



## Elements in the cognitive space of Vietnamese perception verbs

Phuong Nguyen Hoang <sup>a 1</sup> 

<sup>a</sup> University of Social Sciences and Humanities-Vietnam National University, Hochiminh City, Vietnam

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### Abstract

In this paper, theories of mental spaces of Fauconniere, G. and frame semantics of Fillmore, C. J. are applied into investigating the components within the cognition space of Vietnamese verbs of perception. A data of 3,946 sentences containing verbs of perception had been collected from two Vietnamese and English bilingual works, namely, *Love after war* and the adventures of Sherlock Holmes. It was then investigated with approaches of statistics, description contrastive linguistics. Findings obtained show that those elements are both tangible and intangible. The first group consists of the stimulus / perceived, the agent / perceiver / preceptor / experiencer, and the organs of perception. In the second group, there are three sets of ontological elements, spatial elements and information elements. From the results, the conceptualization of Vietnamese perception verbs can be understood and explained. The way their cognitive models formed, communicated, interpreted and comprehended are made clear. These are useful for Vietnamese language learners and researchers.

*Keywords:* mental spaces; frame semantics; Vietnamese perception verbs; tangible elements; intangible elements

## 1. Introduction

Especially for the perception verbs, when defining them, linguists around the world have high consistency in stating that they are verbs expressing the activities of the five senses: visual, auditory, olfactory, gustation and tactile (Kryk, 1978; Rogers, 1971; Viberg, 1983).

Vietnamese perception verbs are very interesting and need to be researched. For example, all the senses can use *thấy*, a visual verb, to describe their perceived information. *Nghe* is the second verb that can be used for diverse senses and its meanings are just less than the meanings of the verb *thấy*. The Vietnamese perception verbs in this research include one verb representing each sense: *nhìn* (look), *nghe* (listen), *ngửi* (smell), *nếm* (taste), *sờ* (touch) and a special perception verb in Vietnamese: *thấy* (can be used in the semantic field of see, heard, smell, taste and feel). All of the five perception verbs researched (*nhìn*, *nghe*, *ngửi*, *nếm*, *sờ*) can be combined with the verb *thấy* to form compound verbs in which the first element has instrumental meaning, perceptual means and the second element indicates perceptual results.

<sup>1</sup> Corresponding Author.

E-mail address: [nguyenhoangphuong@hcmussh.edu.vn](mailto:nguyenhoangphuong@hcmussh.edu.vn)

**Table 1.** Compound Vietnamese perception verbs [25]

Tools / Means		Perceptual factor		Compound Verbs
Sờ	+	Thấy	=	Sờ thấy (= thấy)
Ném				Ném thấy (= thấy)
Nghe				Nghe thấy (= thấy)
Ngửi				Ngửi thấy (= thấy)
Nhìn				Nhìn thấy (= thấy)

The relationship with the deep structure is the factor, suggested by Frame Semantics, that helps catch the meaning of the words. Scene, model and other components of the frame will provide backgrounds enough to comprehend the meaning of the word. Therefore, there have been numerous research works on verbs analyzing within Frame Semantics.

Giles Fauconier with the work named Mental Spaces said that a cognitive space will be formed inside the receiver of a certain linguistic unit. Thus, researches with mental space perspective are suitable for investigating the verbs of perception in Vietnamese (see figure 1). And this paper investigate and identifies the elements in the mental space of those verbs.

### 1.1. Literature Review

The verbs of perception are called by linguists around the world as verbs expressing the activities of the five senses. Rogers (1971) divided perception verbs into three groups: cognitive verbs (e.g. John saw the bird.), active verbs (e.g. John looked at the bird.) and flip verbs (e.g. The bird looked healthy.). Cognitive perception verbs are also considered as passive perception verbs (Palmer, 1966, p. 99), inert perception verbs (Leech, 2004, p. 23), experience verbs (Leech, 2004, p. 23; Viberg, 1983, p. 123), non-intentional / non-deliberate verbs (Behrman, 1998, p. 2). So, these verbs are not used in the progressive or imperative form. In contrast with the cognitive perception verbs are active verbs of perception. Viberg (1983) argues that these verbs describe an activity, "an unbound process that is consciously controlled by a human agent" (p. 123). The perception verbs of the third group are addressed as the descriptive or the flip (Rogers, 1971), the resultative (Scovel, 1971, p. 83), the copulative (Viberg, 1983, p. 124). Scovel (1971) used *resultative* for those terms because, according to him, those perception verbs describe certain sense's results.

After that, linguists divided perception verbs into three groups: cognitive verbs (Behrman, 1998; Leech, 2004; Palmer, 1966; Rogers, 1971; etc.); action verbs (Rogers, 1971; Viberg, 1983; etc.); and verbs describing perception (Rogers, 1971; Scovel, 1971; Viberg, 1983; etc.). While researching the perception verbs which focused mainly on the typology of more than 53 different languages, Viberg (1983) also asserted that there exists a hierarchical system among the perception verbs. In which, the visual has the highest order, followed by the auditory and then the remaining senses. Viberg (1983) also made a conclusion regarding the hierarchical system that "a verb having a basic meaning belonging to a sense modality higher in the hierarchy can get an extended meaning that covers some (or all) of the sense modalities lower in the hierarchy" (p. 136-137). Thus, it is clearly that the higher group the perception verb belongs to, the greater polysemy it possesses.

