

LANGUAGE



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Is Emotion a Moved or a Self-moving Object? The Concepts of Motion and Emotion in English Metaphors from a Frame-semantic and Lexico-grammatical Perspective: A Case Study of the Verb *stir*

Abstract. The aim of the paper is to offer a corpus-based, frame-semantic and lexico-grammatical analysis of metaphorical linguistic expressions that employ the verb *stir* to conceptualize emotions. The study reveals that *stir*, when used metaphorically in the conceptualization of a range of human emotions, participates in a causative-inchoative alternation. All the corpus examples were annotated according to the frame elements expressed by particular constituents, their grammatical function and phrase type. We have also analysed the metaphorical expressions with respect to +/- caused parameter of the motion taxonomy, as proposed by Zlatev, Blomberg and Magnusson (2012). It has been demonstrated that the metaphorical linguistic expressions with the monovalent, anticausative *stir* instantiate the metaphor emotion is a self-moving object. The metaphorical use of the divalent, causative *stir*, on the other hand, can be interpreted according to the emotion is a moved object metaphor. It is believed that recognizing the interplay between these two perspectives of the motion-emotion metaphors can lead to a more comprehensive understanding of how emotions are experienced and how they affect our behavior.

Keywords: conceptual metaphor; corpus BNC; *stir*; lexico-grammatical approach; frame semantics; cooking techniques; causative-inchoative alternation; motion taxonomy; motion-emotion metaphor

1. Introduction

The phenomenon of metaphor, which can undoubtedly be viewed as a pervasive part of everyday communication, has puzzled linguistic scholars and philosophers for ages. Having become a trending issue in academic discourse, so far it has been offered many different accounts, being the subject of systematic study in a wide range of disciplines such as linguistics, literature, philosophy and psychology. Within the wide array of linguistic approaches to metaphor, Lakoff and Johnson's (1980, 2003) Conceptual Metaphor Theory (referred to as CMT) can be regarded as the most prominent theory in the history of metaphor research, where metaphor is believed to be understanding and experiencing one kind of thing, i.e. a target conceptual domain in terms of another, i.e. a source conceptual domain. The target domain **EMOTION** is unquestionably one of the most frequently studied concepts in metaphor research performed within the theoretical framework of Conceptual Metaphor Theory.

Several researchers have directed their attention to the metaphorical relationship of the concepts of motion and emotions (cf. Stefanowitsch 2007; Jacobsson 2015; Zlatev, Blomberg and David 2010; Zlatev, Blomberg and Magnusson 2012; Emanatian 1995; Kövecses, 2000, 2005; Yu 1995; Lee and Ji, 2014; Khatin-Zadeh et al. 2019). As pointed out by Woźny (2015), the relationship between the domains of motion and emotions has been attested across a number of languages by a multitude of conventional motion-emotion metaphors, as evidenced by the following examples:

- (1) She flew into a rage.
- (2) He fell in love.
- (3) Wpadł a w panikę. 'She fell into panic'
- (4) Doprowadził mnie do szalu. 'He brought me to rage'

We believe, however, that motion-emotion metaphors derived from verbs denoting a cooking activity has not received enough attention. For this reason, the present paper offers a case study of metaphors of emotions drawn from the verb *stir* from a frame-semantic and lexico-grammatical perspective¹. We will argue that metaphorical linguistic expressions with *stir* used to refer to the concept of emotions instantiate two kinds of conceptual metaphors, i.e. **EMOTION IS A MOVED OBJECT AND EMOTION IS A SELF-MOVING OBJECT**. The analysis of the metaphorical representation of *stir* carried out from a frame-semantic and lexico-grammatical perspective allows to yield a detailed picture of numerous nuances concerning some semantic and grammatical properties of the analysed verb, otherwise not accessible through CMT. Thus, we would like to correlate the instantiation of the metaphors **EMOTION IS A MOVED OBJECT** and **EMOTION IS A SELF-MOVING OBJECT** with the phenomenon of the causative-inchoative alternation, often referred to as the causative alternation (see Levin and Rappaport Hovav 1995), together with the taxonomy of motion situations, as proposed by Zlatev, Blomberg and Magnusson (2012).

¹ The analysis is partly based on my previous study of *stir* published in Izdebska (2019).

