

METAPHOR, METONYMY, AND IMAGE-SCHEMAS: AN ANALYSIS OF CONCEPTUAL INTERACTION PATTERNS¹

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In Cognitive Linguistics the study of conceptual interaction has attracted the attention of many scholars. Analyses have primarily focused on the role of image-schemas in the construction of metaphors and on the types of interplay that can take place between metaphor and metonymy. In this paper, we examine the role three image-schemas (namely, the CONTAINER, PART/WHOLE and EXCESS schemas) play in conceptual interaction, especially in relation to metonymy. Our analysis reveals that image-schemas have two basic functions: they structure the relationship that exists between the source and target domain of a metonymic mapping and they provide the axiological value of an expression. Finally, we discuss that the pervasiveness of image-schematic structure in conceptual interaction between metaphor and metonymy.

1. INTRODUCTION

In *Women, Fire and Dangerous Things*, Lakoff (1987) contends that we structure our knowledge about the world in terms of idealised cognitive models or ICMs. An ICM can be defined as an organised cognitive structure which serves to represent reality from a certain perspective. Lakoff (1987) further distinguishes four types of structuring principle for this kind of construct: propositional, image-schematic, metaphoric and metonymic. In this

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context, metaphor and metonymy are described as conceptual mappings (i.e. sets of correspondences across domains), which differ only in the nature of the domains involved: in metaphor we find two discrete domains while in metonymy there is a domain-subdomain relationship. Image-schemas are defined by Johnson (1987) as preconceptual abstract knowledge structures based on recurrent patterns of experience. Image-schemas are characterised by a number of structural elements and a basic logic which can be expressed propositionally. This internal logic is employed in abstract thinking (Lakoff 1990). Besides, image-schemas can also be regarded as non-propositional, generic 'gestalts' whose function is to provide coherence and order to certain conceptual structures (Lakoff 1987, 1989).

In recent years, the study of the kinds of correlation which hold between metaphor and other types of structuring principle has occupied a privileged place in Cognitive Linguistics. On the one hand, scholars have noted the relevance of image-schemas as structural patterns which are used as source domains for numerous metaphors (Lakoff and Turner 1989; Lakoff 1990, 1993). On the other hand, they have studied the kinds of interplay that result from the combination of metaphor and metonymy (Goossens 1995; Ruiz de Mendoza 1999a). By contrast, no attention has been paid to the possible patterns of interaction that may result from the combination of metonymy and image-schematic structure. Our purpose in this paper is to examine the way metonymies and image-schemas are related in conceptual interaction. Because of space limitations, we shall focus on just three image-schemas, namely the CONTAINER, PART/WHOLE and EXCESS schemas, which have been found to be very productive in connection to metonymic activity.

2. INTERACTION BETWEEN METAPHOR AND IMAGE-SCHEMATIC STRUCTURE.

Image-schemas have been shown to lie at the basis of numerous metaphorical constructions (cf. Lakoff and Johnson 1980, 1999; Lakoff 1987; Ruiz de Mendoza 1997a; Fornés and Ruiz de Mendoza 1998; Peña 2000). In this connection, Lakoff (1990) has put forward the Invariance Principle which states that the image-schematic structure of the source domain of a metaphor has to be preserved so as to be consistent with the structure of the target domain². In fact, whenever there is an image-schema involved in a

2. More recently, Ruiz de Mendoza (1998) has refined Lakoff's Invariance Principle in order to make it more comprehensive and has formulated the Extended Invariance Principle in which he argues for the consistency between the domains involved in a metaphor, even when there is no image schematic structure. Hence, according to the Extended Invariance Principle, generic structure of the source domain of a metaphor should be consistent with the inherent structure of the target domain.

metaphoric expression, it serves to provide the basic blueprint for its interpretation.

By way of illustration, consider the expression *I don't know which way to go*, as uttered by a person who must make a decision and is not sure about which option is better. The understanding of this expression calls for the activation of the PATH schema. This schema, which has been studied by Johnson (1987) and Lakoff (1987), consists of four basic structural elements: a source, a destination, a number of contiguous locations which connect the source and the destination, and a direction; its logic, as defined by Lakoff (1989), includes the following information: (a) the movement from the source to the destination necessarily involves passing through every intermediate point, and (b) the further along the path a person is, the more time has gone by since he started. Thus, in the metaphor DECIDING IS MOVING IN A DIRECTION, relevant parts of the PATH schema, which constitute the source domain of the mapping, serve to structure our knowledge about making decisions. In this way, the following correspondences can be observed:

- the person that makes a decision is conceived as a moving entity.
- making a decision corresponds to choosing a direction of movement.
- different options are different destinations.