The evidences above show that perception verbs have been studied very carefully and very early by linguists around the world. Gruber (1967) studied the two verbs *look* and *see* and suggested that they are a kind of verbs of motion (p. 943). When comparing the structures of verbs of motion and visual verbs, Gruber found a lot of similar characteristics among them. For example, the verb *look* and the motion verbs both use the preposition *to* or *towards* to indicate direction. This view of Gruber caused

fiercely contested among linguists. Develde (1977) criticized Gruber's concept and provided syntactic and semantic evidence to prove that perception verbs are not motion verbs. Once in a sentence, perception verbs become part of the perceptual process, which is related to the existence of other important entities. With this point of view, Kryk (1978) pointed out the factors in the perceptual process, including: perception, percipient and the perceptor according to their function in the sentence (p. 118). He stated that these entities are universal and need to be analyzed and studied. Fillmore (1971) called these entities the experiencer and the patient or the objective (p. 42).

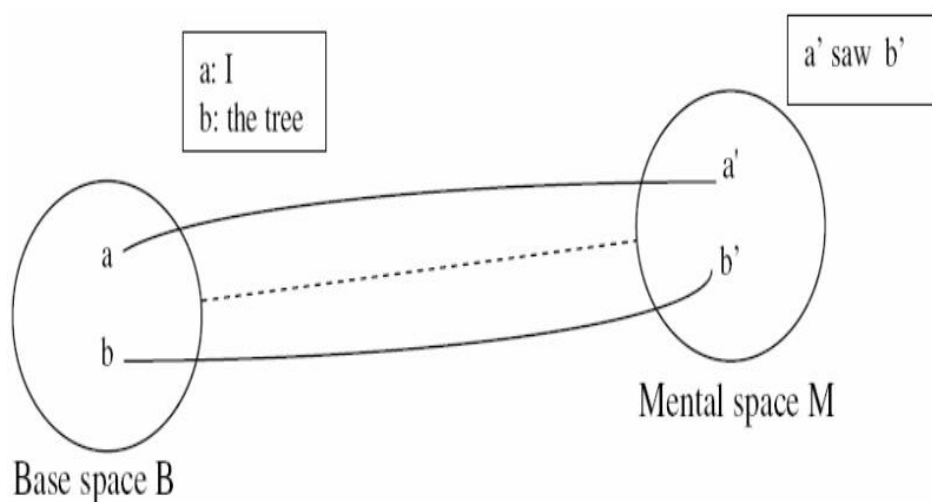
Usoniene (2001) studied direct and indirect perception verbs in Lithuanian and English. She argued that direct or indirect perception is mainly due to the complementary choice. For example, that and infinitive clauses are signals of indirect perception. Her research also provided a lot of statistical data demonstrating the influence of tenses and aspects in the choice of complementaries. In fact, the study of the modifiers of the perception verbs has been done very carefully by many linguists. Dik and Hengeveld (1991), when studying the modifier types of the perception verbs, showed four types of modifiers: instantly perceiving an entity (eg. I can see him there.), instantly perceiving a status (e.g. I saw her crossing the park.), mentally perceiving a propositional information (e.g. I can see that John has come back in the rain.) and receiving a speech act's propositional information (e.g. I hear that the children will come back to school in the second semester.). Research on the modifiers of the perception verbs also has been done in many other works such as when comparing English and Spanish (Cinque, 1992; Meer, 1994; Borgonovo, 1996); when comparing English and French (Felser, 1998; Miller and Lowrey, 2003); etc.

Rojo and Valenzuela (2004) researched how perceptual processes are structured in English and Spanish. They applied the Semantic Framework as the basis of analysis and point out the elements in the framework, including the perceptor-active, the perceptor-passive, the perceived, the manner, the organ, the location, the path and the source. Whitt (2008) researched the English verbs of perception and German ones, dividing the verbs of perception into two groups: subject-oriented and object-oriented. Some other linguists compared and contrasted the perception verbs in terms of semantics and translation equivalence in different languages.

## 1.2. Research Questions

The relationship with the implicit structure is the foundation to comprehend the words within Frame Semantics. Ground, model and other elements of the frame will provide the background context needed to capture the meaning. Frame Semantics has been used to analyse verbs in many linguistic works (Fillmore, 1971; Fillmore, 1977; Fillmore, 1982a; Fillmore, 1982b; Fillmore and Atkins, 1994; Rojo and Valenzuela, 2004; etc.). According to Thang (2005), each language unit elicits a semantic framework. Therefore, the meaning of a linguistic unit must be determined taking into account both the "concept" and the "framework". Cross-linguistic semantic differences are more often related to the information materialized in the frame than to the internal structure of the figurative concept (p. 26-27). Fillmore (1977) said that concepts have systems of mutual relationship so that, the network, frame semantics, surrounding a concept must be interpreted before that concept can be understood, such as, without the "body" domain, "hand" cannot be understood or when the "parents" domain is absent, the "children" concept cannot be defined. Similarly, without the frame semantics of a 7-day-week and of the division of working days or not, "weekend" cannot be understood either (p. 46). Lakoff (1987) used the notion of *concept domain*, *human knowledge domain*, *idealized conceptual models*, *structures of concept* to address the frame information. The semantic frame is the foundation for concept comprehension. A linguistic concept is understood and utilized based on those collected background data.

