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An Investigation of MERGING Image Schema: A Cognitive Semantic Perspective

A B S T R A C T

This study is based on the content analysis method. It is qualitative, descriptive and analytical. Its main goal is to explore MERGING Image Schema as it is one of the image schemas that are recognized as significant constituents in humans' cognitive system and their creative thinking. Image schema theory can be considered as an advanced way of inspection into a nonobjective and sensorimotor experiences. This image schema is dealt with by scholars who are interested in cognitive studies but in this study, the researchers attempt to introduce and involve many authentic perspectives and formalizing new subcategories to it in addition to setting up their visual representations as a way of schematizing their structures and explaining their unique cognitive models. The study comes up with important conclusions. The most essential one is that MERGING image schema can be described as consisting of entities that have kinetic energy. These entities are flexible involved in a SOURCE-PATH-GOAL schema caused by a FORCE to integrate these entities, thus to be in CONTACT and then MERGING together into an entirely new entity either in its internal or external structure or evolving features of the original constitutive entities. Consequently, this schema involves sequential processes of integration and addition.

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دراسة استقصائية عن المخطط الذهني- الاندماجية من منظور علم المعنى الادراكي

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الخلاصة:

تعتمد هذه الدراسة على نظرية تحليل المحتوى باعتبارها دراسة نوعية وصفية وتحليلية. تهدف بالاساس الى الكشف عن المخطط الذهني-الاندماجية باعتباره واحدا من المخططات الذهنية التي تميز على انها مكون اساسي في النظام الادراكي للبشر وكذلك تفكيرهم الفعال. تعتبر نظرية المخططات الذهنية طريقة متطورة

لتفحص الخبرات الانسانية المجردة والحسي-حركية. تم تناول ودراسة هذا النوع من المخططات الذهنية من قبل الدارسين المهتمين بهكذا نوع من الدراسات ولكن حاول الباحثان في هذه الدراسة تقديم وتضمين رؤى اصيلة وجديدة مع تقديم انواع ثانوية لهذا المخطط الذهني-الاندماجية بالاضافة الى بناء اشكال او تمثيلات صورية لها كطريقة لتقديم مخططات بنائها وتوضيح انموذجها المعرفي او الادراكي. وقد قدمت الدراسة عددا من النتائج كان من اهمها ان هذا النوع من المخططات الذهنية المتعلق بالاندماج يتكون من بنى ذات طاقة حركية مرنة تتكون من المخطط الذهني (المصدر-المسار-الهدف) تسببه قوة تعمل على اندماج البنى وتوحيدها وبذلك تكون على اتصال مع بعضها ومن ثم يتم الاندماج لتكوين بنى جديدة من حيث بنائها الداخلي او الخارجي او من خلال تكوين مواصفات جديدة للتكوين الجديد لذلك هذا المخطط الذهني يتضمن عمليات من الاندماج والاضافة.

الكلمات المفتاحية: علم المعنى الادراكي، المخطط الذهني، المخطط الذهني-الاندماج

1. Introduction

This section is going to tackle core points related to cognitive semantics as one of the cognitive linguistics sciences. It is also going to investigate an important theory which is of a great interest to many scholars is image schema theory in which its tenets were established since 1970s. Moreover, there will a detailed exposition to one of the image schemas which was introduced first by Johnson (1987) but the researchers will introduce new and authentic cognitive semantic perspectives to this schema.

2. Image Schema Theory: An Overview

Cognitive semantics emerged as one of the Cognitive Linguistics theories in the 1980s (Geeraerts 2010, p.182). Cognitive linguistics is based on the idea that language is an indispensable part of cognition. Language does not only convey meaning but it also reflects the "cultural, psychological, and communicative factors which can only be understood in the context of a realistic view of conceptualization and mental processing" (Mathewson, 2004, p.2).

