

Understanding Image Schemas

Prior to learning about the surprising role of metaphor in human language and how it impacts language construction, it will be helpful to learn about *image schemas*, one of the primary building blocks of metaphors.

It All Goes Back To Infancy

During the pre-verbal stage, human infants observe things and people in motion. They manipulate their toys and other items within their reach, placing them on top of one another, next to one another, inside one another, etc., as well as observing others manipulate objects. They see and make objects move along paths; they see things fall, start, stop, hit, and bounce into each other. They see things become hidden when they move behind other things and see things go inside and come out of other things. They come to understand how the world works at a physical level by grasping things, picking them up, dropping them, pulling and pushing them, hitting them, and throwing them, always watching how the object responds.

All of these observations and interactions repeated over months and months become learned patterns of spatio-temporal relationships and their associated bodily sensations, well before the infant is able to use words to describe them. These patterns in turn give rise to pre-verbal inferences on the part of the infant allowing them to understand and predict how external objects and their own bodies interact with the world.

These patterns which give rise to such pre-verbal inferences are called **image schemas**.^{*} They are essentially pre-verbal conceptualizations which become so ingrained and cognitively fundamental, they later become the sub-conscious building blocks, i.e., cognitive “domains,” for conceptually structuring less concrete, even entirely abstract aspects of our experience.

The very first such patterns learned by an infant are listed below:

PATH	CONTAINER	LINK	APPEAR
START PATH	INTO	THING	DISAPPEAR
END PATH	OUT OF	BEHIND	± MOVE
PATH TO	± CONTACT	EYES	ANIMATE MOVE
LOCATION	OPEN	UP-DOWN	BLOCKED MOVE

These “spatial primitives” become the building blocks for more complex image schemas:

AGENCY	LINK	COLLECTION	ATTRACTION
NEAR-FAR	REMOVAL	PROCESS	COMPULSION
CENTER-PERIPHERY	CYCLE	PART-WHOLE	RESTRAINT
SOURCE-PATH-GOAL	SPLITTING	FULL-EMPTY	FORCE-COUNTERFORCE
OCCLUSION/BLOCKAGE	ITERATION	SURFACE	BALANCE

These image schemas eventually end up being “mapped” onto the spatial lexico-morphology of a language, e.g., English prepositions and directional adverbs, as we will see in the next section.

* While the plural of *image schema* should be *image schemata*, the form *image schemas* is found in nearly all literature on the topic.

The “Contradictions” and “Irrationalities” of English prepositions

Consider the English word *out*. Its basic concept is spatial in nature, specifically the idea of either static or dynamic exteriority, i.e., “being or moving to the outside of something. So why does its usage extend to what appear to be contradictory examples? E.g.,

1a) *The sun is out / The stars are out.* VERSUS 1b) *The light is out. The fire is out.*

The subjects in sentences (1a) are visible, while in (1b) the subjects become invisible/extinguished.

Or how about:

2a) *Jim threw out an idea to the others.* VERSUS 2b) *The others threw out Jim’s idea.*

The weirdness continues when we look at the following pair of sentences which a non-native speaker learning English might initially conclude to be opposites, but in fact describe the exact same situation:

3a) *Tom filled in the form.* VERSUS 3b) *Tom filled out the form.*

Here’s an example of the same phenomenon using a different pair of prepositions.

4a) *They closed up the bookstore.* VERSUS 4b) *They closed down the bookstore.*

In other cases, the meanings of the supposed “opposites” in fact refer to situations which bear no apparent relationship to one another:

5a) *The student dropped in.* VERSUS 5b) *The student dropped out.*

Still in other cases, two prepositions whose basic meanings don’t seem related to one another, can be used to describe the exact same situation:

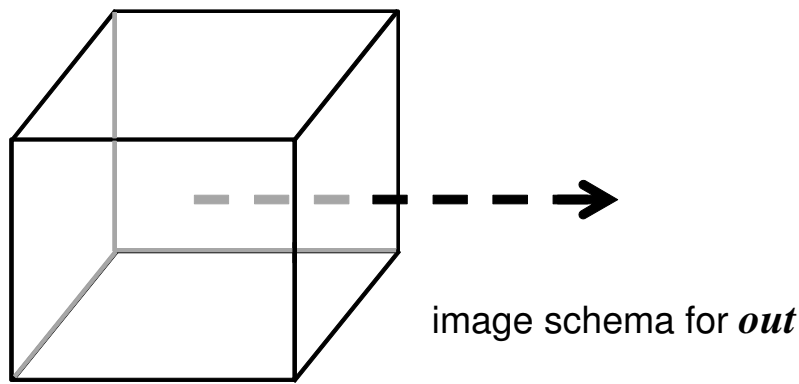
6a) *Everyone turned up for the rally.* VERSUS 6b) *Everyone turned out for the rally.*

The above examples would appear to support the conclusion that the correct usage of simple prepositions and directional adverbs in English is semantically chaotic and that the rules governing usage must be learned by rote for each preposition. It would appear that:

- The same preposition can express opposite meanings
- Opposite meanings can be expressed by semantically unrelated prepositions
- Pairs of prepositions which normally express opposite meanings can express similar meanings
- Pairs of prepositions which normally express opposite meanings can express unrelated meanings
- Similar meanings can be expressed by unrelated prepositions

However, careful analysis of these kinds of phenomena using the concept of image schemas can simplify this “chaos” significantly.

On the following page, we show a diagram of the image schema for English “out.” In cognitive linguistics, such diagrams utilize **LM** to represent the landmark (the entity with respect to which something moves) and **TR** for the trajector (the entity which moves relative to the landmark), as well as additional symbols to convey other entities considered part of the image schema, such as observers, conceptualizers (i.e., a mental observer of an abstract concept), sources, goals, etc. Arrows and dotted lines are also used to indicate spatial relationships and motion.



