

**The Analysis of Image Schemas in Economic
Magazines
Written in Arabic
Hind Tahseen Hameed
Instructor, Department of English, University of
Diyala
AND
May Tahseen Hameed
Assistant Instructor, Department of English,
University of Diyala**

The present study aims at analysing image schemas in economic discourse written in Arabic. The present study is a descriptive-analytic research. The analysis based on some image schemas mentioned by Johnson(1987)and Lakoff (1987).The study aims at showing which one of the image schemas presented by them are the most frequently used in Arabic economic texts, it depends on cognitive and semantic theory. Image schemas are conceptual structures derived from physical experiences, cultural background and ideology of a nation. All human beings have access to a universal collection of image schemas. Economy is so important aspect of people's lives that in everyday speech people inevitably speak of the economy and related topics. These economic terms such as budget, interests, and shares are very familiar to Arabic people and used in their daily life from time to time. It is important to mention that image schemas are not just used in literature, but in everyday language as well. The findings of the current study reveal that scale, containment and force schema are the most prominent schemas among all types used in economic magazines written in Arabic.

Key Words: Image Schema, cognitive, concept, Economic

Introduction

Cognitive and Semantic Linguistics

In 1970's cognitive linguists held a connection between language and the mind. Cognitive linguists argue that knowledge of linguistic phenomena is essentially conceptual in nature. They deny the existence of a unique and autonomous module for language use. They argue that the use of language in understating employs similar cognitive abilities to those used in other non-linguistic tasks (Croft and Cruse, 2004,p11). They assume that the storage and retrieval of linguistic data are not significantly different from the storage and retrieval of other knowledge.

According to Gibbs (2005,p.3), cognitive science deals with the operations of human mind and the fact that how it gets the information from the outside through the five senses, compares them with the previous data and finally categorizes and stores in the memory.

Cognitive linguists need to cover some phases of the study such as the brain, imaging and language acquisition. They depend on some few important things like empirical observation, neuroscience and experimental psychology. So cognitive linguistics is concerned with investigating the relationship between human language, the mind and socio-physical experience. Evans and Green (2006,p27) believe that cognitive linguistics is a relatively new school of linguistics and one of the most innovative and existing approaches to the study of language and thought that has emerged within the modern field of interdisciplinary study known as cognitive science.

Evidence for image schemas is drawn from a number of related disciplines, including work on cross-modal cognition in psychology, from spatial cognition in both linguistics and psychology, and from neuroscience.

Part of cognitive linguistics is semantic linguistics there are three main branches of cognitive semantics, first, the grammar is conceptualized, second, that conceptual structure is embedded and motivated by usage , and the third, that ability to use language draws upon general cognitive resources and not a special language module (Croft and Cruse, 2004,p11). Cognitive semantics focuses on meaning as a mental entity, it is conceptualist. Cognitive semantic theories are typically built on the argument that lexical meaning is conceptual, the meaning is not necessarily a reference to the entity or a relation in some real or possible world. Meaning corresponds with a concept held in the mind based on personal understanding (Raii,2009,p175).

Image schemas:

Image schemas are one of the most important conceptual structures from the cognitive semanticist's point of view. Johnson (1987,p 27) explains that these image schemas are proposed as a more primitive level of cognitive structure underlying metaphor and which provide a linked

between bodily experience and a higher cognitive domain such as language. The basic idea is that because of our physical experience of being and acting in the world of perceiving the environment, moving our bodies, exerting, and experiencing force..., etc. We form basic conceptual structures, which we then use to organize thought across a range of more abstract domains. According to Johnson's definition "A schema is a recurrent pattern, these patterns emerge as a meaningful structure for us chiefly at the level of our bodily movement through space, our manipulation of objects, and our perceptual interactions in forming the human comprehension and language"(1987,p29). Image schemas make it possible for us to employ the logic of our sensory-motor experience to perform high-level cognitive operations for abstract entities and domains (Hampe and Grady,2005,p26). Image schemas are directly meaningful "experiential /embodied", preconceptual structures, which arise from or grounded in, human bodily movement(Johnson,2005,p1).