Fauconnier (1995, p. 16-21) stated that a cognitive space will be formed inside the receiver of a certain linguistic unit. So, that cognitive space is an exact copy of the outside world reflected into the receiver's mind. That space just exists as a mental space inside the human mind and it can be sometimes unreal in comparison with the objective entity in the physical world. Unicorn or dragon is examples of linguistics concepts which are present in the human cognitive space only. Patterns of language reflect cognitive models and frames, which form the cognitive spaces with layers and lots of mental elements, namely, language perceiver capabilities of mapping, analysing, synthesizing, building image schema, partitioning concept, etc. For example, when we deal with 'tree', mental factors instantly appear in our mind, namely, it is on the ground, in a certain space, with leaves, branches, trunk and lots of other details as color, direction, height, weight, species, etc. And for each person, those metadata are not the same exactly. When interacting between reality and language we have the objective space, the mental space that reflects within our perception and the linguistic space. With the language expression 'I saw the tree.', its objective space contains two objects: *I* (a) and *the tree* (b). And they are brought to the perceptor's cognitive space with *I* and *the tree*, corresponding in turn (a') and (b'), as cognitive images. Example of mapping from Objective space to Cognitive space is shown in figure 1.



**Figure 1.** Example of mapping from Objective space to Cognitive space [25]

Cognitive space can be considered as the simulated space of the real space created inside human mind. This space did not necessarily coincide with the real space. Its trueness to real space just has relative meanings. Its value is just authenticated within the sphere of human linguistics mental aspects, without high requirements as in exact and natural science. For example, *unicorn*, *dragon* are those concepts which exist just within the cognitive linguistics world. And hardly any one doubts the saying "In my memory, the Eifel tower is only half built", although anyone can easily realize that the simulated space that this sentence creates is completely incorrect. With the current status cognitive space is a complex entity with many levels and layers. Each space contains its elements and they are constructed from cognitive models and frameworks that language expressions reflect, being affected by lots of elements like schematization capability, approaches of analysis, mapping, synthesizing, conceptual partitioning, culture, experience, background knowledge, etc. of the perceptor. For example, with a simple example such as the concept of "tree", we will in turn realize the multitude of factors that govern this concept such as: a tree must have a trunk, leaves, and branches; there must have a certain space and ground, vertical direction; there is information of height, colour, context. And the *tree* concept in everyone's mental space isn't completely the same. Because there are many complex and diverse factors that govern the cognitive space, language utterances are affected by many different spatial reference systems such as power/social position space, geographical space, cultural space, experience space, knowledge space, etc. For example, with the same object as the *Ủy ban*

Phường (the Ward's office), there are many different statements with the dominant interlacing of power space, geographical space and cultural space. Example: Tôi đến/ vào / ra / xuống / lên Phường (I come to/ in/ out/ down/ up the Ward's office). Applying cognitive space, many matters in language can be explained such as spatial perception, language competence, etc. or more specific, such as, distinguishing metaphor and metonymy. Metaphor is the transformation of focus from one cognitive space to another. Metonymy is the transformation of focus within the same cognitive space.

Applying the two perspectives of view above, Frame Semantics and Mental Space / Cognitive Space, this research examines and finds out the mental space factors of the Vietnamese verbs of perception.

## 2. Article Structure

### 2.1. Tangible elements

Because the properties of the external objective space reflected in our cognitive thought are various and complicated, the elements in the mental space that verbs of perception convey in language are also complex and diverse.

For the fact that the real space is mapped into the mental space, hence, the way factors in the objective space are represented into the mental space will be the basic, must-have elements and they have decisive significance in determining whether a cognitive action will take place or not. We research and draw out those physical elements as tangible factors of the Vietnamese verbs of perception's cognitive space.

### 2.2. Intangible factors

Cognition spaces of language utterances created by mapping, reflecting the objective space into the preceptor's mind cannot be functioned or interpreted without humanity characteristics. Therefore, beside the physical / tangible factors above, the mental spaces of Vietnamese perception verbs also contain the counterpart, intangible elements. In this research, they are inevitably the elements of physical space, of ontology and of information data.

## 3. Method

### 3.1. Sample

The research in this article focuses on the group of perception verbs in Vietnamese, representing the senses, nhìn, thấy, nghe, nếm, sờ, ngửi together with the corresponding contrastive English verbs, as shown in the table 2 below:

**Table 2.** Research object [25]

Base form		Compounded with the element <i>thấy</i>	
Vietnamese	English	Vietnamese	English
Nhìn	Look	Thấy, Nhìn thấy	See
Nghe	Listen	Nghe thấy	Hear
Sờ	Touch	Sờ thấy	Feel
Ngửi	Smell	Ngửi thấy	Smell
Nếm	Taste	Nếm thấy	Taste

Next, sentences containing the perception verbs, shown in the table 2 above, in Vietnamese-English and English-Vietnamese bilingual works are examined and tracked. The total number of surveyed units found in the Vietnamese corpus is 1951 and in the English corpus is 1997, as shown in the following table 3 of statistics:

**Table 3.** Corpus research [25]

Vietnamese corpus	Number of units	English corpus	Number of units
Nhìn	553	Look	590
Nhìn thấy	163	See	900
Thấy	740		
Nghe	421	Listen	90
Nghe thấy	56	Hear	355
Ngửi	2	Smell	10
Ngửi thấy	3		
Nếm	1	Taste	5
Nếm thấy	1		
Sờ	10	Touch	40
Sờ thấy	1	Feel	7
<b>Total</b>	<b>1951</b>	<b>Total</b>	<b>1997</b>

Then, cognitive linguistic approaches and scientific methods are applied under cognitive linguistic perspective to research and find out the factors within the mental space of Vietnamese verbs of perception.

