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CONCEPTUAL PROJECTION AND IMAGE-SCHEMAS

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ABSTRACT

In the present paper, we shall study metaphorical expressions based on the path and container image-schemas and we shall account for how their meaning is derived from (i) the exploration of the structure and logic of the image-schema involved, and (ii) the application of standard principles of conceptual projection and combination. In this connection, we shall make use of the «many-space» model of conceptual projection, as proposed by Turner and Fauconnier (1994, 1996) and of some proposals made by Ruiz de Mendoza (1997ab) concerning principles of conceptual combination.

INTRODUCTION

With the inception of Cognitive Linguistics in the mid 1970s, scholars, such as Lakoff, Johnson, Turner and others have defined metaphor as a conceptual mapping of a source domain to a target domain, where aspects of the source are made to correspond with the target. By using our knowledge about the source domain, which is usually concrete, we are able to reason about the target domain, which tends to be abstract in nature (see Lakoff & Johnson, 1980; Lakoff & Turner, 1989; Lakoff, 1993, 1996). In this way, metaphor is understood in terms of two conceptual domains.

However, in recent work on metaphor this «two-domain» model has been replaced by the «many space» model (see Fauconnier & Turner 1994, 1996). This model is based on the notion of mental space. According to these scholars (1994: 113) a mental space is «a small conceptual packet constructed as we think and talk, for purposes of local understanding and action». In other words, a mental space is a portion of what Lakoff has called and idealized cognitive model or ICM.

According to Lakoff (1987: 68) ICMs are the way in which human beings organize knowledge. Therefore, ICMs may be postulated as cognitive structures whose purpose is to represent reality from a certain perspective. They are the result of a process of idealization of reality (see Lakoff 1987, 1989; and Peña 1996 for discussion). In relation to research into metaphor, scholars have seen this conceptual phenomenon as the result of the projection of conceptual structure from two input spaces (the source and the target) into a blended space through the mediation of another mental space, called the generic space. All mental spaces derive their conceptual structure from different ICMs.

According to the many-space model, metaphoric mappings require the activation of at least four mental spaces: two input spaces (the source and target), a generic space, and a blended space (or blend). The function of the generic space is to enable the user to establish correspondences between source and target. The blend is a special space which results from the combination of information from source and target. Inferential activity is carried out wittin this space.

The notion of image-schema has also been given special importance as another conceptual construct. Image-schemas are generic and very abstract spatial concepts. Among the clearest examples we shall mention the CONTAINER, PATH and VERTICALITY schemas. Image-schemas, which have been studied as one of the preferred mechanisms for the construction of metaphors, consist of a set of structural elements plus a basic logic [1] (i.e. a set of relations between elements and the inferences based on them).

In the present paper we would like to place special emphasis on metaphors based on the CONTAINER and PATH [2] schemas for their construction and understanding. We suggest these two image-schemas to be basic thereby providing the blueprint for the onderly activation and projection onto it of other mental spaces, including what we believe to be lees basic image-schemas. We further argue that the meaning of metaphors based on image-schemas is derived from the partial exploration of the structure and logic of the image-schema involved, which is carried out by the application of various principles of

[1] For detailed discussion, see Lakoff (1987, 1989) and Johnson (1987).

[2] For a detailed analysis of these image-schemas, see Peña (1997 abc).

conceptual projection and combination. We shall also contend that, as a general rule, the activation of image-schematic structures —whether basic or not— is previous to the activation of information from any other type of ICM.

1. Metaphors based on image-schemas

There are many metaphorical expressions which have an image-schematic component. This is a natural consequence of the strong experiential grounding of image-schemas. In Lakoff's words image-schemas are «grounded in our perceptual system and arise out of the regular interactions in our everyday environments» (Lakoff, 1989: 115). For example, think of expressions like *be in trouble, be in a terrible predicament, be in a good/bad mood, fall into a depression, get out of trouble*. It is easy to observe that in all these cases there is a situation which is treated as a container; if the situation is pleasant it will affect the entities inside it in a positive way and if it is unpleasant the effects will be negative. The cognitive grounding for these metaphors arises from every day experience where there are actual containers which may either have beneficial or harmful effects on the entities inside them (for example, a house may protect you from harmful exterior conditions, but it may also prevent you from escaping if locked). In a similar way, there are countless «path metaphors» in which the everyday experience of movement along a path (see Lakoff, 1993, in this respect) serves to conceptualize many other (more abstract) experiences where the participants have a goal, which is seen as the destination at the end of a path. Consider expressions like *I think we are on the right track, Her accident was a enormous setback to her career, We are going nowhere, We are at a crossroads*. Each of these metaphors focuses on and exploits one aspect of the PATH schema in order to cue the central meaning of the expression. Thus, being on the right track means acting in such a way that one may reach the intended destination (i.e. achieve the intended goal); having a setback is having an impediment to travel, that is, a problem to reach the goal; going nowhere is the same as having no destination (i.e. being engaged in purposeless activities); and being at a crossroads is being at a point where an important choice has to be made in order to achieve the correct goal.