The initial identification of image schemas was mainly achieved through the cross-linguistic analysis of concepts of motion and spatial relations and the informal analysis of the phenomenological contours of everyday experience (Hamp and Grady, 2005, p27).

Lakoff and Johnson (1980,p1) argue that abstract concepts are largely discussed via metaphor. This allows us to understand abstract notions, such as emotion, through concrete ideas. This is called the grounding of metaphors. They are grounded when there is a correlation in experience, according to cognitive views metaphor is defined as understanding one conceptual domain in terms of another conceptual domain (Kövecses, 2010, p 4). An interesting property of image schemas is that they can serve us the basis of other concepts, they structure many of our abstract concepts metaphorically.

A schema consists of a small number of parts and relations, by virtue of which it can structure indefinitely many perceptions, images, and events , it must pattern and order to our actions, perception and conceptions in order to have meaningful, connected experiences that we can comprehend and reason about (Lakoff and Johnson,1993,p23).

Types of image schemas

Johnson provides an initial list of image schemas in "The Body in the Mind" (1987.p126). Six types of image schemas will be chosen for the present study. These are as follows:

Containment Schema:

It represents one of the ways in which bodily experience give rise to a meaningful concept, the concept container is grounded in the directly embodied experience of interacting with bounded landmarks, image – schematic conceptual structure can also give rise to more abstract kinds of meaning. According to Lakoff (1999, p 26) and Hurtienne and Blessing (2007,p 4), this image schema consists of an interior, and exterior and a boundary. It involves the experience that the physical body as itself a container and from the experience of being physically located ourselves within bounded locations like rooms, beds, etc... and also putting objects into containers boxes, cans and bags (Hampe and Grady,2005, p 60). Peña (1989, p 453) mentions that according to this such a schema, encompass several consequences such as locating and limiting the activities of the content entity. Elements are either inside or outside the container. If the container is placed in another container, the entity is within both. Example: John has gone into deep desperation after divorced. Here are types of containment schema :

A. ACTIVITIES ARE CONTAINERS:Example: In washing the windows I splashed water all over the floor. How did Jerry get out of painting the faces?

B. STATES ARE CONTAINERS:Example: She entered a state of euphoria.

C. GROUPS OF INDIVIDUALS ARE CONTAINERS:Example: It was bound to raise a serious debate in the party.

D. LAND AREAS ARE CONTAINERS: Example: What should I take with me for a walk in the south downs?

E. TIME IS A CONTAINER:Example: In 1968...He's like something out of the last century.

It is one of the most common structures that emerge from our constant bodily functioning. It reflects our everyday experience of moving around the world and experiencing movements of other entities. It consists of a starting point and an end point (a goal) and a series of intermediate point. So here if you go from a source to a destination along a path, you must pass through an intermediate point on the pass and that further along the path you are, the more time has gone by since starting. (Peña, 1999, p189).

The path schema, which has been studied by Johnson and Lakoff (1987,p 49) consists of four structural elements: a starting point(a source) an endpoint (a destination), (a path)a number of contiguous locations which connect the source and the destination and (a direction). Therefore according to Lakoff, this entails that the structure of this schema includes the following: The SOURCE of motion(JOURNEY), the PATH travelled, and a goal (DESTINATION).Example: Being on the right track. (Acting in a manner that enables one to reach the intended destination).

Path schema is expressed in many ways here are some of them:

- A. The mean for achieving purposes are Routes: Example: If this doesn't work I will try a different route.
- B. Actors are Travelers :Example: As we travel down life's path...
- C. Purposes are Destinations :Example: He's headed for great things.
- D. States are Locations: Example: He saw teaching as just a stopover on his way to bigger things.
- E. Major Choices are Crossroads: Example: She's at a crossroads in her life.
- F. Difficulties are Impediments to Travel: Example: He's lost his way.
- G. Progress is Distance Travelled: Example: We've come a long way.