### 3.2. Instruments

#### 3.2.1. Synthetic and statistical methods

Sentences containing the perception verbs, in Table 2, are investigated in the Vietnamese-English and English-Vietnamese bilingual works. Based on the collected corpus, they are synthesized and statistically counted by each verb, by each language, divided into three groups: Vietnamese and English are similar, Vietnamese are different from English, and English are different from Vietnamese to serve as a basis for solving the linguistic matters related to the research topic.

#### 3.2.2. Descriptive and analytical methods

At the same time with the above steps, cognitive features of the perception verbs' semantics, structures, and thinking mechanisms in Vietnamese and English are described and analysed to solve the related cognitive linguistics matters. The cognitive spatial and cognitive linguistic features of these verbs are focused on describing and analysing.

#### 3.2.3. Contrastive methods

While conducting research on the topic, the methods of comparing and contrasting these verbs in Vietnamese and in English are also performed respectively. This aims to investigate the different and similar points in the cognitive-spatial and cognitive linguistic features of the Vietnamese perception verbs and the English perception verbs.

#### 3.2.4. Cognitive linguistic perspectives

Frame Semantics suggested that we can comprehend words in the relationship connected to the implicit constitution. Components of the frame (ground, model) provides background contexts necessary for catching the word semantics. Frame Semantics has been used to analyse verbs in lots of linguistic works (Fillmore, 1971; Fillmore, 1977; Fillmore, 1982a; Fillmore, 1982b; Fillmore and Atkins, 1994; Rojo and Valenzuela, 2004; etc.).

Fauconnier (1995) stated that a cognitive space will be formed inside the receiver of a certain linguistic unit. Patterns of language reflect cognitive models and frames, which form the cognitive spaces with layers and lots of mental elements, namely, language perceiver capabilities of mapping, analysing, synthesizing, building image schema, partitioning concept, etc.

These cognitive perspectives (Frame Semantics of Fillmore and Mental Space of Fauconnier) are also applied in the researching and finding out factors within the mental space of Vietnamese verbs of perception.

### 3.3. Collection and analysis of the data

Perception verbs in Vietnamese which represent senses *thấy, sờ, nếm, nghe, ngửi, nhìn* and the corresponding contrastive English verbs have been investigated. The data is the linguistic corpus that has been examined from a variety of sources. The corpus surveyed the equivalents of Vietnamese perception verbs and English perception verbs. They are sentences containing the perception verbs, shown in Table 2, in Vietnamese-English and English-Vietnamese bilingual works, such as, the two sets of works *Love after war* (Karlin and Thai, 2003) / *Tình yêu sau chiến tranh* (Karlin and Thai, 2004) (47 stories) and *The adventures of Sherlock Holmes* (Doyle, 1999) – *Những cuộc phiêu lưu của Sherlock Holmes* (Doyle, 2009) (12 stories), have been examined and tracked. The total number of the surveyed units found in the Vietnamese corpus is 1951 and in the English corpus is 1997, as shown in Table 3. Research works on cognitive linguistics, especially the research works related to the research topic written in Vietnamese and English by authors in Vietnam and in the world have also been collected for this scientific research.

Consequently, the data above has been processed, investigated and researched with the use of many methods, such as, synthetic and statistical methods, descriptive and analytical methods, contrastive methods under the cognitive linguistic perspectives which applied the Frame Semantics theory (Fillmore, 1977; Fillmore, 1982a; Fillmore, 1982b) along with the theory of Mental Space (Fauconnier, 1995; Fauconnier, 1997) in order to find out the mental space factors of Vietnamese verbs of perception.

## 4. Results and Discussion

The cognitive space factors expressed by verbs of perception in language are productive and complicated as the properties of the outer objective space when they are mapped to our cognitive thought. Since the objective space reflects the mental space, the way that the physical factors of the real space are represented within the mental space will be the basic and must-have elements and they determine whether the cognitive action takes place or not. Those elements will be examined in turn as follows.

### 4.1. Tangible elements

Tangible elements are the physical elements, the physical entities exist visibly, explicitly in the perception action. There are 4 tangible factors of Vietnamese verbs of perception found within this research.

#### 4.1.1. The perceiver/ perceptor

Within an action of perception, perceiver / perceptor is a must-have factor and this is also the agent, the experiencer. For perception verbs, perceiver / perceptor is the agent that performs perceptual actions.

Example 1: *-Chị bán thuốc lá nhìn tôi, mỉm cười, độ lượng.* (*The cigarette vendor looked at me and smiled gently.*)

-*Người đàn bà* ngược lên nhìn Đẩu, rồi lại cúi mặt xuống. (*The woman* raised her eyes to look at Dau, then lowered her head.)

-*Tôi* chẳng thấy gì trong phòng cả. (*I* see nothing in the room.)