2. The use of image-schematic structure

In Turner & Fauconnier's model of reasoning and interpretation, mental spaces only draw part of this structure from ICMs. This is clearly the case with

image-schemas. Consider the metaphorical expression *I am bursting with happiness*, uttered by a student who has just learned that he/she has passed all his/her exams. According to the «many-space» model of conceptual projection, in the interpretation of this metaphor there exist two input spaces: one is the source domain, which consists of a specific instatiation of the CONTAINER image-schema (the interior of an entity is so full that the boundary of the container explodes); the other, which is the target, is the situation to which this linguistic expression refers (the person who is very happy because of his/her success in his/her exams and makes this manifest by means of certain physical reactions). There is also a generic space which is provided by the structure and logic of the CONTAINER-schema [3] and which licenses the metaphoric mapping. This schema consists of an interior, an exterior, and a boundary. Its internal logic tells us that the boundaries prevent what is outside from affecting the entity or entities found within the container; that everything is either outside or inside the bounded region; that if container A is in container B and B in C, then A is in C; that if any entity enters the bounded region, such an entity will be affected either positively or negatively by the entity or entities within the container, etc. (see Lakoff, 1987, 1989) [4]. For the conceptual projection into the blended space, which is carried out as licensed by the generic space, the container is a person, whose interior is filled with happiness and who is so happy that he/she cannot hold such an emotion in his/her interior any more. Note that in the same way as the functionality of a container may be altlered by internal pressure, the functionality of a person who is extremely happy may be altered (think of a person's agitation and similar physical reactions which may be likened to the situation in which a container is shaking —because of the pressure buildup— before bursting).

The analysis of the previous example shows that we do not need to invoke everything we know about containers to make sense of it. As a matter of fact, only a portion of the CONTAINER idealized cognitive model is activated when analysing linguistic expressions such as the one above. Here, Taylor's discussion of perspectivization may prove illuminating. According to Taylor (1989: 90) «it frequently happens that different uses of a word whose

[3] The idea that image-schemas may supply the structure not only for the source of metaphors but algo to create a generic space which may license projection has been put forward by RUIZ DE MENDOZA (1997b).

[4] In PEÑA (1996, 1997a), an expanded version of the basic logic of the CONTAINER-schema is provided. This version is based on a previous proporsal made by FORNÉS and RUIZ DE MENDOZA (1996) and accounts for many of the meaning effects which may be produced by exploiting this image-schema.

semantic structure is rather complex tend to highlight different components of frame-based knowledge». In the same way, in the use of the CONTAINER-schema, some specific portion/s of knowledge about container is/are highlighted and others disregarded. For instance, we do not need to take into account the idea that in container A is in container B and B in C, then A is in C in order to interpret the mataphor *I am bursting with happiness* (cf. *My heart is full of joy,* where joy is in the heart, which is in the body) [5].

3. Basic and subsidiary image-schemas

Johnson (1987: 126) has provided a long list of possible image-schemas. In Peña (1997bc) it has been observed that many of the image-schemas proposed by Johnson are only subsidiary to a few broad image-schematic categories among which the PATH and CONTAINER schemas figure prominently. Thus, the FORCE, NEAR-FAR and LINK schemas depend on the PATH schema; the FULL-EMPTY, the WHOLE-PART and the CENTRE-PERIPHERY schemas are subsidiary to the CONTAINER image-schema. Also, several degrees of dependency have been postulated. Thus, the CENTRE-PERIPHERY schema cannot be ranked on a par with the FULL-EMPTY schema since the former depends on the WHOLE-PART schema, which has subsidiary status, while the latter depends on the CONTAINER schema directly. Here it may be added that the VERTICALITY image-schema may be portulated to be dependent on the PATH schema, since the UP-DOWN orientation implies a vertical path which possessed the same basic logic and structural elements as the PATH image-schema.