Force Schema:

Forces are viewed as physical, embodied entities (an agonist)acting in competition against other forces(an antagonist), with each entity having varying strength and tendencies(Gibbs, 2005,p 243). They are mainly of a dynamic nature. In other words, this schema is related to experiences of encountering an obstacle and using one's power to overcome it. Johnson (1987, p 43) mentions that force has a vector quality and directionality.

There are seven kinds of force schemas:

- A. Blockage: Involves a pattern that is repeated over and over again through our lives. When a force meets an obstruction and acts in various ways: being diverted as a result of the causal interaction of two or more vectors(Gibbos,2005,p 243), or counting on by moving the obstacle or passing through it. According to Peña (1999, p 199), we encounter some obstacles that prevent a moving entity from reaching a destination. Example: My doctor has forbidden me to drink alcohol.
- B. Compulsion: Johnson (1987, p 43) states that when we have a movement along a trajectory the force may be blocked. Example: She pushes us to our limits.
- C. Removal of Restraint: Some actual barrier is removed by another force or because the potential barrier is not actually present, the force can be exerted (i.e., there is nothing blocking it) (Johnson, 1987, p 46).This means that when the removal (by another cause) of a blockage allows an exertion of force to continue along a trajectory. Example: John did his best and passed the exam.
- D. Enablement: There are a potential force vector and an absence of barriers or blocking encounter forces (Johnson, 1987, p 47).Example: He is wild to make his pleasure conduce to yours.
- E. Attraction: The force is a kind of gravitation toward an object. The vectors can be either actual or potential (Johnson, 1987, p 48).Example: Something about him drew me to him.
- F. Counterforce: Two equally strong and determined force centres collide face to face, with the result that neither can go anywhere. (Johnson, 1987, p 46).Example: He finally could lift that big rock and people who were stuck in the cave were saved.
- G. Diversion: Colliding forces with a resultant change in force vectors, interaction of two or more vectors. (Johnson, 1987, p 46).Example: Being pushed off course by wind.

Scale Schema:

Johnson (1987, p xiv) an image schema that involves an increase or decrease of physical or metaphorical amount and consists of any of the following: a closed or open-ended progression of amount , a position in the progression of amount , one or more norms of amount and a collaboration of amount , and economic entities such as supply and demand.

On physical basis More is up: when we add more of substance to a pile or container, the level rises (Lakoff and Johnson,1980,p 15), quantitative amount and qualitative degree or intensity (verticality), our world is experienced partly in terms of more, less and the same (Johnson,1987,p xv).

We understand greater quantity in terms of increased height, and decreased quantity in terms of lesser height. Example: The number of shares has gone up.

Balance Schema:

It is a schema that provides an understanding of physical or metaphorical counteracting forces, it consists of countervailing forces acting on a target which is either a point, liner or plain. It is based on bodily experience, normal bodily states, such as temperature and it may be applied metaphorically to provide an understanding of other experiences such as the balance of the visual field with respect to art, balance schema involves symmetry (Johnson, 1978, p 96).

Johnson (1987, p 96-7) mentions three kinds of balance schema:

- A. Psychological balance as when emotions are said to be capable of and in need of repressed suppressed and hold in Example: He had to suppress his anger.
- B. Equilibrium schema that involves physical or metaphorical external pressure on the container like objects: Example: Pressure in the stomach.
- C. Twin-Pan balance schema, which involves physical or metaphorical countervailing forces acting on either side of a fulcrum like an argument, justice and equality.

Link schema:

It consists of two or more entities, connected physically or metaphorically, and the bond between them (Johnson, 1987, p 51).Example: A child holding her mother's hand. This schema emerges from experience. It is formed by our relationships and the integrity of our body. When we grip an object in our hand, we form a link between the object and us. A common action is that of binding two objects together. We have two objects or more, concrete and abstract that are in contact within our experiential field. What link schema does to us is the following:

- A. Structures our perception of connections, shared features, and functional unities.
- B. Enables us to make sense of notional connections such as causality or logical connectedness.
- C. Underlies our use of metaphor itself since in order to use link we must understand the source domain and the target domain.