-*Ông già* vẫn mãi nghe tiếng đé kêu râm ran dưới chân đê. (*The old man* was still listening to the crickets' songs rising from the foot of the dike.)

-*Anh* có nghe thấy không? (*Do you* hear it?)

-*Người bệnh* không thể ngửi được một hoặc nhiều mùi khác nhau. (*The patient* cannot smell one or more different odors.)

-*Nếu bạn* ngửi thấy mùi khai trong nhà thì có thể bạn đang gặp nguy hiểm. (*If you* smell a musty odor in your home, you may be in danger.)

-*Vua chúa* ngày xưa được nếm thử nhiều món ăn ngon mỗi ngày. (*Kings* in the past could taste many delicious dishes every day.)

-*Tại sao bạn* nếm thấy nước biển mặn? (*Why do you* taste sea water salty?)

-*Bà ấy* sờ soạng mò mẫm các thứ từ bàn ăn đến tủ bếp. (*She* touched for everything from the dining table to the kitchen cabinets)

-*Chị em phụ nữ* sờ thấy khối u ở vú thì nên đi khám bác sĩ ngay. (*Women* who feel a lump in their breast should see a doctor immediately.)

In the given examples, only one perceiver / perceptor appears, i.e. just one perceptor / perceiver performing the action of perception. For the next two examples, it will be the case that the perception action has multiple perceivers / perceivers or group of perceivers / perceivers. In the first example, the perceptor / perceiver is not a single agent anymore, but a collection of many perceivers/ perceivers/ people. In the second example, the subject is a collection of "các vị (they)". For these two examples, the perceptor / perceiver is a group of agents that perform the same perception action.

Example 2: -*Chị Thu* và *chị Thế* nháy mắt cho nhau, cả hai nhìn Hà. (*Thu* and *The* winked at each other and then looked at Ha.)

-*Các vị* thấy chúng tôi sẽ không rời nhau dù có chết. (*You, guys*, see that we will not leave each other even if we die.)

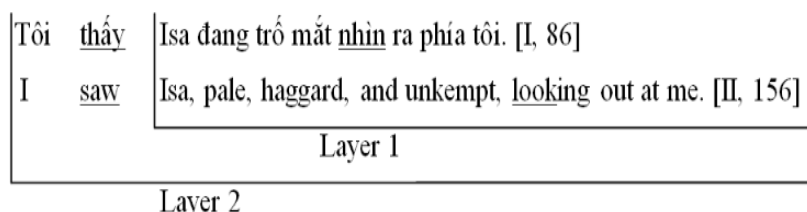
The examples above can be considered as a case of having a single-layer perceptor / perceiver. That is, in each cognitive action, there is only one layer of the agent performing. But reality world is a space that is extremely complicated and has many levels, so in the act of perception there will be times when there are multiple layers of perceivers / perceivers. That will be clearly seen in the following examples.

Example 3: - *Tôi* thấy ông ta nhìn tôi với ánh mắt ngờ vực. (*I* saw him looking at me with suspicion.)

-*Tôi* ngồi ở bàn chưa tới mười phút, thì thấy Frank xuất hiện ở cửa sổ, nhìn qua phía bên kia đường. (*I* hadn't been at the table ten minutes before I saw Frank out of the window, looking at the other side of the road.)

It's clear from the above two examples that this is a multi-layer cognitive space. In one more example, the first-layer cognitive space is "Isa is looking at me. (Isa đang trở mắt nhìn ra phía tôi.)" and the second-layer cognitive space is "I saw Isa looking at me. (Tôi thấy Isa đang trở mắt nhìn ra phía tôi.)" And so, *Isa* is the first-layer perceiver / perceiver performing the *look* action, *I (Tôi)* is the next layer perceiver, the subject of the perception action "thấy (saw)" is shown in figure 2. (Phuong, 2016).





**Figure 2.** Layers of perception cognitive space [25]

Another point is that the perceptor / perceiver can be clearly expressed in the perceptual space as in the examples above, but sometimes, the perceptor / perceiver does not appear in the perceptual space so clearly and sometimes this agent is from outside of the mental space and understood implicitly only. It can be shown through the following examples.

Example 4: -*Hắn* nhìn cô ấy. (*He* looked at her.)

With this example, there is a visible perceptor / perceiver in this mental space, "Hắn". It is the agent of the visual action of "look (looked/ nhìn)". But, sometimes, to comprehend this cognitive space, it is necessary to implicitly understand that there is another perceptor / perceiver that does not appear in this utterance. Depending on the connection with the sequence of other cognitive spaces forming the appropriate context, the perceptor / perceiver implicitly understood here can be "Tôi (I)", "Chúng tôi (We)", "Họ (They)", etc. So, with this example, it can be fully interpreted as "(I could see that) *He* looked at her." with the subject of the first level manifested as "He" and the subject of the second level implicitly understood as "I (Tôi)".

In the following example, it seems that there is a perceptor / perceiver that is visible "Cô gái (The girl)", but in fact, "Cô gái (The girl)" here is essentially a perceived entity and, the presence of the perceiver/ perceptor is not indicated in this utterance.

Example 5: -*Cô gái* nhìn trẻ hơn, xinh xắn hơn vì đôi guốc cao và cái quần thun xốp may kiểu âu, gấu loe một cách ý nhị. (*The girl* looks younger and prettier because of her high heels and European-style foam pants with a flared hem.)