The image schema for “out” indicates that a trajector entity is located outside of a container or container-like space. The relationship can be static or dynamic as in *The cat is out of the house* versus *The cat goes out of the house*. This basic meaning is extended to a large number of situations, both tangible and abstract, wherever the notion of exteriority can be construed.

And so we get examples such as *The lava spread out* in which an entity expands in size, thus taking up an area previously outside of the original landmark domain.

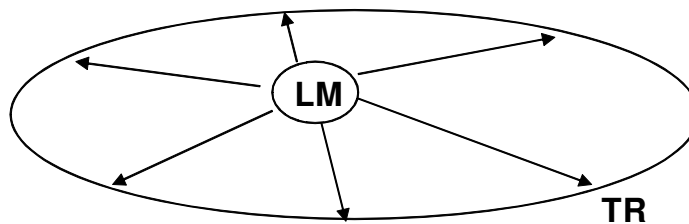


Image schema for *spread out*

Similarly, *Hand out the brochures* and *Roll out the carpet* describe situations where the area of dissemination or presence is greater than the original, i.e., the entity has moved “out” and beyond its original occupying space.

Abstracting further, we extend the concept to situations where a trajector entity (or a part thereof) moves outward from the landmark without any accompanying notion of “exit”, as in *They set out on their trip* or *He reached out for it*.

In our *The sun is out* example, an added semantic notion comes into play besides exit from an original location—the idea that the landmark is a container inaccessible to the observer and that the trajector (the sun) emerges from this container into the observer’s perceptual field. This interpretation is supported by the fact that we use the verb “come” when saying the dynamic equivalent of the sentence, *The sun came out*, conveying movement towards the speaker or conceptualizer. Notice how the sentences *The light is out* or *The fire is out* convey an “opposite” meaning where the trajector’s metaphorical movement is away from the observer, to “outside” the landmark where it becomes inaccessible, as evidenced by the fact we use “go” instead of “come” when saying the dynamic equivalent.

These examples show a notion of **perspective** comes into play when considering image schemas. Thus...

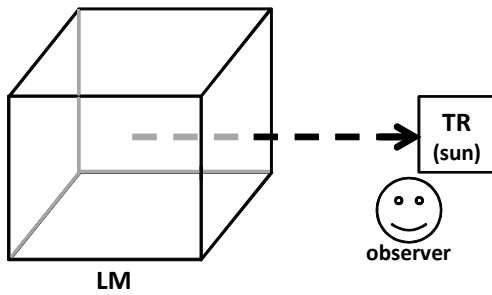


Image schema for “*The sun came out.*”

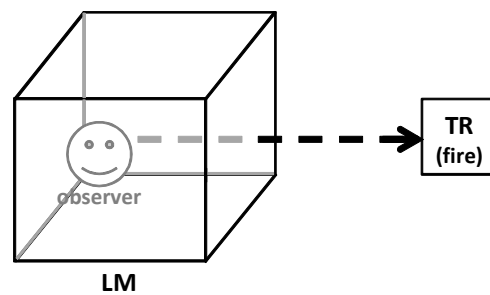


Image schema for “*The fire went out.*”

We now see why and how the same word *out* can be used in semantically “opposite” contexts. It is not arbitrary as a traditional grammarian might state. In fact, we don’t even have to change the meaning of *out*; it’s usage in the two contexts is based on the same underlying notion of exteriority applied to both contexts, but differentiated by perspective. These same schemas explain contexts such as *The news is out*, or *The secret is out*, where the accessibility/inaccessibility is in relation to one’s cognitive field as opposed to one’s perceptual field, given that these sentences describe abstract contexts rather than tangible ones as with the *sun* examples. The principles extend to even more abstract contexts such as *She speaks out*, *It all turned out okay*, *I’ve sorted it out*, in which the result or outcome of a process or action becomes known or comprehensible.

Examples similar to “*the fire went out*” schema include *The music drowned out his voice*, *I want to blot out the memory*, and *The criminal is hiding out*, where there is metaphorical movement of the trajector into a landmark that is inaccessible to the conceptualizer’s perceptual or cognitive field. This notion of landmark inaccessibility is further extended metaphorically to contexts involving the unavailability of tangible or intangible resources, e.g., *We’re out of gas*, *The supplies ran out*, *I’m tired out*.

In examples like *Tom filled in the form* versus *Tom filled out the form*, the exact same situation is being described using different image schemas. The former uses a CONTAINER schema where the form is seen as a container being “filled” with information, while the latter uses our “spread out” (or ADDITIVE) schema where the form is construed as subjectively taking up more space as information is added to it.

A Preview of Conceptual Metaphor Theory

The examples above using English *out* demonstrate that image schemas learned by infants not only survive into the linguistic realm, but form the basic cognitive “mappings” between pre-verbal conceptualizations and a language’s lexico-morphology (i.e., the correspondences between concepts and words).

What is important to note is how these “mappings” become more and more abstract, in that the image schema starts as the basis for the meaning of a word or words in one’s native language, then becomes applied to increasingly more abstract situations. This notion of “mapping” simpler, more concrete concepts to more abstract concepts as a means of subconsciously understanding those abstract concepts in a more intuitive way, will be fundamental to **conceptual metaphor theory**.

REFERENCES

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- Lee, David. *Cognitive Linguistics: An Introduction*, Oxford University Press, 2001
- Mandler, Jean M. and Pagán Cánovas, Cristóbal. “On defining image schemas” in *Language and Cognition*, Vol. 6, Issue 4 (December 2014)