Corpus of the Study:

The corpus used in this study has been extracted from a number of economic texts written in the Arabic language. These economic texts have been chosen from "Noor Economic Magazine".It is an Iraqi magazine and it is written in Arabic, and the texts chosen from five published issues containing all types of articles: interviews, economic news, inquires, and reports ...etc. The issues have been chosen randomly and they are started from the years2010-2014. This magazine provides rich contemporary economic discourses. The data is classified based on the structure of cognitive linguistics, Lakoff and Johnson's image schema (1989). The current study is done based on descriptive- inductive. This study examines the role of six image schemas play in conceptual interaction, especially in relation to economic texts.

From the corpus of the study appears that the following types of image schemas are prominent: scale, containment, path, force, balance, and link. The following is the analysis of some samples selected and then classified into categories represented each one of the schemas.

Journalists make abstract economic processes and systems more manageable and comprehensible to the readers. So it becomes easier for those readers to understand economic

concepts because those concepts become derived from people's experiences in physical worlds by the use of those image schemas.

The Analysis:

Now we consider these image schemas in an economic magazine written in Arabic. The types and the frequencies of schema found in the Arabic economic articles are categorized into seven categories according to the types introduced by Johnson and Lakoff (1987). The frequencies of these seven types are shown in the following table:

The frequency of Schemas in Economic Articles

Schema	Number	Percentage
Scale Schema	9	12.04%
Containment Schema	6	8.36%
Image Schema	2	2.52%
Force Schema		3.32%
Path Schema		3.6%
Location Schema		4%
Total	5	60%

The sample sentences have been translated by the researchers. The following are the analysis of selected sentences showing the six types of image schemas in the corpus of the study.

Scale Schema: Sample Sentences:

- | | |
|--|--|
| (1) فإن أسعار المواد الغذائية ترتفع | Food stuffs' prices are rising. |
| (2) حيث سترتفع صادراتها النفطية | its petrol-exports will rise |
| (3) ازداد بمقدار ٤٠٠ ألف برميل في اليوم | increases about 400000 barrel per day |
| (4) وهو ما ينعكس سلباً في ارتفاع نسبة التضخم | reflected negatively in the rising inflation rates |
| (5) مع انخفاض قيمة أسهمها | with its depreciation of shares |

The physical basis for scale schema is the idea that if you add more of a substance or physical objects to a pile, the level goes up, up corresponds to more (Lakoff and Johnson, 1989:16). We understand greater quantity in-terms of increased height and decreased quantity in – terms of lesser height.

Scale schema is basic to both the quantitative and qualitative aspects of our experience. So in this respect, people can view the world they live in as a massive expanse of a quantitative amount and qualitative degree or intensity.

In sentence (1) the prices of the foodstuff are getting up oriented (increase). so in all the other sentences: the prices, petrol-exports, the barrels and inflation rate all of them are getting up, are increasing and becoming more. The last sentence is comprehended as the shares are getting down; becoming less.

Containment schema:

From the beginning, we experienced constant physical containment in our surroundings (those things that envelope us).

Sample Sentences:

- | | |
|---|---|
| (6) الظروف التي قد تغلف هذا القرار | the circumstances, which may envelop this decision |
| (7) عشرات الشركات على وشك الدخول في نفق تراجيدي | tens of companies are about to enter into a tragic tunnel |
| (8) بعدم السماح للمصارف بدخول سوق شراء العملة | not allowing the banks to enter into the currency buying market |
| (9) بمجرد خروجه (إيران) من العقوبات التي فرضتها الأمم المتحدة | (Iran) coming out of sanctions imposed by the UN |
| (10) كما وتدخل (القوى العاملة) سوق العمل سنوياً | |

(labour force)entering employment exchange yearly

(11) نُنقذ المستهلك من هذا المستنقع الرهيب rescue the consumer from this terrific swamp

(12) خطط الاقتصاد للخروج من الازمة الطاحنة

(economy)plans to come out of the molar crisis

In sentence (6) here the decision is completely covered by circumstances, it becomes invisible and contained. Sentence (7) there are many troubles facing the companies as if they are going to enter into a long dark tunnel and be totally contained. Sentence (8) the currency buying market is like a place or building and banks are not allowed to be in this building or place. Sentence (9) the sanctions imposed on Iran is as a room whenever the UN sanctions ended, Iran will be able to come out of this room. Sentence (10) employment exchange is a field or a place for the labour force to go in or out. In sentences (11) and (12)(the swamp)and (the crises)is as a hole and (the consumer) and(the economy of Iraq)should be saved and we should get them out of this hole.