This shows that the sentence's subject and the perceiver /perceptor of the perception action are not necessarily the same, but they can be sometimes two distinct objects.

#### 4.1.2. The entity to be perceived

Within one perception activity, in addition to the perceiver / perceptor, there exists the perceived, the object, the entity to be perceived and can also be considered as the stimulus. That perceived entity can be the target object or it can also be the general object.

Example 6: -Theo thói quen, nàng lại nhìn lên *đồng hồ*. (Out of habit, she looked at the broken *clock*, with its missing hour hand.)

-Tôi cho rằng cô ta có thể đã nhìn thấy *một người đàn ông Mỹ*. (I assume she may have seen *an American man*.)

-Em có thấy *ánh sáng* giữa mấy cái cây không? (Do you see *the light* among the trees?)

-Ông già vẫn mãi nghe *tiếng đé kêu* râm ran dưới chân đê. (The old man was still listening to *the crickets' songs* rising from the foot of the dike.)

-Lúc tưởng anh ăn cơm thì đến bậc sáu mươi một cầu thang Trang nghe thấy anh hát to lên một câu hát gì đó. (When she was sure he was having his meal, she would hear *him break suddenly and loudly into song* just as she reached the 61st stair.)

-Ông ngồi co ro ở bậc cửa, ngó sang, âm thầm ngửi *mùi hương khói* nhà bà suốt ba trăm sáu mươi ngày bà hương khói cho chồng. (For three hundred and sixty days, she smoked incense for her husband, he crouched on the doorstep, looked over, and silently smelled *the scent of her smoke*.)

-Cứ mưa là ông ngửi thấy *mùi rữa nát* ở đồ vật, *mùi mốc* ở cơ thể mình. (Whenever it rained he would smell *the decaying odor* of all his possessions, *the musty scent* from his own body.)

-Chừng nào đêm nay còn chưa trôi qua chúng ta sẽ vẫn còn phải nếm đủ *mùi khủng khiếp*. (As long as this night is not over, we'll still have to taste the horrors.)

-Trong món kho này bà có thể nếm thấy *tỏi*. In this stew you can taste *the garlic*.)

-Chỉ cần cậu sờ *ngực cháu* như lúc này là cháu đẻ. (All you'll need to do is touch *my breast* like right now, and I'll have a baby.)

-Tôi chỉ thấy *máu* khi sờ lên *mặt* lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

The entity to be perceived is also various as the perceiver / preceptor is. Depending on the case, the perceived entity can be a single entity or it can be a collective entity. The examples above are the cases with single perceived entity. For the following examples, these will be the cases where there is a group of perceived entities.

Example 7: -Và chị nhìn *hai con người đó, một kẻ ăn trộm gà, một kẻ mang đến tin thảm họa*. (And she looked at *the two men, the one had stolen her roosters, the other who had brought her this calamitous news*.)

-Cứ mưa là ông ngửi thấy *mùi rữa nát* ở đồ vật, *mùi mốc* ở cơ thể mình. (Whenever it rained he would smell *the decaying odor* of all his possessions, *the musty scent* from his own body.)

The perceived entity also has a hierarchy that matches that of the perceiver / perceiver.

Example 8: -Khi thấy *chồng bà đang nhìn xuống* bà lạnh cả người. (Seeing her husband looking down at her, she was struck cold.)

In this example, “Bà (She)” is the first-layer perceived entity, which is the perceived object of the “nhìn (look)” action of the first-layer perceiver / perceiver as “chồng bà (her husband)”. However, it is the first-layer perceiver / perceiver “chồng bà (her husband)” that becomes the second-layer entity to be perceived of the second-layer perceiver / perceptor “Bà (She)” through the second-layer mental activity of “see (thấy)”.

Next, it is also important to note that it is not necessary that a perceived entity always be present in an utterance. We can see that in these examples below:

Example 9: -Lần này thì mọi người bước ra ngoài, ngược nhìn  $\emptyset$  theo hướng tay tôi chỉ, chăm chú. (This time everyone stepped outside, turning to look  $\emptyset$  in the direction I was pointing.)

- Thích ghê, em chưa thấy  $\emptyset$  bao giờ. (Wonderful! I haven't ever seen  $\emptyset$ .)

Through the first example, there is the perception action “nhìn (look)”, but there is *no perceived entity* ( $\emptyset$ ). In the second example, the perceived entity of “thấy (seen)” is implicitly understood and does not appear in the utterance.

#### 4.1.3. The perceptual organ / the senses

Humans will certainly not be able to perceive the outside world if it is not through the perceptual organs. Corresponding to each perceptual organ, languages give it a quantity of verbs of perception to express the operations of each perceptual organ.

Example 10: +The Visual:

-Chị cay đắng *nhìn* hắn. (She *looked* bitterly at him.)

-Thốt nhiên tôi *nhìn thấy* Roza trên ô cửa sổ đối diện. (Suddenly I *saw* Roza standing in one of the windows.)

+The Auditory:

- Nếu bạn thực sự yêu thích công việc buôn bán của mình, bạn nên học cách chăm chú *lắng nghe* ngôn ngữ câm lặng của những người khôn khổ có thể nói nhưng không. (If you really love your trade, you should learn to *listen* attentively to the silent language of the miserable who can speak, but don't.)