3. CONCEPTUAL INTERACTION BETWEEN METAPHOR AND METONYMY

Ruiz de Mendoza (1997a, 1999ab, 2000) has devoted much of his work to exploring the behaviour of metaphor and metonymy in conceptual interaction and has provided some insightful observations about the kinds of interplay that may result from their combination. First, he has argued that because of its nature metonymy is always subsidiary in conceptual interaction to metaphor. This is quite logical if we bear in mind that in metaphor we find two separate domains whereas in metonymy there is only one domain involved. Therefore, it does not seem feasible to include the two distinct domains of a metaphor within the single domain of a metonymy. Second, this author has developed a typology of interactional patterns between metaphor and metonymy which is based on two main criteria: (a) the place where the metonymic mapping develops (either the source or the target of the metaphor); and (b) the scope of the metonymy (i.e. which can be a whole metaphoric domain or just one of its correspondences).

Moreover, Ruiz de Mendoza (1997b, 1999a) has challenged the traditional three-fold classification of metonymy and has postulated the non-existence of part-for-part metonymies by showing that this type is inconsequential in terms of processing. He has distinguished only two basic types of metonymy: *source-in-target*, in which the source is a subdomain of the target (e.g. *The piano has the flu today*, where 'the piano' is a subdomain of 'the musician who

plays the piano’) and *target-in-source*, in which the target is a subdomain of the source (e.g. *The Picasso is in the lounge*, where by “the Picasso” we refer to ‘one of his paintings’, which is a subdomain of our knowledge about this painter). The former develops a domain of which the source highlights a relevant aspect and the latter highlights a crucial aspect, which may be difficult to pin down accurately. This distinction between source-in-target and target-in-source metonymies is also relevant for dealing adequately with metonymy in interaction. The following diagrams show schematically the four patterns of conceptual interaction Ruiz de Mendoza has found to be productive in English:

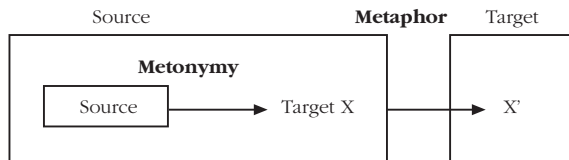


FIGURE 1: *Metonymic expansion of a metaphoric source.*

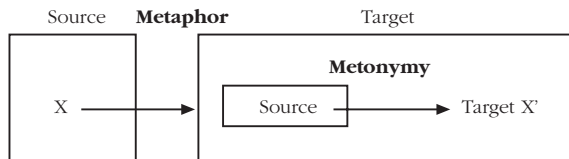


FIGURE 2: *Metonymic expansion of a metaphoric target.*

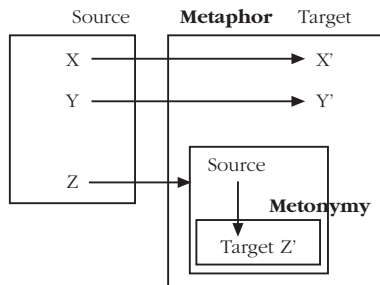


FIGURE 3: *Metonymic reduction of one of the correspondences of a metaphoric target.*

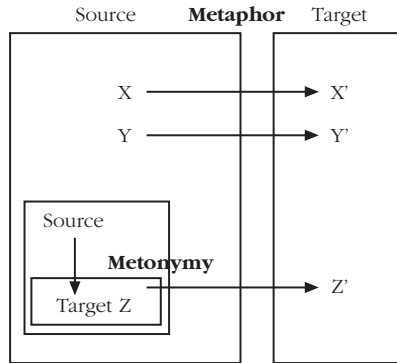


FIGURE 4: *Metonymic reduction of one of the correspondences of a metaphoric source.*

Additionally, Díez (2000) has discovered the existence of two further patterns which complete Ruiz de Mendoza's typology:

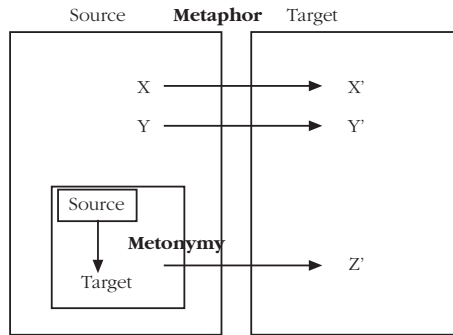


FIGURE 5: *Metonymic expansion of one of the correspondences of a metaphoric source.*

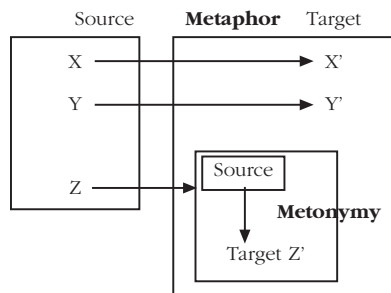


FIGURE 6: *Metonymic expansion of one of the correspondences of a metaphoric target*

4. IMAGE-SCHEMAS AND METONYMY IN CONCEPTUAL INTERACTION

4.1. The Structuring Function of Image-Schemas

As was mentioned in the previous sections, scholars have mainly analysed conceptual interaction between metaphor and metonymy; however, image-schemas -in being one form of structuring principle for idealised cognitive models- also play a fairly significant role in interactional patterns and have to be taken into account. Consider now the following sentences:

- (1) The conscripts have no stomach for a fight.
- (2) She made every effort to attract him, and finally she has won his heart.

In (1) *to have stomach* is a case of conceptual interaction between the metaphor QUALITIES ARE POSSESSIONS and the metonymy STOMACH FOR COURAGE. Regarding the metaphor, ‘courage’ is conceived of as a physical entity with its associated properties (e.g. it can be possessed). This way, an abstract concept which we may find difficult to deal with is envisaged as a physical entity. Accordingly, the property of ‘displaying courage’ or ‘being courageous’ is understood as the state in which a person is the owner of an object³ as the representation of this metaphor in figure 7 shows:

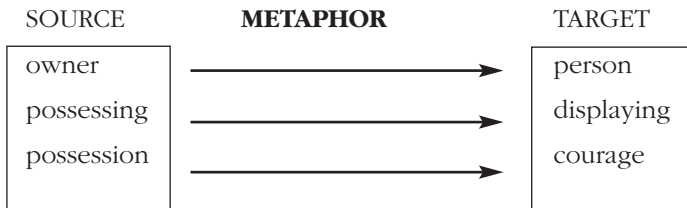


FIGURE 7: *To have courage.*

However, in (1) this metaphor interacts with a metonymy. In contrast to the metaphor *to have courage*, where the property is directly mentioned, in (1) the possession maps onto the bodily organ which is culturally and experientially conceived of as the site for the property (i.e. stomach). A

3. The understanding of courage as a property is connected to Lakoff’s (1993) proposal that most metaphorical structure is integrated in larger metaphorical systems. In this way, he posits the existence of the EVENT STRUCTURE metaphor which accounts for our understanding of events and causes. The EVENT STRUCTURE is, in turn, based on two different conceptualisation systems: the *location system* and the *object system*. The location system conceives a state as a location (e.g. *I’m in trouble*) whereas in the object system an attribute is seen as a possession (e.g. *I have a problem*). Both of them are so pervasive in every day language that we rarely notice the metaphor that is involved in many expressions.

subsequent metonymic mapping is needed for the intended interpretation to take place as diagrammed in figure 8:

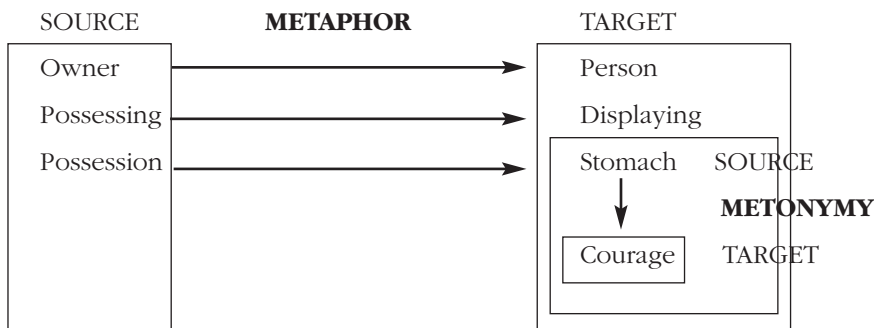


FIGURE 8: *To have stomach.*

The metonymic mapping STOMACH FOR COURAGE is of the source-in-target kind since part of our cultural knowledge about this body part is that it is figuratively the location of courage. This piece of knowledge is experientially grounded in a number of sensations which we experience in the stomach area when we are determined to face a danger or, by contrast, when we are afraid of something or lack the courage to do something.