2. Data and methodology

The present study integrates findings from two theoretical frameworks, namely Lakoff and Johnson's (1980, 2003) Conceptual Metaphor Theory and Fillmore's (1975, 1976, 1977, 1982, 1985) Frame Semantics (FS). We believe that building a bridge between these two approaches allows us to offer a detailed account of the semantic and grammatical properties of the analysed verbs, which otherwise would not be possible solely within the framework of CMT, which, on the other hand, is well capable of capturing the conceptual structure of metaphors at a higher level of generality. The data for the study was obtained from the British National Corpus (BNC). We will also draw on FrameNet² for the definitions of the proposed frames as well as the methodology of a three-layered annotation scheme where all the metaphorical examples will be annotated according to the frame elements expressed by particular constituents, their grammatical function and phrase type³. Metaphor Identification Procedure (MIP) proposed by the Pragglejaz Group (Pragglejaz Group, 2007) will serve as a tool for identifying the metaphorically used words in the corpus. With the employment of Frame Semantics we will investigate the valency properties of the verb *stir* in terms of its semantic and syntactic valency. Since frame elements are believed to correspond to thematic relations, frame element annotation will make it possible to describe the semantic combinatory properties of the analysed verb. We will also characterize the verbal arguments of *stir* in terms of its grammatical function and category (phrase type). Unexpressed arguments will be described in terms of definite, indefinite or constructional null instantiation⁴. The paper will also employ the taxonomy of motion situations proposed by Zlatev, Blomberg and Magnusson (2012) who distinguish three parameters of motion: +/-translocative, +/-bound and +/-caused. We will draw on Woźny's (2015:132) definition of motion, understood as "a change of the position of an object"⁵. In the present paper a focus will be placed on the +/- caused parameter of motion, according to which two types of motion events can be distinguished, i.e. self-motion and caused motion. As pointed out by Zlatev, Blomberg and Magnusson (2012), the

² FrameNet is a lexical database of English, based on FS and supported by empirical corpus evidence from the English language corpora, primarily the British National Corpus.

³ In the approach adopted by the Framenet project, semantic roles are replaced with frame elements (FE), syntactic category is referred to as phrase type while syntactic function is called a grammatical function.

⁴ Null instantiation in FrameNet terminology could be explained as a lack of an explicit instantiation of a particular frame element. In other words, this means that a particular argument of a verb is not overtly expressed and is omitted. Ruppenhofer et al. (2016) distinguish three types of null instantiation with regard to the definiteness of the omitted argument: definite null instantiation (DNI), indefinite null instantiation (INI) and constructional null instantiation (CNI).

⁵ Offering a critical outlook on the definition of motion proposed by Zlatev, Blomberg and Magnusson (2012: 429) as "continuous change in the relative position of an object (the figure) against a background", Woźny (2015) suggested removing the words 'continuous', 'relative' and 'background' and proposed a revised version of motion.

notion of causality is understood with reference to the human lifeworld, which, in linguistics, is understood as the world as it is experienced and understood by individuals, as opposed to the scientific understanding of the universe. While in the case of self-motion (- caused) the moving body is its own motor, caused motion (+ caused), in contrast, implies external causation. We would like to argue that the +/-caused parameter of the motion taxonomy is correlated with the notion of transitivity alternation between causative verbs and their anticausative (inchoative) counterparts. This will be further elaborated on in the following section. The proposed conceptual metaphors, i.e. EMOTION IS A MOVED OBJECT and EMOTION IS A SELF-MOVING OBJECT will be described in terms of mappings between the source frame Motion and the target frame Emotion.

3. Findings and discussion

When *stir* is used to refer to the concept of emotions, it can be classified as belonging to the category of unaccusative verbs which participate in the causative-inchoative alternation, also often referred to as the causative alternation (see Levin and Rappaport Hovav 1995). The causative/inchoative alternation relates to pairs of verbs with transitive and intransitive uses which describe the same situation. While the causative variant has an agent as a subject, the inchoative variant can be characterised by the absence of the agent-related meaning component (cf. Levin and Rappaport Hovav 1995: 79–133; Haspelmath, 1993). Levin (1985, 1993), who provided a verb classification based on syntactic behaviours, describes the causative/inchoative alternation as characteristic of verbs of change of state, including cooking verbs, break verbs, bend verbs and others.

The verb *stir* can be used either as a monovalent, intransitive, anticausative (inchoative) verb (LU-1) or as a divalent, transitive, causative verb (LU-2)⁶. Since the frame elements involved in the argument structure of *stir* in both monovalent and divalent constructions do not differ, we have decided not to split the intransitive *stir* from its transitive equivalent and discuss both meanings of the verb with reference to the Emotions frame⁷.

In the examples (1)-(7) below LU-1 of *stir* functions as a monovalent, anticausative verb and is used to describe emotions arising in an Experiencer. In other words, it is used to describe a situation in which an Emotion arises in an Experiencer as induced by

⁶ Depending on the evoked frames and the context, in the FrameNet methodology separate lexical units are distinguished, referred to as LUs.