The correctness of this observation about the degrees of dependency between different image-schemas may be corroborated by looking into how these knowledge constructs interact. Let us take the sentence *I was pushed into depression.* The PATH schema underlies this expression but there is another image-schema underlies this expression but there is another image-schema involved in it: the CONTAINER. The PATH schema includes the following

[5] In fact, this part of the logic of the CONTAINER image-schema is not very productive. It only seems to apply to such expressions as *My heart is full of joy* in which the heart is involved. Our heart is conceptualized as the locus of our emotions. This metaphor implies that the whole subject is happy. If joy is inside the subject's heart and his heart is inside his body, then the subject is happy. However, we could do away with this part of the basic logic of the CONTAINER-schema and postulate that this expression is a metonymy in which the part, the heart, stands for the whole, the body.

structural elements: a starting point, an end point or destination, and some direction. According to Lakoff (1989: 119) its basic logic tells us that if you go from a source to a destination along a path, then you must pass through each intermediate point on the path and that the further along the path you are, the more time has passed since starting. By virtue of the PATH schema, the starting point coincides with a non-depressive mood; the destination is a depression; there also exists some force. The subject is passive and that is the reason why he/she does not move on his/her own. In this expression the source domain is represented by a path which includes the following mappings:

— The traveller is a passive subject.
— The path leads the subject to a depression.
— The end point or destination is the depressive mood, which is conceptualized as a container.
— The force involves movement and is external, as suggested by the verb in the passive voice.

It must be noted that in this example, the destination takes the form of a CONTAINER which is projected onto the PATH schema in a way which is consistent with its general conceptual layout. As Fornés and Ruiz de Mendoza (1996) have pointed out, image-schemas often provide the blueprint for the partial activation and projection of other ICMs onto them; this process results in an enrichment of the highly skeletal structure of the image-schema. As a rule, generic ICMs are used as the basis for the guided activation of other ICMs as needed. The example we are analyzing is interesting in this respect. In it we combine one image-schema with another in such a way that the structure and logic of both have to be made compatible, but one of the schemas involved (i.e. the CONTAINER) acts as subsidiary to the other (i.e. the PATH).

The portion of knowledge which is instantiated or highlighted on each occasion depends on the linguistic expression under consideration. As mentioned before, basic and subsidiary or dependent image-schemas exist. Whenever a subsidiary schema is invoked by a linguistic expression, the portion of knowledge of the image-schematic ICM that we instantiate will be only a small part of the basic schema to which it is subsidiary [6]. Consider the folliwing example: *When the glass was full to the brim he drank it in one gulp* [7]. Since this expression makes use of the FULL-EMPTY schema [8], we do not need to invoke

[6] For detailed discussion see Peña (1997bc).
[7] *Language Activator*, 1993, p. 534. Cambridge: Cambridge University Press.
[8] For a detailed analysis of this subsidiary image-schema, see PEÑA (1997c).

all our knowledge about containers to understand it but only a small portion of knowledge which has been highlighted. The structural elements here include a container with an interior and some entity or entities which fill (part of) the interior. Since its structure depends on that of the CONTAINER, it naturally follows that its basic logic cannot be independent of the logic of the CONTAINER either. As a result, the range of possibilities of combination for the creation of meaning is smaller than in the case of a linguistic expression involving a basic image-schema.

It is interesting to note that subsidiary image-schemas are used to highlight part of a basic image-schema whose presence, though backgrounded, remains essential for the ultimate interpretation of the metaphor which makes use of them. Consider the sentence *We have eventually witnessed the take-off of economy in our country*. This example is based on the PATH schema, but it is particularly focused on the SOURCE sub-schema. However, the rest of the PATH schema supplies some crucial meaning ingredients. Thus, the beginning of a flight is mapped onto the beginning of economic growth but we know that the economic take-off of a country is not just any type of beginning. We need to understand it in terms of the sort of goal that it can achieve. This is what makes the use of the aeroplane take-off all the more significant. The take-off of an aeroplane involves a sudden change from being stationary to moving at a tremendously fast speed. Moreover, we know that an aeroplane can reach extremely short time. In the mapping this suggests that the economy of the country has undergone a dramatic and fairly promising change.

4. The Invariance Principle

In connection to the question of the relationship between abstract reasoning and metaphoric mappings based on image-schemas, Lakoff (1990, 1993) has formulated The Invariance Principle. According to it, the image-schematic structure of the source domain of a metaphoric mapping is preserved in a way which is consistent with the inherent structure of the target domain. Ruiz de Mendoza (1997a) has argued that the Invariance Principle —which is ultimately a principle of consistency between source and target domains— should be extended to account for cases of metaphors where (i) no image-schema is involved, (ii) there may be more than just one space for the input source domain. He illustrates the first case by means of the PEOPLE ARE ANIMALS metaphor, where it is understood that animal behavioural (and sometimes physical) attributes are mapped onto corresponding human behavioural attributes. For

example, in *John is a lion* the behavioural feature of a lion's purported courage is mapped onto the human quality of courage. It can never be mapped onto any other attribute (like modesty, honesty, arrogance, and so on). The second case is illustrated by Ruiz de Mendoza with examples which involve an image-schema plus an ICM of a different kind (for example, a propositional or even a metaphorical ICM, as in Ruiz de Mendoza's example *I am ahead of myself* where the subject is figuratively split into two in application of the SPLIT SELF metaphor [9]).