Moreover, the instantiation of this metonymy makes use of the CONTAINER schema. Thus, the stomach is understood as a three-dimensional entity that can hold things inside. This conception is metaphorically evidenced in expressions like *I have butterflies in my stomach*. Note that unless we metaphorically understand the stomach as a container and courage as its content, the relationship between them is not possible and sentence (1) would be meaningless.

The metonymy STOMACH FOR COURAGE abides by the internal logic of the CONTAINER image-schema. According to Lakoff (1989: 116), this image schema consists of an interior, an exterior and a boundary. As part of its logic, he notes that “if container A is in container B and X is in A, then X is in B”. Besides, Peña (1999a) has further developed the logic of this schema and has noted that the entities found in the interior of a container may affect it, a fact which becomes part of the extended logic of the schema. Besides, the ‘gestaltic’ nature of this image-schema makes us see the contents as part of the whole so that we see the container as naturally embracing its contents. This way, the absence of the container entails the loss of its contents, unless the opposite is specified. For example, by saying *My suitcase was stolen at the airport* the speaker actually conveys the idea that he has lost not only the suitcase but also everything that was kept inside it. Likewise, the figurative lack of stomach, as in (1), entails the absence of courage.

In the light of this discussion, we observe that the complete understanding of this metonymy requires the activation of our knowledge of the logic of the CONTAINER schema so that the full interpretation of sentence (1) makes use of metaphoric, metonymic and image-schematic principles.

Additionally, note that *to have stomach* involves a metonymic reduction of a conceptual domain of the metaphoric target, where the interaction serves to highlight the correspondence that contains the metonymy, thereby emphasising the lack of the quality.

In (2) we find another case of interaction similar to the one studied above where one of the correspondences of a metaphoric target contains a target-in-source metonymy as the following diagram illustrates:

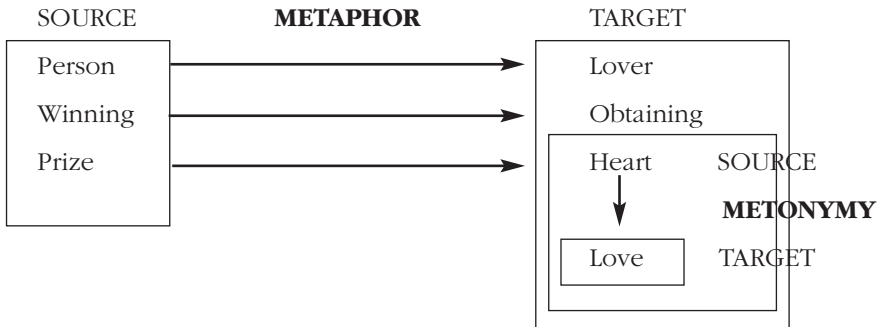


FIGURE 9: *To win someone's heart*

This example is an instantiation of the metaphor LOVE IS A PRIZE. In this metaphor, achieving someone's love is viewed as obtaining a reward, which involves the existence of some previous actions in which the lover has proved that he deserves this prize. Therefore, this metaphor invokes a competitive context where the lover must overcome some barriers (e.g. another lover, the indifference of the loved person, etc.). In this sense, 'winning someone's love' conveys that some effort has been needed, that there is an underlying structure or that it was a hard task, which is additional communicative information created by the metaphoric mapping. As has been mentioned, this metaphor incorporates a metonymic mapping. In the metonymy the heart as the site of feelings or emotions is chosen to stand for the feeling of love, allowing this correspondence of the metaphor to acquire a more central role. In this case the CONTAINER image-schema also interacts with the metonymy since the heart is typically understood as a container and love as its content (c.f. *With a heart full of love...*). In fact, the CONTAINER image-schema is frequently exploited by body part metonymies that express feelings since we tend to conceptualise these as containers and to locate different kinds of emotion or quality inside them. Other expressions based on the metonymic

exploitations of the CONTAINER image-schema are *to vent your spleen*, *to pour your heart*, or *to have the guts*, where the body parts stand for ‘anger’, ‘inner feeling’ and ‘bravery’, respectively (c.f. Peña 2000).