⁷ There has been no consensus whether verbs with different syntactic forms, i.e. transitive and intransitive should be treated as one lexical unit with two different syntactic uses or two separate lexical units (Kulikov 2001: 887). Nevertheless, for the purpose of organizational clarity in the present analysis we separate the transitive and intransitive uses and treat them as two separate variants of the same lexeme (see Cruse 1986: 80). What is more, since the transitive and intransitive variants of *stir* involve the same frame elements, they are relativised to the same frame.

a Stimulus, which is rarely expressed with the anticausative *stir*. Another core element is the *Seat_of_emotion*, which refers to the interior of the Experiencer's body where the Emotion is believed to reside. In the examples (1)-(6) below the Emotion plays the role of a subject, while the *Seat_of_emotion* is expressed as a PP adjunct:

- (1) Then, almost magically, as she realised this, [something EMOTION: DP: SUBJECT] **stirred** [inside [her EXPERIENCER: NP] SEAT_OF_EMOTION: PP: ADJUNCT] and that something was excitement and courage.
- (2) [A small interest EMOTION: DP: SUBJECT] **stirred** [inside [her EXPERIENCER: NP] SEAT_OF_EMOTION: PP: ADJUNCT].
- (3) She stifled the admission that they had to talk about something — anything — to take her mind off [the contradictory emotions EMOTION: DP: SUBJECT] that **stirred** [inside [her EXPERIENCER: NP] SEAT_OF_EMOTION: PP: ADJUNCT], and managed a casual shrug.
- (4) [[Helen's EXPERIENCER: DP] anger EMOTION: DP: SUBJECT] **stirred**.
- (5) [A memory of the day mentioned by Joanna EMOTION: DP: SUBJECT] **stirred** [at the back of [her EXPERIENCER: NP] mind SEAT_OF_EMOTION: PP: ADJUNCT], but, not daring to examine it, she waited for Joanna to say something.
- (6) Nellie looked along the turning to the Galloway firm's gates, a hard look in her eye as the [bitter memories locked up [inside [her EXPERIENCER: NP] SEAT_OF_EMOTION: PP: ADJUNCT] **stirred** once more.
- (7) She stared at him, her curiosity spiked, and [[her EXPERIENCER: NP] heart SEAT_OF_EMOTION: NP: SUBJECT] **stirred** slightly, in spite of her antagonism towards him.

With regard to the taxonomy of motion situations proposed by Zlatev, Blomberg and Magnusson (2012), all the above-mentioned *BNC* metaphorical expressions with LU-1 of *stir* involve metaphorical self-motion (- caused). In other words, the meaning of LU-1 of *stir* implies motion which is conceptualised as occurring spontaneously, i.e. without an external cause. For this reason, in all the examples which illustrate LU-1 of *stir* the Stimulus is not present. This is due to the fact that inchoative verbs express an event whose undergoer, i.e. a patient corresponding to the frame element Emotion, is the grammatical subject.

Metaphorical expressions (2) and (5)-(7) above are motivated by the interaction of metaphor and metonymy where the two figures blend and form the resulting expressions. Metonymy is frequently applied in the realisation of some of the frame elements. In (2) *interest* metonymically refers to the emotions which accompany the interest developed in the Experiencer. In other words, *interest* stands for the Experiencer's emotional response to a Stimulus. In a similar fashion, in (5) and (6) the concept of *memories* is metonymically used to refer to the emotions which the memories provoke. In (7) *heart* is metonymically used to refer to emotions on the grounds of the metaphor **HEART IS A CONTAINER FOR EMOTIONS** and the **CONTAINER FOR CONTAINED** metonymy.

In the examples (8)-(15) below, LU-2 of *stir* is a divalent verb used whose main arguments are the Experiencer and the Stimulus. Since the verb is used in a causative meaning, it denotes the activity of arousing a strong feeling in somebody. In other

words, it describes a scenario in which some kind of a Stimulus provokes a particular Emotion in the Experiencer. The Stimulus is either an event or an entity which brings about an emotional or psychological state in a person:

- (8) She had got over their love affair before she agreed to marry Fred, although [the young man's sudden appearance STIMULUS: DP: SUBJECT] had **stirred** [a few very pleasant memories EMOTION: DP: DIRECT OBJECT] [for her EXPERIENCER: PP: ADJUNCT].
- (9) [The doctor STIMULUS: DP: SUBJECT] **stirred up** [numerous feelings EMOTION: DP: DIRECT OBJECT] [in the poet EXPERIENCER: PP: ADJUNCT].
- (10) His shadow fell on her and [a traitorous flicker of anticipation STIMULUS: DP: SUBJECT] **stirred** [[her EXPERIENCER: NP] *senses* EMOTION: DP: DIRECT OBJECT].
- (11) He turned on his side and clasped her more tightly as [a new wave of passion STIMULUS: DP: SUBJECT] **stirred** [him EXPERIENCER: NP: DIRECT OBJECT].
- (12) [The very thought STIMULUS: DP: SUBJECT] **stirred** [him EXPERIENCER: NP: DIRECT OBJECT] [sexually MANNER: ADVP: ADJUNCT], and fanned the smouldering coals of his insane bloodlust into flickering life.
- (13) [Jinkwa EXPERIENCER: NP: SUBJECT] was **stirred** [by the General's words STIMULUS: PP: ADJUNCT].
- (14) [Thousands of preachers of the Gospel EXPERIENCER: DP: SUBJECT] have been **stirred** [to renewed zeal RESULT: PP: ADJUNCT] [by reading [the Reformed Pastor STIMULUS: PP: ADJUNCT] MEANS: PP: ADJUNCT].
- (15) [[Her EXPERIENCER: NP] *imagination* EXPERIENCER: DP: SUBJECT] was **stirred** [by the thought of the three children alone in the house with a sick woman STIMULUS: PP: ADJUNCT].

According to the taxonomy of motion situations, LU-2 of *stir* can be classified as implying caused motion (+ caused), as it presupposes the existence of an external cause and, for this reason, in the above examples the Stimulus is always present. In the examples (8)-(12) *stir* is used in an active mode and the Stimulus plays the role of a subject. In (8), (9) and (10) the direct object of *stir* plays the role of an Emotion incited in the Experiencer. In (8) *pleasant memories* metonymically stand for the emotions that these memories evoke. In (10) *senses* metaphorically refer to the emotions which are triggered by the stimulated senses on the grounds of the metaphor EMOTION IS SENSE IMPRESSION. In (11) and (12) the direct object of *stir* expresses the Experiencer. In examples (13), (14) and (15), which are passive constructions, the Experiencer is expressed by a NP or DP as the grammatical subject of the sentences and the Stimulus is introduced with a PP adjunct. In (15) *imagination* metonymically stands for the mind since thought processes are in a metonymical relationship with the brain. Moreover, since brain metonymically stands for human mind and since mind might metonymically refer to a whole person in a part-for-whole metonymic relationship, then *imagination* might metonymically refer to the Experiencer.

Metaphorical linguistic expressions with LU-1 and LU-2 of *stir* realise the conceptual metaphors EMOTION IS A SELF-MOVING OBJECT and EMOTION IS A MOVED OBJECT,

respectively. We believe that the two conceptual metaphors highlight different perspectives on the nature of emotions. While the metaphor **EMOTION IS A SELF-MOVING OBJECT** suggests that emotions are dynamic and initiate action, **EMOTION IS A MOVED OBJECT** implies that emotions are triggered as a response to external or internal stimuli. Both perspectives, however, offer valuable insights into the complex nature of emotions, highlighting the link between emotions and movement as well as suggesting that emotions are embodied and expressed through physical actions.

The metaphor **EMOTION IS A SELF-MOVING OBJECT** emphasizes the active, dynamic and generative nature of emotions. It suggests that emotions don't just happen to us, but rather they drive us to act, express ourselves, and engage with the world. In other words, the metaphor suggests that emotions are not just reactions, but also forces that can act upon or within a person, influencing their thoughts, behaviors, and physical states. The metaphor **EMOTION IS A MOVED OBJECT**, on the other hand, presupposes that emotions are elicited or influenced by external factors or internal states. This perspective emphasizes the passive aspect of emotion, where feelings are seen as reactions to external stimuli or responses to things that happen to us or around us. This view aligns with the idea that emotions are not solely internally generated but are also shaped by the environment.