Ruiz de Mendoza has dealt with the two limitations of Lakoff's proposal by formulating the Extended Invariance Principle. According to it, all contextual ffects motivated by a metaphoric mapping preserve the generic-level structure of the source domain, and of any other input space involved, in a way consistent with the inherent structure of the target domain. This formulation accommodates the idea that there may be more than one input space for the source of a metaphor. In effect, it is not only the structure of the basic schema for the source that has to be preserved but also the structure of any other input space involved in the source. Ruiz de Mendoza's formulation is additionally sensitive to the fact that non-image-schematic metaphors also obey principles of consistency between domains.

However, there are two problems with this proposal. One is that it does not take into account the possibility that an image-schema is used to enrich another image-schema, as in our previous example *I was pushed into depression*. The other problem is that consistency is not just a matter of source-target relationships. Il concerns the internal configuration of the source itself. Thus, when information from different ICMs combines in the source, this has to be done in a coherent manner. Consider in this respect the sentences *He broke into our conversation* and *He kept butting in on our conversation*. Both have an image-schematic base in that the conversation is conceptualized as a CONTAINER into which someone forces his way. But what is special about them is not that they have an image-schematic base. Note that the expression *break into* is often associated with house burglary: to break into a building is to get into it by force. On the other hand, the word *butt* is typically used to describe a horned animal's action of pushing against someone or something with the head. This suggests that the meaning of the two sentences above has a special situational component. Each of the situations which we have just described (a burglar entering someone else's private property by force and an

[9] SEE LAKOFF (1996) for detailed discussion of metaphors dealing with the internal structure of the self.

animal striking an object with the head or horns) constitutes a mental space which is projected onto the input source of the metaphors which account for the meaning of the two sentences. As a result of this, each input source is heavily enriches and a large number of meaning effects may be derived: that is to say, breaking or butting in on a conversation is not only interrupting the conversation, but doing it in a certain way (i.e. forcefully and violently) as prompted by each of the two situations invoked.

It may finally be observed that the general principle for the activation of mental spaces to make up an input source space is that the most generic space (e.g. an image-schema) takes precedence over and serves as the blueprint for the activation of the other spaces cued by the metaphorical expression. This is in keeping with the process of schematic enrichment as described above. When there is more than one generic space, only one can function as the blueprint. Usually the metaphorical expression cues the special prominence of this space by means of a verb phrase. Thus, in *catch a glimpse,* the PATH schema is cued by the verb, which suggests that there is an entity which moves along a path to end up under someone's control (by being held in the hand which acts as a container to prevent the object from escaping); in *fall into despair,* the verb describes a downward movement along a PATH which leads into a CONTAINER which affects the entity negatively; in *get out of trouble* the verb suggests movement along a PATH which leads out of a harmfull CONTAINER; in *She was filled with sorrow* the subject is depicted as a CONTAINER which is FULL of a negative emotion (which thus affects the container negatively). It must be noted that all input spaces which are not cued as central by the metaphorical expression are inmediately assigned sybsidiary status. However, as is the case with the CONTAINER schema, they may function as basic in other expressions. On the other hand, those schemas which, like the FULL-EMPTY schema are subsidiary by nature, may never appear working as basic schemas.

5. Conclusión

In the present paper we have attempted to show how metaphorical expression based on image-schemas are constructed and processed. We have been able to see the applicability for the study of such expressions of both the «many-space» model —as postulated by Turner and Fauconnier (1994, 1996)— and of Ruiz de Mendoza's reformulation of the Invariance Principle (see Lakoff, 1990, 1993), which we have attempted to improve. We

have also discussed in what way mental spaces combine as guided by the basic conceptual structure provided by image-schemas to prepare the source of some metaphors for the mapping process. In relation to this, the notion of *schematic enrichment*, which is compatible with the essentials of the «many-space» model —has proved useful and has allowed us to determine the principles of focalization of meaning constituents within their frames of reference. This discussion has also made it possible to establish hierarchies of prominence inside image-schemas depending on their intrinsic nature, i.e. on whether they act temporarily or not as subsidiary to other schemas.

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