Nonetheless, the CONTAINER schema is not the only image-schematic structure which may have a role in the activation of a metonymy. Take the following example:

(3) Don't bite the hand that feeds you.

This sentence, which is to be understood as a warning not to hurt the person that helps you, represents another case of conceptual interaction between metaphor and metonymy. As far as the metaphor⁴ is concerned, ‘biting’ is mapped onto any action that hurts or goes against someone, and ‘feeding’ onto the action of helping or taking care of a person. Within the source domain of this metaphor, there is a source-in-target metonymy where ‘hand’ stands for the person that carries out the activity of feeding. The choice of ‘hand’ is connected to its role in the situation portrayed in the source domain. Thus, in the action of feeding an animal, the hand plays a specially prominent role which converts this body part into the best option to become the source of the metonymy. In other words, the metonymy highlights the importance of the hand in the action. This is diagrammed in figure 10 below:

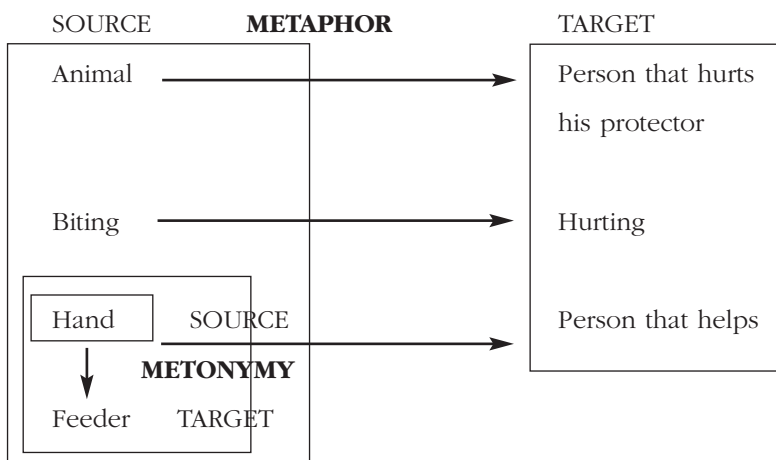


FIGURE 10: *Don't bite the hand that feeds you.*

4. Ruiz de Mendoza (1999a) has termed this type of metaphor where a specific situation serves to make generalizations which are later applied to other specific situations as *situational metaphor*. This metaphor is frequently exploited by proverbs such as *Blind blames the ditch*.

We noted above that the understanding of (3) needs the additional activation of some image-schematic structure. Let us consider now in some detail the relationship that exists between the source and target domains of the metonymy in this example. There is no way we can define ‘hand’ adequately without making reference to the fact that it is a body part. This occurs because we see our bodies as wholes with different parts (cf. Lakoff 1987). As a result, in the metonymy the part (‘hand’) stands for the whole (‘person’). This suggests that the PART/WHOLE schema is compulsorily needed in order to understand the relationship that holds between the source and target domains. This image-schema, which has attracted the attention of cognitive linguists such as Lakoff (1987), Johnson (1987) and Deane (1992), consists of a whole, parts and a configuration⁵. By means of this schema, we conceive of entities as composed of other entities. Take now the following example:

(4) Sprained ankles should not wear high-heels.

This sentence contains two metonymic mappings (ANKLE FOR PERSON and HIGH-HEELS FOR SHOES), which make use of the PART/WHOLE schema for their instantiation. Thus, a shoe is composed of a sole, a heel, and a toecap, among others. One of these parts, the heel, is particularly salient for describing a kind of shoe (i.e. high-heeled shoes), which, together with the fact that both concepts are seen in a part/whole configuration, provides the experiential grounding for the metonymy. In the second place, ‘ankle’ as a body part stands in a part/whole relation to ‘body’ in the same way as ‘hand’ does in example (3). The fact that two metonymies which need of the PART/WHOLE schema for their understanding coincide in one example gives us a clue about the high degree of productiveness of the schema in the creation of metonymic mappings. This image-schema is employed whenever a part of an entity is used to stand for the whole entity (e.g. (3)) or vice versa (e.g. She is learning to tie her shoes, where ‘shoes’, the whole, stands for ‘shoelaces’, a part). Consider finally the following example:

(5) Liberalism and democracy don’t flourish on an empty stomach.