Meaning is the central issue for cognitive linguistics in general and cognitive semantics in particular in that all "linguistic phenomena are interwoven with each other [and] with other cognitive phenomena to allow us to make sense of, to understand our experience and [then] communicate this understanding". (Ibid)

Warchoł (nd, p.5) emphasized the power of language by delineating it as a "window into cognitive function and human concepts". It reflects "the patterns of thought and conceptualization". Without language we cannot understand how ideas and thoughts are generated in the mind besides how human experiences socio-physical knowledge". He suggested a framework for cognition summarized in figure (1) below:

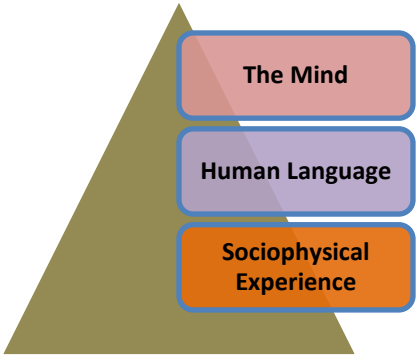

Figure (1): A Cognitive Framework

Cognitive semantics is based on the assumption of the embodied conception (Anderson 2003). It is our acting in the world around us by having physical experiences, "perceiving the environment, moving our bodies, exerting and experiencing force, and so on" that form our conceptual structures in our minds. (Saeed, 2016, p.358)

Image schema theory which was proposed by Johnson (1987) is an important theory "for embodied conceptual structure" (Saeed 2016, p.359). It is rooted in embodied cognition and grounded theory. The findings of both cognitive linguistics and neuroscience supports the emergence of image schema theory (Hedblom, Kutz & Neuhaus, 2015, p.23). Image schemas are spatial patterns formed and developed as a result of recurring sensorimotor experiences.

Lakoff (1987, p.265) states that "conceptual structure is meaningful because it is embodied" in that they constitute the bases for understanding and conceptualizing concepts. Concepts are tied up to "our preconceptual bodily experience".

Johnson (1987) and Lakoff (1987) show that there are two kinds to preconceptual bodily experiences:

a. Basic level categories which come out from "gestalt perception capacity for bodily movement, and ability to form rich mental images".

b. Image schemas which are simple structures that recurs as we interact with the world around us.

Image schemas are variable schemas. All work to formalize human cognitive system. One of these schemas that is going to be tackled in this study is MERGING image schema which is part of UNITY/ MULTIPLICITY Image Schemas which generally describe two or more objects whether they are animate or inanimate trying to unite completely as they experience approximation or linkage or vice versa. MERGING image schema is one of the dynamic schemas that objects or humans entirely or partially are experiencing almost every day.

3. MERGING Image Schema

MERGING image schema is one of the schemas makes our world meaningful and help us in understanding the world around us cognitively as humans interact and experience the world and try to comprehend reality.

This schema involves making new relationships or compositions that emerge and evolve as a result of merging two or more than two objects or entities. This merging is a sequential process of integration and addition. This will be shown in the subcategories suggested later.

Additionally, merging objects with each other may cause either altering the original features to bring into being a new object or keeping features or components of the original objects. It is only a matter of transferring components to new merged object. In both cases this process leads to a new whole.

This image schema involves kinetic energy. Further, the focus on the process of merging can be on its endpoint or on its consecutive evolving stages. It involves moving entities; thus, this schema initiates a SOURCE-PATH-GOAL image schema and there is/are a FORCE or more than one force each with a directionality that causes entities to be, at first, in CONTACT and then MERGING together. This process; therefore, can suggest more than one subtype or subcategory to MERGING schema which are:

a. Conglomerate MERGING: It takes place between two or more entities that have nothing in common but the resultant merged entity can be described with an enhanced performance or power. As in the case of chemical reactions.

Figure (2): Conglomerate MERGING

b. Congeneric MERGING: This kind of merging involves merging entities that have common or shared features. The purpose of this merging is keeping components or features of these entities, thus getting a new ability or features as in the case of unions or assemblies.

