Original Research Article

Cognitive Spaces in Vietnamese Sentences

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Abstract: *Cognitive Space at the Level of Sentence in Vietnamese:* According to Gilles Fauconnier, for any language expression, it always evokes a cognitive space in the consciousness of the perceptor. That space can also be considered as a space simulator of the real space, created in the minds of language users. It is a large holistic perspective which can have many levels, many layers. Every cognitive space contains its components and this space is created from the cognitive frames and cognitive patterns that the language expression reflects. It is made dependent on many factors such as the ability to schematize, the background knowledge, the analytical, synthetic, mapping methods, the concept partitioning, etc. of the perceptor. In this article we use the theory of cognitive space by Gilles Fauconnier to examine the types of cognitive space formed at the level of sentence in Vietnamese. The research results help us better understand how the Vietnamese generate language. Simultaneously, it also enables us to add a good orientation for teaching Vietnamese as a foreign language to foreigners.

Keywords: cognitive space, the mind, the level of sentence, Vietnamese.

COGNITIVE SPACE

The cognitive space was proposed by Gilles Fauconnier [1] in Mental Spaces. According to Gilles Fauconnier, any linguistic expression will evoke a region of cognitive space in the mind of the perceiver. For example, with the linguistic expression *I see a tree*, we have a base space or real space in which there are two entities: a: *I* and b: *tree*. This base space has been reflected into the perceiver's mind forming a cognitive space with two elements a': *I* and b': *tree* with the concept: *I see a tree*.
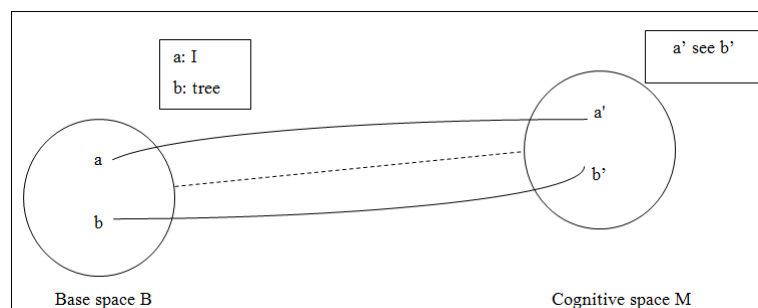

Fig-1: Cognitive space mapping

The cognitive space can also be considered as a simulated space of the real space created in the minds of language users. Simulated spaces sometimes do not necessarily coincide completely with the real space. It is a subjective and selective reflection of the objective world. For instant, in the example above we have the simulated space *I see a tree*, but in the real space, there are not only *I* and *the tree*, but there are also countless other backgrounds such as the sky, the ground, colors, etc.

The truth / false value of the simulated space with respect to the real space is sometimes relative. It is only valid in language, in the minds of language users, does not require a high quality of natural science and accuracy. For example, the concepts of "dragon" and "unicorn" only exist in the cognitive space. And no one doubts the utterance "In my memory, the Eifel tower is only half

built." although anyone can easily recognize that the simulated space that this sentence creates does not completely coincide with the current truth.

The cognitive space is a large perspective that can consist of many layers. Each cognitive space contains its elements. And these spaces are constructed from the cognitive frameworks and cognitive models that the linguistic expression reflects. It is built depending on many factors such as the mapping ability, background knowledge, methods of analysis, synthesis, mapping, concepts partition, etc. of the perceiver. For instant, with a simple example as the concept of "tree", we will sequently recognize the countless factors dominating this concept, such as: the tree must have trunk, leaves and branches; it needs ground and space, it is usually vertical; it has a certain height, a certain color, in a given background; The concept of 'tree' in everyone's mind is not exactly the same, etc.

Below, Gilles Fauconnier's theory of cognitive space will be used to examine the types of cognitive spaces formed at sentence level in Vietnamese. The results will help us better understand how Vietnamese people generate their language. It also helps us to have a good orientation for teaching Vietnamese as a second language for foreigners.

TYPES OF COGNITIVE SPACE IN VIETNAMESE SENTENCES
The cognitive space is similar to the real space in the manner that always having a depth, which means that there is a complex spatial perspective with spatial stratification. We can fully verify that in language with examples such as with the perception verb *look* we have many linguistic expressions such as *look outside*, *look inside*, *look at each side, take a deeper look*, etc.