This example is a linguistic realisation of the metaphor IDEAS ARE PLANTS, which forms part of our general knowledge about cognition and is

5. The notion of ‘configuration’ in relation to the PART/WHOLE schema has been detailedly analysed by Deane (1992) who has contended that this concept is too vague in Lakoff’s (1987) terms. Deane (1992) has redefined ‘configuration’ as the conjunction of three properties: perceptual adjacency, continuity, and temporal stability.

instantiated in examples such as *That's a budding theory, Mathematics has many branches* or *The seeds of his great ideas were planted in his youth*⁶ (cf. Lakoff and Johnson 1980). In example (5), 'liberalism' and 'democracy' are seen as plants and the intended hearers as the ground. Moreover, this sentence includes a metonymic mapping of the source-in-target type in one of the correspondences of the target domain of the metaphor, namely, STOMACH FOR PERSON (see figure 11). By means of the metonymy we are emphasizing the role of this correspondence in the metaphor. Thus, one of the main factors involved in the success of a harvest is the quality of the ground where the seeds have been sown. It follows that if the ground is not the adequate one, the plants will not be able to flourish. Similarly, the satisfactory transmission of a message depends on many factors, one of them being the correct predisposition of the hearer. The function of the metonymy, then, is to highlight that the reason for the failure of the communicative act lies in the hearers and their hunger. As was hinted at above, we are dealing again with a BODY PART FOR PERSON metonymy where the relationship between its source and target domain is to be understood through the PART/WHOLE image schema.

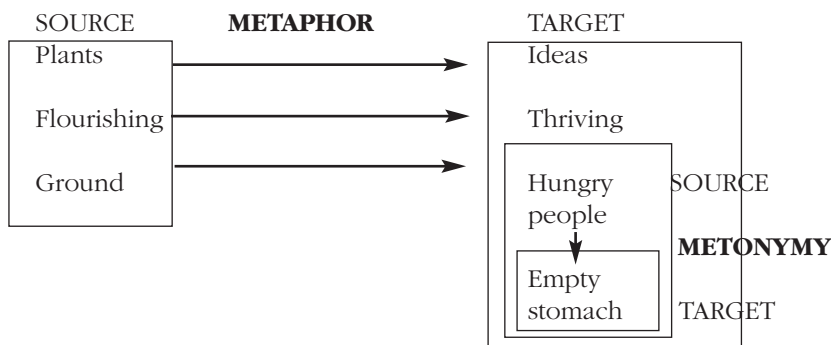


FIGURE 11: *Ideas don't flourish on an empty stomach*

On the basis of the previous analysis two further remarks should be made. First, image schemas, as generic models, can easily accommodate other non-generic models (e.g. metonymic models) in their structure (cf. in this respect Ruiz de Mendoza 1997a). For example, if we consider the CONTAINER

6. One of the best known instantiations of this metaphor, which shows its great productiveness when dealing with communication and cognition, is found in the New Testament in the parable of the sower. In this case, communicating corresponds to sowing, the seeds symbolize the message, the sower maps onto the speaker (i.e. Jesus and his disciples) and proper understanding relates to blooming healthily.

image schema, a bounded entity and its contents can function as the source and target domain of a metonymy. Second, in every case of conceptual interaction where a metaphoric mapping is involved the metaphor always provides the basic pattern for the conceptual interplay. Even in those cases of interaction between metaphor and image schemas (cf. *I don't know which way to go*), the image schema is subordinated to the metaphor, i.e. it is either the source or the target of the metaphor. On the contrary, metonymy in conceptual interaction is always subsidiary both to metaphor and to image-schematic structure. First, the metonymy always follows the requirements of the mapping imposed by the metaphor and develops within either the source or the target domain of the metaphor (see figures 1 to 6). Second, the metonymy also abides by the logic of the image-schema it may interact with; that is to say, the relationship that exists between the source and target domains of a metonymy mapping always agrees with the logic of the image-schema at work.