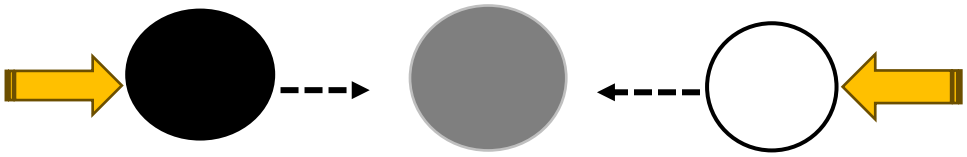

Figure (3): Congeneric MERGING

c. Incumbent MERGING when there is necessity for merging like forcing various working powers or positions to work.

Figure (4): Congeneric MERGING

d. Voluntary MERGING when there is a will and ENABLEMENT to merge.

e. Balanced MERGING when the merged entities are equal in their mass or force to merge.

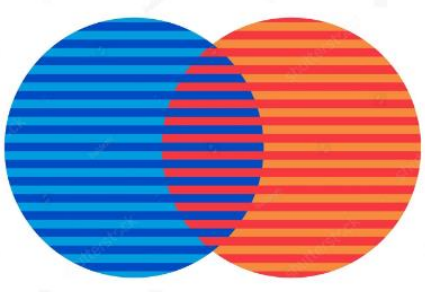

Figure (5): Balanced MERGING

f. Unbalanced MERGING which involves unequal merging of entities thus the more powerful or bigger entity is the dominant over others.

Figure (6): Unbalanced MERGING

We can make use of what Szwedek (2018, p.79) proposes about the point that PATH is subsidiary to FORCE as initials to MERGING. This study remodifies MERGING image schema and suggests the following figure:

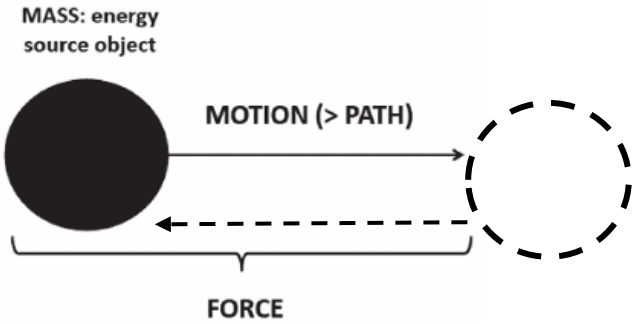

Figure (7): MERGING Schema

MERGING image schema is closely connected to PART-WHOLE image schema which constitutes essential role in deciding and recognizing the "meronymic relations" which Winston and Herrmann (1987, p.420) follow up and then succeed to distinguish between six types of them:

a. "Component-Integral Object" as in the relation between the *pedal* and the *bike*.

The object has a pattern or a structure and the same is applied for their parts and at the same time these parts have functions in relation to each other and to the whole (ibid, p.422). Winston and Herrmann distinguish between physical and non-physical objects shown in the following table:

Table (1): Physical and Non-physical Objects

Physical Objects	Non-physical Objects
1. they are physical 2. they are extensive (Smith and Mulligan, 1982, p.17). 3. they occupy a volume of space 4. the object components "are included in the spatial volumes occupied by their wholes". (Winston and Herrmann, Ibid) 5. for example, wheels are part of bikes.	1. they are abstract. 2. they are not extensively included in the spatial volumes occupied by their wholes. 3. they belong to non-physical wholes. 4. for example, France is part of NATO.

Moreover, as part of the physical world, Winston and Herrmann distinguish between "components" and "pieces". Components are parts that have relations which are determinate and functional to the wholes. Pieces are portions that lack determinate functional relations to the wholes. They "belong to a different family of meronymic relations that we call the portion-mass relation".

b. "Member-Collection" as in the relation between the *ship* and the *fleet*.

Members as part of collections do not need to have functions or have a structural organization in relation to the wholes. We usually use *"part of"* to exhibit the relationship between the member to the collection, e.g., a *tree* to a *forest*. Thus, members are not classes because the latter

"is determined on the basis of similarity to other members". On the other hand, membership "is determined on the basis of spatial proximity or by social connection" (Ibid, p.423).

c. "Portion-Mass" as in the relation between the *slice* and the *pie*.