- Lúc tưởng anh ăn cơm thì đến bậc sáu mươi một cầu thang Trang nghe thấy *anh hát to lên một câu hát gì đó*. (When she was sure he was having his meal, she would *hear* him break suddenly and loudly into song just as she reached the 61st stair.)

+The Olfactory:

-Con chó *ngửi* mùi xung quanh. (The dog smells around.)

-Con chó *ngửi thấy* mùi con mồi đang ở rất gần. (The dog smelled that the prey was very close.)

+The Gustation:

-Chúng tôi muốn *nếm* thử món này. (We want to taste this dish.)

-Trong món kho này bà có thể *nếm thấy tỏi*. (You can *taste* the garlic in this stew.)

+The Tactile:

-Tôi *sờ* đến hai con mắt, hai con mắt mềm mềm nhắm, tôi dừng tay. (I reached out to *touch* her two softly closing eyes, and then stopped my hand.)

-Tôi chỉ thấy *máu* khi *sờ* lên *mặt* lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

In utterances, the perceptual organ does not appear but is always understood by default. However, the operational capacity of the perceptual organs is expressed very obviously and particularly in language. For instance, the visual capability can be seen through linguistic expressions in the following examples.

Example 11: -Tôi có thể *thấy rõ* mặt anh đầy kinh hãi và tái nhợt như một xác chết. (I could *see clearly* that his face was filled with horror and loathing and deadly pale.)

-Nó *chẳng thấy* anh đâu. (He cannot see you.)

-Tôi *nhìn* em *đau khổ*. (I saw her miserably.)

#### 4.1.4. The source

Source is an entity that emits or produces stimuli received by the senses.

Example 12: -Người đàn bà nghe thấy tiếng than thở nơi *lồng ngực* người đàn ông. (The woman heard the groan in the man's *chest*.)

-Phải nói rằng cái *đèn kéo quân* ấy là món đồ chơi quyến rũ nhất tôi từng nhìn thấy. (His *picture-lantern* was the most tempting toy I had ever seen.)

- Con chó *ngửi* thấy mùi *con mồi* đang ở rất gần. (The dog smelled that *the prey* was very close.)

-Trong món kho này bà có thể *nếm thấy tỏi*. In this stew you can taste *the garlic*.)

-Tôi chỉ thấy *máu* khi *sờ* lên *mặt* lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

## 4.2. Intangible elements

Intangible elements are the non-physical elements, the non-physical entities exist invisibly, implicitly in the perception action. There are 3 sets of intangible factors belong to the mental space of

the Vietnamese verbs of perception found within this research. If these physical elements are finite and play an important role in deciding whether the cognitive action takes place or not, then, it can be said that the intangible factors in the mental space are really more various and richer and they will govern the nature of how mental actions take place, how the results of perception be. They will be examined below in the groups of intangible elements.

#### 4.2.1. Spatial elements

If the real world can be considered as a complicated real space, the cognitive world will be also a complicated space with its layout in reflecting the objective real world along with as high accuracy as possible. The layout of the cognitive space of Vietnamese perception verbs includes the basic factors below.

##### 4.2.1.1. Perception location

Perception positions are the locations where the perception activities take place. This position aims at locating the perceived entity, the perceptor. Those positions can be specific sometimes and abstract sometimes or be implicit within contextual relationships with each other.

###### a) The position of the perceiver

Example 13: -Người đàn bà vô danh, con tôi, vợ tôi, nhìn tôi từ đáy nước. (The nameless woman, my son, my wife are looking at me from the river bed.)

-Trong lúc đang ngồi trước tivi vào một buổi tối thứ bảy chờ xem chương trình kịch nói thì chị giật mình khi nhìn thấy chiếc mũ đen rời khỏi vách, đậu xuống trên đầu Đoàn. (On Saturday night, while waiting for a television drama to begin, she was startled to see the black felt hat suddenly float off the wall and perch itself on her husband's head.)

-Tôi ngủ ở bên bếp lửa, nằm thao thức nghe tiếng mưa rơi khi đêm về khuya. (I lay down to sleep by the stove, listening to the sound of the rain, dreaming, slumbering around the images of the soft supple heart, wet, heaving on the cold ground, and the small house with the big window.)

-Lúc tưởng anh ăn cơm thì đến bậc sáu mươi một cầu thang Trang nghe thấy anh hát to lên một câu hát gì đó. (When she was sure he was having his meal, she would hear him break suddenly and loudly into song just as she reached the 61st stair.)

-Con chó ngửi mùi xung quanh. (The dog smells around.) (The dog is in the middle of the scene.)

-Con chó ngửi thấy mùi con mồi đang ở rất gần. (The dog smelled that the prey was very close.) (The dog is near the prey.)

-Chúng tôi đâu đã được nếm thử nên đâu biết mặn hay không. (We don't know if it's salty or not because we haven't tasted it.) (Our location certainly does not coincide with the location of the dish.)

-Trong món kho này bà có thể nếm thấy tỏi. In this stew you can taste the garlic.) (His position was definitely outside the location of the stew.)

-Bà ấy sờ soạng mò mẫm các thứ từ bàn ăn đến tủ bếp. (She touched for everything from the dining table to the kitchen cabinets) (The woman was in the room. There she would circle around the room, touching everything.)