4.2. The Axiological Component

In 4.1. we have explored the idea that image-schemas may determine the nature of the relationship between the source and the target domains of a metonymic mapping; but this is not the only form of conceptual interaction with an image-schematic basis. Image-schemas are capable of endowing the expression with a strong axiological value. Take the following examples:

- (6) He has too much heart in him to quit the game.
- (7) Owen boiled over.

(6) is another case of conceptual interaction between metaphor and metonymy where one of the correspondences of the target domain of the metaphor is reduced by means of a metonymic mapping. 'Heart' in (6) stands for one of the feelings or emotions which are culturally thought to be contained in the heart, namely, pride. This is graphically represented in the following way:

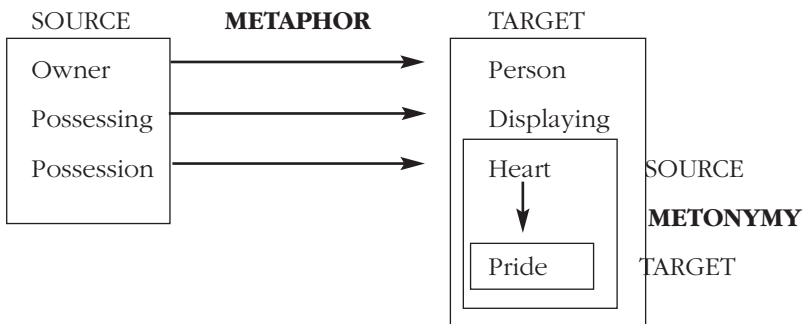


FIGURE 12: *To have heart.*

Furthermore, the CONTAINER image-schema is also found in (6) since 'heart' and 'pride' are envisaged as in a container-contents relationship. This explanation, however, cannot account for the full communicative import of this expression: the negative axiological value cannot be obtained just from the interplay between the metaphor and the metonymy. This occurs because the activation of the EXCESS image-schema is also needed for the correct comprehension of (6). The EXCESS schema is called up by the expression "too much" which denotes that pride appears in a greater quantity than needed and therefore, profiles a negative aspect of heart⁷. Notice should be taken that a prerequisite for the activation of the EXCESS image-schema in (6) is the conception of the heart as a container⁸.

The EXCESS image-schema is invoked by all those expressions which convey that something is in a larger amount than would be desirable (c.f. Peña 2000). This schema is usually associated with a negative axiological value. This has to be understood in terms of control. The heart as a container controls the things that are in its interior (i.e. pride). Whenever the container is very full, it becomes harder to keep its contents under control. If feelings or emotions are viewed as uncontrolled, balance is lost, which is usually considered negative in Western cultural systems. As a result, an excessive quantity of pride, in being difficult to handle or control, affects the person negatively (e.g. it may not let his common sense act and make him quit the game). Therefore, the EXCESS image-schema together with the idealised cognitive model of 'control'accounts for the negative axiological value of (6).

Similarly, in (7) the axiological value is also provided by the EXCESS image-schema, which is called up by the preposition 'over'. Again, the CONTAINER image-schema is needed for understanding the person as a container for feelings and emotions. Note that by means of a metonymic

7. It is worth pointing out that as a consequence of the metonymic mapping the noun which encodes the source domain undergoes a process of subcategorial conversion so as to shorten the gap that exists between the word forms employed to express the source and target domains of the metonymy, i.e. "heart" becomes a mass noun as evidenced by the appearance of "much" as its modifier (cf. Ruiz de Mendoza and Pérez 2001; Díez 2001).

8. In contrast to Johnson (1987) who ranks all image schemas on the same level, other authors such as Turner (1993), Clausner and Croft (1999) and Peña (1999b, 1999c) have convincingly argued that not all image schemas share the same status and that a distinction should be made between basic and subsidiary image-schemas. In this view, Peña (2000) has contended that the CONTAINER schema belongs to the former and provides the blueprint for the activation of two other image-schemas, namely the FULL-EMPTY and the EXCESS schemas. Accordingly, the EXCESS schema is said to be dependent on the CONTAINER schema since a container is a prerequisite for the activation of this image-schema. Note that the EXCESS schema involves that the entity or entities inside a container exceed its capacity.

mapping ‘Owen’ stands for ‘Owen’s anger’. ‘Over’ suggests that there is more anger than the amount the person can keep inside him. As a result, Owen cannot control all his anger which bursts out, causing the complete loss of control. Once more, it is the lack of control which creates the negative axiological value this sentence carries.