Ex:

Bình nhìn vào trong xe. (Binh looked into the car (1).
Muốn nhìn ở tầm gần không? (Do you want to look at them close up? (2).

The cognitive space can also be expressed on the surface of linguistic structures with simultaneous multi-layered layout.

Ex:

Tôi thấy *Isa đang trố mắt nhìn ra phía tôi.* (3) (I saw *Isa looking wide open at me*.)

$$\underset{\text{Layer 2}}{\underline{\qquad\qquad \text{Layer 1} \qquad\qquad}}$$

Through the materials examination, we get the results of the cognitive space types in Vietnamese sentences as follows.

Single Cognitive Space
Single cognitive space means that only one cognitive space is created in the mind of the perceiver when receiving the utterance. These are cognitive spaces easily made up of the simplest utterances in language communication. Single cognitive space can contain single image or multi-images.

Single Cognitive Space Containing Single Image
Single cognitive space containing single image is a cognitive space created in the mind of the person who receives the utterance with only one cognitive image.

Ex:

Mưa. (Raining (4).
Mây bay. (Clouds fly (5).
Gió thổi. (The wind is blowing (6).

In all the three examples mentioned above, when receiving these utterances, in the mind of the perceiver, only a single cognitive space with a single image is formed. This type of cognitive space is made up of the simplest possible utterances, evoking only one image.

Single Cognitive Space Containing Multi-Images
Single cognitive space containing multi-images is a cognitive space created in the mind of the person who receives the utterance with two or more cognitive images.

Ex:

Một đám mây trắng đang bay qua mặt trăng. (A white cloud is flying over the moon (7).
Đàn voi bước đi chậm rãi trên những con đường làng quanh co giữa cánh đồng bao la bát ngát. (The herd of elephants walked slowly on winding village roads amidst the immense field (8).
Năm hôm, mười hôm… rồi nửa tháng, một tháng. (Five days, ten days ... then half a month, a month (9).
Tiếng chiêng, tiếng cồng, tiếng đàn tơ-rưng dìu dặt vang lên. (The sounds of gongs, tơ-rưng (a kind of Vietnamese harp) resounded rhythmicly (10).

In all of the examples (7) to (10) above, there are at least two cognitive images created in the same cognitive space. In example (7), there are two images: a white cloud and the moon. *These two images are arranged in the same space. The first image is a moving animation that flies over the second image. In example (8), there are 3 striking images in the same spatial background. The first image is the herd of elephants, the second image is the winding village roads and the third image is the immense field. In that space, the first image is an animation and the remaining two images are still images. Example (9) is a space arranged with images of timelines and arranged in a time axis. In other words, they are arranged in dimensional order of space, represented in a space with images that are ordered as time slices continuously on a cognitive axis. Example (10) is an example of an open space spread out with three images.*

Compound Cognitive Space

Compound cognitive space is a cognitive space created by putting two or more cognitive spaces together. Component cognitive spaces have equal value and role.

Ex:

Mưa rất to và gió rất lớn. (The rain is very heavy and the wind is very strong (11).

Bên chàng đọc sách, bên nàng tưới hoa. (He is reading books, while she is watering flowers (12).

Nàng rất nghèo sống dưới chân đồi, còn chàng thì ngược lại rất giàu và sống trên đồi cao. (She was very poor and lived at the foot of the hill, while he was very rich and lived on the hill (13).

Chiều nào chàng cũng ra sau vườn nhìn xuống chân đồi và thấy bóng dáng nàng con gái xinh đẹp. (Every afternoon, he would go to the back of the garden to look down the hill and see the figure of a beautiful girl (14).

In all the examples from (11) to (14) above, we see that there are two separate spaces and they are joined together by certain means. In example (11), we have two spaces matched mutually. In examples (12) to (13), we have compound spaces matched opposingly. In example (14), we have two spaces matched chronologically.

Complex Cognitive Space

Complex cognitive space is a cognitive space created from two cognitive spaces or more with interdependent relationships with each other. Component cognitive spaces have values and roles depending on each other and create many levels and layers of cognition.

Ex:

Tôi *thấy* Isa đang trố mắt *nhìn* ra phía tôi. (I saw Isa looking wide open at me (3).

Nếu trời mưa thì lớp ta sẽ hoãn đi cắm trại. (If it rains, our class will postpone camping (15).