Portions of masses are homeomerous in that "they are similar to each other and to the wholes which they comprise". Further, portions are different from members and components because the portion is just like the whole as in the slice of a pie is a pie because it has the same taste and ingredients and even the colors of the whole pie while components like a window of a house is different in shape and other features from other house components and at the same is applied for the members of collections like a tree is not a forest but it is a member of it.

We usually use *"part of"* to show the relationship between the portion and the mass. It can be replaced by *"some of"* as in:

[1] *I ate part of my apple.*

[2] *I ate some of my apple.*

In the case of using the *"part of"* with a count sense as in the sense of the component-integral object, it cannot be replaced with *"some of"* and keeping the same count sense (Ibid, p.424) as in:

[3] *"The engine is part of the car."*

[4] **"The engine is some of the car."*

"Some of" cannot be used to distinguish between portions and members but *"one of"* can be used instead:

[5] One of the countries is European.

Moreover, "arithmetic operations of addition, subtraction, multiplication, and division" can be used with portions like (inches, ounces, gallon, and hours). ((Liu, Wang, & Zhang, 1984; Behr et al., 1986 in Winston and Herrmann, Ibid, p.425)

d. "Stuff-Object" as in the relation between the *steel* and the *car*.

This relation is expressed by using *"is partly"* and it answers the question *"What is it made of?"* unlike the component-integral object relation which is expressed by answering the question *"What are its parts?"*. Not only "is partly" is used in all cases but "is made of" is used instead if that stuff is made of something:

[6] *"The lens is made of glass."*

[7] **"The lens is partly glass."*

The major difference between the stuff and the component is that the stuff cannot be separated physically from the thing it constitutes because doing this will alter "its identity" while separating a component is possible. For example, if aluminum is taken from a car, it is still called a car whereas if flour is separated from cake, this will no longer be identified as cake. (Ibid)

e. "Feature-Activity" as in the relation between *paying* and *shopping* in which paying is part of the activity of shopping.

This relation can be expressed by using *"part"* but not *"X has Y"* as in:

[8] *"Paying is part of shopping."*

[9] **"Shopping has paying."*

f. "Place-Area" for example the "*Yellowstone Plateau"* in the USA.

The main features of places are: they are not "parts by virtue of any functional contribution to the whole". Moreover, this relation is homeomerous in that "every place within an area is similar to every other and to the whole area in that all are areas". This relation is an answer to the question "What are its parts?". Finally, "parts cannot be separated from areas of which they are a part".

They add that these meronymic relationships differ from each other in three ways:

a. If the parts are "functional" or not in that they "are restricted, by their function, in their spatial or temporal location". For example, handles in pots are put in certain positions in pots if they are used to function as handles.

b. If the parts are "homeomerous" or not. Homeomerous parts is when parts have the same characteristics or they are the same kind as their wholes the slices as parts are the same as the cake as a whole while "nonhomeomerous" parts are not as in a *tree* as a part of the *forest* as a whole.

c. If the parts are "separable" or "inseparable" from the wholes. For example, *handles* in *pots* is separable while *aluminum* in *cars* is inseparable.

Conclusions

MERGING image schema can be described as consisting of entities that have kinetic energy. These entities are flexible involved in a SOURCE-PATH-GOAL schema caused by a FORCE to integrate these entities, thus to be in CONTACT and then MERGING together into an entirely new entity either in its internal external structure or evolving features of the original constitutive entities. Consequently, this schema involves sequential processes of integration and addition.

Furthermore, this image schema has subcategories Conglomerate, Congeneric, Incumbent, Voluntary, Balanced and Unbalanced Merging.

Finally, MERGING schema delineates a relation to PART-WHOLE image schema which constitutes essential role in deciding and recognizing the "meronymic relations".

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