The container image schema operates beneath the level of our conscious awareness , that is human will share a general understanding of what it means for something to be located within a container (Johnson,1987:271)This particular schema structures our regular reoccurring experiences of putting objects into and taking them out of a bounded area.

Path Schema: Sample Sentences:

(13) القوانين النافذة التي تتقاطع مع الاستثمار

the inure laws which crossroads with investment

(14) بحيث تتجه المصروفات نحو الأدوات ذات التأثير على النمو

expenses are directed to the tools that have an impact on growth

(15) في وضع عجلة الاقتصاد العراقي في المسار الصحيح

putting the wheel of Iraqi economy on the right track

(16) نعود قليلا الى تاريخ الاقتصاد العراقي

going back a little bit to the Iraqi economic history

(17) ان تدفق عائدات النفط

the petrol royalties incomes inflow

(18) المشروع ينطلق من اعتبارات حسن الإدارة

the project triggers from the good management regards

(19) فأنها (القوانين)تتحرك نحو تخفيض الضرائب المفروضة

(the laws)are moving towards reducing the imposed taxes

There is a vast number of path schemas in which the everyday experience of movement along the path serves to conceptualize many other more abstract experiences. Relevant parts of path schema serve to structure our knowledge about making decisions. Sentence (13) investment is walking in the path and inure laws are on another, they crossroads means that they both are not able to achieve the intended goal because goals are achieved by reaching the intended target or the end point and this is not true in this case.Sentence(14) here we also have a track moving forward is good , the moving object decided to walk in this track in order to achieve the goal and reaches its aim ,because it is sure that this path will make it reach because it is the right one, here expenses are the source, the tools that had impact on the growth are the goal, the trajectory is the processes, or the plans made to direct the activity.

Sentence (15) Iraqi economic is a cart or a van, the new investment's laws are going to put this vehicle on the right path and that will make it reach to the right point. Sentence (16) by going back is bad, in the road after walking for some distance means that we will not reach the intended goal. Goals are achieved when we reach them. As if we were walking and then we decided to go back to some point in the trajectory (this is a token of a hesitation. Sentence (17) the petrol royalties which means the money acquired by selling petrol is going to flow, to fulfil the country needs.Sentence (18) good management makes the project to start its journey, to start an accessioning, the end of the trajectory is to apply the project and finishing it. Each project or achievement is considered a path schema, and solving the problem is a path along which one will

have to move step by step through time and space. Sentence(19) reducing the imposed taxes is the target and the laws are the moving objects, the trajectory is the application of these laws, through the application of laws imposed taxes will be reduced.

Force Schema: Sample Sentences:

(20) اليمن والعراق عاجزون عن تحقيق الأهداف الإنمائية

Iraq and Yemen are incapable of achieving the developmental goals

(21) ستواصل الهيئة عملها بدعم المستثمرين بتذليل كافة المعوقات التي تقف امامها

the corpus will continue its work of backing the investors by grovelling all the impediments that stand in front of their business

(22) يتعرض الى مشاكل مالية كبيرة كما تعرضت لها بعض المصارف مؤخرا

(the bank) is exposing to big financial problems as some banks have been exposed to recently

(23) الامن يعتبر من اهم المعوقات الكبيرة امام استقطاب الاستثمار للبلد

security is considered the most important great barriers facing the recruiting of investment in the country

(24) وتسهيل انسياب البضائع و السلع

facilitating the flow of merchandise and commodities

(25) العمل هو الشيء الوحيد الذي يدفعك للأمام

work is the only thing that pushes you in front

(26) قوانين تجارة الدولة قد تفرض بعض القيود على حرية تدفق التجارة

state trade laws may impose some restrictions on the freedom of trade inflow

There may actually be a moving object or there may be only a force exerted against an object that is not moved or changed. The force is exerted in one or more directions. There is typically a single path of motion tied up with the vector quality of forceful movement . (Kövecses,2010, p 43).