Cô gái có mái tóc vàng mà anh nhìn thấy trong tranh thật ra trước đây có mái tóc màu nâu hạt dẻ. (The blonde-haired girl you saw in the painting actually had chestnut brown hair before (16).

In example (3), we have two cognitive spaces. The first cognitive space is *Isa looking wide open at me*. The second cognitive space is *I saw Isa looking wide open at me*. The first cognitive space is a subspace inside the second cognitive space. In example (15), we have two cognitive spaces: *it rains* and *our class will postpone camping*. In those two spaces, we can see that the second cognitive space is a consequence of the first cognitive space. In example (16), we have a series of cognitive spaces. Those cognitive spaces are, respectively: *The blonde-haired girl, The blonde-haired girl in the painting, The blonde-haired girl in the painting that you saw, This girl previously had chestnut brown hair*. These cognitive spaces are nested in a complex relationship in all spatial dimensions.

Static Cognitive Space

Static cognitive space is a cognitive space created from static images. These are spaces created by separate time slices, without continuity, motion connection.

Ex:

Tôi thấy cái cổ trần trụi của anh ấy. (I saw his naked neck (17).

Em thì chăm chỉ hiền lành, anh thì lười biếng tham lam. (The younger is hard-working and gentle, the older is lazy and greedy (18).

Quê em là một làng nhỏ ven sông Cầu. (My hometown is a small village along the Cau River (19).

Dòng sông phẳng lặng như một tấm gương trong. (The river is calm as a clear mirror (20).

Dynamic Cognitive Space

Dynamic cognitive space is a cognitive space created from many images having motion alignment. These are spaces created by continuous time slices, having relationships with each other in terms of time.

Ex:

Tôi thấy nàng nói chuyện với cô tớ gái. (I saw her talking to her maiden (21).

Con đò từ từ rời bến, mặt nước xôn xao. (The boat slowly left the dock, the water stirred (22).

Chích chòe, sáo sậu, chào mào… đua nhau chuyền cành. (Warblers, starlings, crested birds, etc. race to pass the branches (23).

Linked Cognitive Space

Linked cognitive space is a cognitive space created from many cognitive spaces with connection, association with each other. Those component spaces are related to each other in terms of time and space. The relationship among component cognitive spaces is an interconnected, dependent, interrelated relationship.

Ex:

Con đường làng vốn im lìm nép dưới bóng tre, sáng nay cũng rộn lên tiếng chim lảnh lót. (The village road, which was usually quiet in the shade of bamboo trees, was also bustling this morning with birds' singing sounds (24).

Do cha mẹ quan tâm dạy dỗ nên em bé rất ngoan. (Because the parents care about teaching, the baby has very good manner (25).

Nếu trời trở rét thì con phải mặc áo ấm. (If it gets cold, you have to wear a warm coat (26).

Cô gái mà có mái tóc vàng mà anh nhìn thấy trong tranh thật ra trước đây có mái tóc màu nâu hạt dẻ. (The blonde-haired girl you saw in the painting actually had chestnut brown hair before (16).

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In example (24), we have two cognitive spaces that are interlinked with each other in terms of the images of time slices. Example (25) gives us two cognitive spaces that are related in relation to cause and effect. Example (26) gives us two cognitive spaces that are interlinked with each other about the condition-result relationship. In example (16), as analyzed above, we have four cognitive spaces. In which the first three cognitive spaces have nested relationships to create a large cognitive space *The blonde-haired girl in the painting that you saw*. This cognitive space and the fourth cognitive space are interlinked with each other in terms of images of time slices. Example (13) provides two cognitive spaces with contrasting, opposite associations. In example (14), these are two cognitive spaces that are progressively connected.

CONCLUSION

Cognitive space is a very promising model that we can apply to language teaching because it is simple, easy to imagine, specific, and not too abstract. When placing learners in cognitive spaces, they will motivate learners to apply and generate languages effectively. Currently, there are many language teaching textbooks in the world applying this model. Those are the language textbooks teaching by topics, contexts, situations, specializations. However, at the specific level of generating a sentence, there is not much use of cognitive space.

Regarding sentence in Vietnamese, the elements of their grammar are quite diverse and complex. The problem will become simpler, easier to understand, easier to manipulate if we apply to teaching in cognitive spaces. When teaching, we provide students with cognitive space models and the necessary materials for students to build cognitive spaces themselves under the guidance of the teacher.

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