Human body is often conceptualized as a container and the emotions as fluids or some kind of entities inside the container by virtue of the metaphors **EMOTION IS A FLUID IN A CONTAINER** (Kövecses 2005: 36–43) and **EMOTION IS AN ENTITY IN A CONTAINER** (Oster 2019). Since **EMOTION** is understood as a fluid or some kind of an entity, causing emotions in somebody is conceptualised in terms of stirring a fluid or the entities in the container, which is related to the metaphor **CHANGES ARE MOVEMENTS** and **CAUSES ARE FORCES**. Thus, just like a change is conceived of in terms of a movement, a change in somebody's emotional or psychological state is metaphorically understood in terms of stirring a liquid or the entities in a container, where the container stands for human body. In a literal sense the activity of stirring causes a change in the structure of the stirred liquid or substance. This is reflected in the etymology of the word *stir*, which derives from Old English *styrian, stirian* “to move, be or become active or busy, pass into motion” also transitive, “to agitate with a rotating motion (a liquid or mixture by hand or with an instrument)”, and PIE **(s)twer-* “to turn, whirl” (etymonline). Following this line of argumentation, depending on the nature of the liquid or substance which is subjected to the activity of stirring, or the ingredients that are being mixed into, the resultant substance might change its texture. As a consequence, the texture might become thicker or looser. If stirring also involves combining different ingredients or stirring an ingredient into a mixture, apart from the consistency, the contents become changed as well. In this respect *stirring* is metaphorically captured as introducing a change, which lies in agreement with the metaphor **CAUSATION IS A MOVEMENT**. Therefore, when *stir* is used to describe emotions, stirring amounts to changing one's mood, arousing a feeling in somebody, affecting a person with a strong emotion or moving strongly. Interestingly, the metaphorical sense of the verb *move*, which refers to becoming affected by a feeling, accompanied its literal sense almost from the

very beginning of the semantic history of *move*. Moreover, the English word *emotion* is etymologically related to Latin *emovere* ‘move out, agitate’ and was originally used in the second half of the 16th century either to refer to a movement from one place to another, or to political agitation and social movements. It was later on, at the beginning of the 17th century that *emotion* was first recorded in the meaning of a mental state or a feeling (after *OED*). Thus, it appears the concepts of motion and emotion are strongly related to each other not only on metaphorical grounds but also historically.

In Tables 1 and 2 below we have illustrated the metaphors **EMOTION IS A SELF-MOVING OBJECT** and **EMOTION IS A MOVED OBJECT** in terms of mappings of elements from the source frame Motion to the target frame Emotions:

Source: Motion	Target: Emotions
Theme – the entity that changes location	Emotion residing in the Experiencer
Area – a general area in which the motion takes place	Seat of Emotion – the general area in which the emotion occurs in the Experiencer, i.e. the person or sentient entity that experiences or feels the emotions

Table 1. Constituent mappings in the metaphors **EMOTION IS A SELF-MOVING OBJECT**.

Source: Motion	Target: Emotions
Agent – the entity that causes the motion of an object	Stimulus, i.e. a person, thing or event which evokes the emotional response in the Experiencer
Theme – the entity that changes location	Emotion provoked in a person
Area – a general area in which the motion takes place	Seat of Emotion – the general area in which the emotion occurs in the Experiencer, i.e. the person or sentient entity that experiences or feels the emotions

Table 2. Constituent mappings in the metaphors **EMOTION IS A MOVED OBJECT**.

As visible in the table above, the frame elements Agent, Theme and Area from the Motion frame are mapped onto the target frame elements Stimulus, Emotion and Seat of Emotion/Experiencer in the Emotion frame. In terms of their grammatical function and category, the pairs of frame elements that participate in the correspondences, i.e. Agent mapped to Stimulus, Theme to Emotion and Area mapped to Experiencer or Seat of Emotion possess the same properties.

4. Conclusions

The present study has offered an analysis of metaphorical linguistic expressions that employ the verb *stir* to conceptualize emotions. The research has been conducted from a lexico-grammatical and frame-semantic perspective, what has allowed us to discern two varieties of the metaphorical meaning of *stir*, and thus obtain a detailed picture of

the metaphorical use of the analysed verb. In the course of the analysis we have distinguished two separate lexical units which are believed to participate in the causative-inchoative alternation. Due to the fact that the transitive and intransitive variants of *stir* evoke the same frame elements, they are both relativised to the same frame EMOTIONS.

The analysed metaphorical linguistic expressions with *stir* can be interpreted as instantiating two types of conceptual metaphors: EMOTION IS A MOVED OBJECT and EMOTION IS A SELF-MOVING OBJECT. We believe that the two proposed conceptual metaphors capture different aspects of the complex and dynamic nature of emotions. Metaphorical linguistic expressions with *stir* which instantiate the metaphor EMOTION IS A SELF-MOVING OBJECT suggest that emotion is a driving force that propels us forward. On the other hand, in the metaphor EMOTION IS A MOVED OBJECT, emotions are viewed as responses to external stimuli triggered by an external event. Thus, it is believed that recognizing the interplay between these two perspectives can provide a more nuanced understanding of how we experience and respond to emotions in our lives.

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