Sentence (20) we have a trajectory that is going to lead to the developmental goals, but because of counter forces that make them unable to move, they failed to fulfil the aims. Sentence (21) the removal of restraint here is the backing of the corps to the investors, the corps is getting away from anything that may block their way.

Sentence (22) the bank here is facing troubles, the troubles are obstacles in the way of the bank business and the movement is blocked. Sentence (23) the absence of security prevents investors from starting projects in Iraq so it blocks the way in their faces, and that investment must be recruiting, is another force schema it is an attraction, it has a given magnitude moving along a path and has a direction. Sentence (24) removing the obstacle from the way of merchandise and commodities to make their passing easier, this kind of force schema is called (a removal of restraint). Sentence (25) here what makes you move is working, here working is the force, to achieve your dreams you have to be a hard worker. This is called attraction Force schema. Sentence (26) the laws of the state are the power which puts the obstacles on trading. It is compulsion so trade is not free to be practised their it faces difficulties.

Balance schema: Sample Sentences :

(27) ابدى العديد من العراقيين والمتابعين قلقهم من احتمال غياب الدور الرقابي الفاعل

a lot of Iraqis and pursuers showed their worries from the probability of the absence of the active controlling roll.

(28) وسيؤدي الى ارتفاع الدولار مقابل الدينار

it would lead to the rising of the dollar against the Iraqi dinar

(29) النقص والتذبذب في مفردات الحصاة التموينية

the storage and the slippage in provisioning items

(30) عند ارتفاع البطالة لابد للأنفاق من ان يزداد والعكس ينخفض العجز مع تزايد الناتج المحلي

when inflation rises expenditure should rise and the opposite is true, the deficit lowers with the increase of local products

التضخم ناتج عن عدم توازن العلاقة بين أسعار السلع من ناحية وبين أسعار عناصر الإنتاج ومستوى الأرباح من جهة (31) أخرى

inflation has resulted from the instability of the relation between commodities prices on one side and the prices of production factors and the level of profits in the other hand.

Sentence (27) to be worried is to be unbalanced, the absence of the active controlling roll will create unbalance in the whole situation, and the situation will be out of control so such a chaos means there is no balance. Sentence (28) here there is a balance we have the dollar in one hand, and we have the Iraqi dinar on the other when the dollar rises, the Iraqi dinar is going to rise to i.e. what one side gets, the other must get also. Sentence (29) this kind of situation creates a state of unbalance. The image of balance involves symmetry is understood relative to an axes, the sides of the axes here are not equal. Sentence (30) we have an equality over the axes, from one side there is inflation on the other side there is expenditure if one of them rises the other will rise to the opposite is true also. Here there is another image schema, the rising is up oriented it is scale schema and the going down means low. Sentence (31) the reasons for inflation in the economy of the country is distortion in balancing in the relation between the prices of goods and the profits of the production.

Link schema: Sample Sentences :

(32) لدمج مساعدات الاتحاد مع أولويات الحكومة

to merge the union assistance with the government priorities

(33) ويقترن ذلك كله بظروف سياسية all this is coupled with political circumstances

(34) مشكلة البطالة بناء على علاقتها المتشابكة وارتباطها المباشر بالأوضاع السياسية

unemployment problem based on its interlacing relations and it's direct correlate with political situations

(35) ووضع اليات صحيحة للتعشيق فيما بينها

putting suitable mechanisms to interlock between them

(36) ومسؤولون عن تحقيق التشابك الاقتصادي

and responsible for achieving the economical interrelation

Sentence (32) there is a relationship between that assistance and the priorities, they are linked on one way or another. Sentence (33) there is a relationship between the conditions that had been spoken about because of the political circumstances reached to this state, there is a connection between them. Sentence (34), (35) and (36) in all these sample sentences there is something related to another thing and so it is affected by it. The two things become as one entity because what effects one of them will affect the other...