However, in some cases of conceptual interaction, we may find two different image schemas which are not dependent between them. By way of illustration, consider the following example:

(8) She broke my heart.

This is an instance of conceptual interaction similar to the ones studied in examples (1) and (2); that is to say, a metonymic reduction of one of the correspondences of a metaphoric target as the following figure, borrowed from Ruiz de Mendoza (1999b), shows:

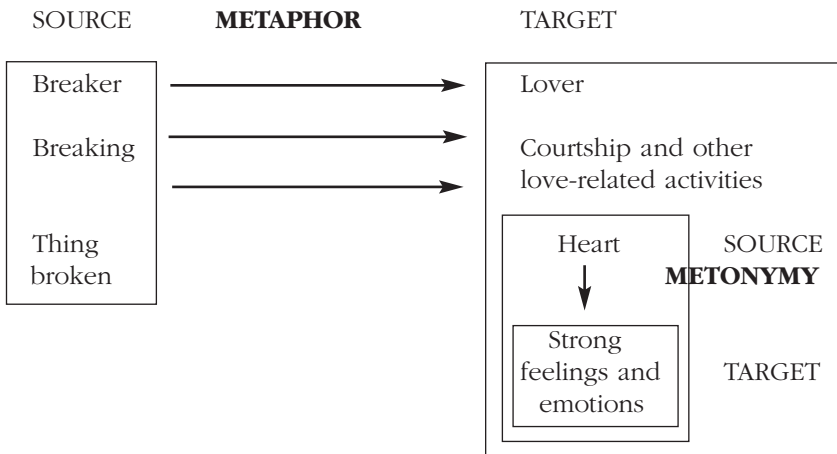


FIGURE 13: *To break someone’s heart*

As was the case with examples (1) and (2), the CONTAINER image schema has a key role in the understanding of this expression since it cues the relationship that exists between the source and target domains of the metonymy: the heart is conceived as a container and feelings and emotions as its contents. However, neither this image schema nor the metaphor or the metonymy are sufficient to explain the strong negative axiological value of example (8). This occurs because the complete understanding of this example calls for the activation of another image schema, namely the PART/WHOLE image schema. As part of its logic, Lakoff (1987: 273) notes that “if the parts exist in the configuration, then and only then does the whole exist”. In

example (8), the action of breaking causes the figurative destruction of the heart as a whole, which becomes a group of separate pieces with no configuration at all. The parts in isolation are not functional any longer; only the whole is. This absence of functionality normally brings about negative value judgements. Hence, the activation of the PART/WHOLE schema is necessary so that we can fully comprehend that the whole in being destroyed has lost its functionality and, we can reach the negative axiology the sentence shows. Therefore, in this example, apart from the metaphor and the metonymy, we find the interplay between two different image schemas; one of them, the CONTAINER schema, serves to structure the kind of relationship which holds between the source and target domain of the metonymy, whereas the other one, the PART/WHOLE schema, provides the axiology of the sentence.

5. CONCLUSION

In this paper we have attempted to show that the role of image-schemas in conceptual interaction is not restricted to structuring of the source domain of numerous metaphors, but that it is also basic for our understanding of the role of metonymy in reasoning. On the one hand, we have posited the existence of two main functions of image-schemas in interaction: first, they are needed in order to determine the nature of the relationship between the source and the target domains of a metonymic mapping; second, image-schemas are frequently used for providing the axiological value of some cases of conceptual interaction in which the mere interplay between metaphor and metonymy does not provide sufficient interpretative clues by itself to arrive at its full interpretation. On the other hand, we have seen that the appearance of image-schemas in conceptual interaction is more ubiquitous than it may seem at first sight and that conceptual interaction frequently involves the activation of these three types of cognitive model (i.e. metaphor, metonymy, and image-schemas). Thus, for each of the functions of an image schema in conceptual interaction, we have provided evidence of the way it works with two different image schemas. In every case the analysis has shown that the metaphor provides the basic pattern for the interplay where both the metonymy and the image schema are easily accommodated.

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