Well me have given notice of that yesterday, when yourself satisfy.2SG.PRET in disturb my spirit; Well I noticed that yesterday, when you satisfied yourself by disturbing my spirit;...
	(39) Las voces de su interior *lo* **presionaron**. Voice.PL.DEF of his inside him press.3PL.PRET.	(48) No acababan de alegrarse, de mirarle, de satisfacer y **sosegar** *el corazón* lleno de amor y de ternura. not finish.3PL.PAST to be happy, to look.him,

	His inner voices pressed him.	to satisfy and appease the heart full of love and tenderness. They didn't finish to rejoice, to look at him, to satisfy and appease their hearts full of love and tenderness.
	(64) *Me* **relaja** mucho la música de Deadmau5. Me relax.3SG.PRES much music.DEF of Deadmau5. Deadmau5's music relaxes me a lot.	(49) ..., - es poco la cabeza miserable para contener nuestro cerebro roto, es poco el pecho necio para **comprimir** *el corazón* despedazado;... ...; is little the head miserable to hold our brain broken, is little the breast stupid to compress the heart piecebroken;... ...; too little the miserable head to hold our broken brain, to little the stupid breast to compress the pieces of the heart;...
		(36) ...que el sitio y la hora sean oportunos para **conmover** *el ánimo*... ...that place.DEF and time.DEF be.3PL.PRES.SUBJ suitable to move/upset/affect spirit.DEF... ...that the place and time would be suitable to move/upset/affect the spirit...
		(50) ...;os alumbra y os hace **crecer** *el corazón* que es la sombra del amor. ...;you.2PL illuminate.3SG.PRES and you.2SG make.3SG.PRES grow the heart that is the shadow of the love. ...;illuminates you and makes your hearts grow, the heart that is the shadow of love.