Conclusion:

This study is intended to make some explorations into the use of image schema in economic texts written in Arabic. Economy has a close relationship with human beings and human society. The schema is a feature of the human mind. From the data collected in this paper it can be concluded that among the schemas introduced by Johnson and Lakoff (1987), scale schema is the most frequent one. This could be due to the nature of the text under analysis, economic language always deals with verticality in talking about prices and shares. Containment schema has a little bit less occurrence comparing with scale schema, the less frequent is path schema, then force, balance, and lastly link schema.

References

- Croft, W & Cruse, D.A. (2004). Cognitive Linguistics. New York: Cambridge University Press.
Dodge, Ellen & Lakoff, G. (2005). Image Schemas: From Linguistic Analyzes to Neural Grounding. Hampe, B., (Ed), From Perception to Meaning: Image Schemas in Cognitive Linguistics. Berlin: Mouton de Gruyter.
Evans, V. & Green, M. (2006). Cognitive Linguistics: An Introduction. Edinburgh: Edinburgh University.

- Gibbs, R. W. (2005). The Psychological Status of Image Schemas. From Perception to Meaning Image Schema in Cognitive Linguistics. Hampe, B., (Ed), From Perception to Meaning: Image Schemas in Cognitive Linguistics. Berlin: Mouton de Gruyter.
- Grady, J.E. (2005). Image Schemas and Perception: Refining a definition. Hampe, B., (Ed), From Perception to Meaning: Image Schemas in Cognitive Linguistics. Berlin: Mouton de Gruyter.
- Hampe, Beat & Joseph E .Grady.(2005).From Perception to Meaning: Image Schemas in Cognitive Linguistics.Berlin: Mouton D Center.
- Hurtienne, J. and Blessing, L. (2007).Design for Intuitive Use – testing Image Schema Theory for User Interface Design. INJC. Bouquet (Ed.), Proceedings of ICED'07, International Conference on Engineering Design (pp.1-12).Paris, France: ACM.
- John, T. & Littlemore, J. (Eds). (2014).The Bloomsbury Companion to Cognitive Linguists Bloom. London: Bloomsbury Publishing.
- Johnson, M. (1987).The Body in the Mind: The Bodily Bases of Meaning, Imagination, and Reason. Chicago: University of Chicago Press.
- Johnson, M. (1989). Image – Schematic Bases of Meaning. Semiotic Association, 2 (1-3), 109-118.
- Johnson, M. (2005). The Philosophical Significance of Image Schemas. Hampe, B., (Ed), From Perception to Meaning: Image Schemas in Cognitive Linguistics. Berlin: Mouton de Gruyter.
- Kövecses, Z. (2010).Metaphor: A Practical Introduction (2 nd ed).Oxford: Oxford University.
- Lakoff, G. & Johnson M. (1980).Metaphors We Live By. Chicago: The University of Chicago Press.
- Lakoff, G. (1990).The Invariance Hypothesis is Abstract Reason Based on Image Schemas. Cognitive Linguistics, 1(1).39-74.
- Lakoff, G. (1999).Philosophy in the Flesh: The Embodied Mind and its Challenge to Western Thought. New York: Basic Books.
- Lakoff, G. (2006).The Contemporary of Metaphor. Geeraeats, D (Ed.), Cognitive Linguistics: Basic Readings. Berlin: Mouton de Gruyter.
- Peña, S. (1998). Conceptual Projection and Image Schemas.EPOS, XIV, 451-461
- Peña, S. (1999).Subsidiary Relationships Between Image Schemas: an Approach to the Force Schema.Journal of English Studies, I , 187-207.
- Raii, J. (2009). Metaphor in Day – to –Day Arabic Speech: A Conceptual Approach. Tishreen University Journal for Research and scientific studies - Arts and Humanities Series, 31 (1), 175-193.

<http://www.fageriman.com/PageViewer.aspx?id=26>