-Tôi chỉ thấy máu khi sờ lên mặt lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.) (The position of the perceptor coincides with the entity perceived position.)

###### b) The position of the entity perceived

The position of the perceived entity is the cognitive stimulus location emitted to guide the perception action to take place.

Example 14: -Anh nhìn chông báo và tạp chí ở trên bàn. (He looked at the stack of newspapers and magazines *on the table*)

-Thốt nhiên tôi nhìn thấy Roza trên ô cửa sổ đối diện. (Suddenly I saw Roza standing *in one of the windows*.)

-Giống như hồi còn chiến tranh chúng tôi vẫn làm, anh em tập trung về làng Plei-O-K này để nghe tin tức trên đài. (We all came together in this village of Plei-O-K to listen to the news *on the radio*, just as we would do during the war.)

-Cô gái thò đầu ra cửa hỏi tôi khi nghe thấy tiếng lục lọi đồ đạc. (The girl poked her head *out the door* and asked me when she heard the sound of rummaging through things.)

-Con chó ngửi thấy mùi con mồi đang ở rất gần. (The dog smelled that the prey was *very close*.)

-Trong món kho này bà có thể nếm thấy tỏi. (In this stew you can taste *the garlic*.)

-Tôi chỉ thấy máu khi sờ lên mặt lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

#### 4.2.1.2. Perception distance

For the Vietnamese perception verbs, the near and far distances in the perception actions are also reflected very clearly on the linguistic structures.

Example 15: -Tôi chợt hiểu rằng đó là hướng gần nhất có con người khi nhìn bao quát chung quanh. (I suddenly understood that it was the closest direction to humans when looking around.)

-Cô gái ấy cứ hướng mắt nhìn xa xăm vô định. (The girl kept looking *into the distance* aimlessly.)

Among the perception verbs studied in this research, the verbs nếm thấy, sờ, sờ thấy, ngửi, ngửi thấy, nếm can only be used at close perception distances. So we can say nghe xa xa, thấy xa xa, nhìn xa xa, etc.; but we cannot say nếm xa xa, sờ xa xa, ngửi xa xa, etc. (xa: far away)

#### 4.2.1.3. Perception path

Perception path is the path of sensory stimuli from the source to the perceptor.

Example 16: -Tôi không biết cha tôi đi về hướng nào; tôi nghe thấy tiếng kêu của cỗ xe ngựa trước nhà, và nhìn qua cửa sổ tôi thấy cha tôi đang rất vội ở ngoài sân. (I don't know which way my father is going; I heard the sound of the carriage in front of the house, and I looked *out the window* and saw my father in a hurry in the yard.)

-Họ nhìn thấy một ngôi sao mới qua kính viễn vọng. (They see a new star *through* the telescope.)

-Sao em không nghe thấy nếu đúng là từ ngoài bãi cỏ vọng vào? (Why can't I hear it if it's really *coming from the lawn*?)

#### 4.2.1.4. Perception direction

Perception direction is the direction in which the perceived action takes place. That activity can take place in the direction from the perceiver to the entity perceived.

Example 17: - Chú chó đưa mắt nhìn xung quanh. (The dog looked *around*, and then lowered her voice.)

(The direction of perception is from the perceptor to the surroundings.)

-Lão cởi trần, ngồi uống rượu kèm với đầu cá, rung đùi nghe đài những hôm ngoài trời nóng 39 độ, trong nhà còn nóng hơn nữa. (The old man sat shirtless, drinking whiskey, eating fish heads, and jiggling his legs while listening *to the radio*.)

(The direction of perception is from towards the radio.)

-Con chó cúi *xuống* ngửi cục xương. (The dog bent *down* to smell the bone.)

(The direction of perception is from the perceptor to the flowers.)

-Chúng tôi muốn nếm thử món này. (We want to taste this dish.)

(The direction of perception is from the perceptor to the dish.)

-Chỉ cần cậu sờ *ngực* cháu như lúc này là cháu đẻ. (All you'll need to do is touch my *breast* like right now, and I'll have a baby.)

(The direction of perception is from the perceptor to the breast.)

That activity can also occur in the reverse direction from the entity perceived to the perceiver as in the examples below.

Example 18: -Tôi bỗng thấy cô ấy đang nhìn tôi. (I suddenly saw her looking at me.)

(The direction of perception is from the woman to the man.)

-Tôi thường nghe thấy *tiếng đàn dương cầm* vọng, thoảng xa trong lúc nói chuyện. (I often heard the sound of the piano echoing *in the distance* while talking.)

(The direction of perception is from the piano to me.)

-Con dê ngửi thấy mùi cỏ. (The goat smelled the grass.)

(The direction of perception is from the grass to the goat.)

-Chúng tôi nếm thấy món này có nhiều muối. (We can taste that this dish has a lot of salt.)

(The direction of perception is from the salt to the people.)

-Tôi chỉ thấy *máu* khi sờ lên *mặt* lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

(The direction of perception is from the face to the perceptor.)

And there are cases when the perception direction exits from the perceptor and returns to the perceptor itself. In other words, the perceptor is also the perceived entity.

Example 19: -*Em thấy mình* đôi khi thật xấu xa. (I see myself sometimes as a wicked woman.)

-Cứ mưa là ông ngửi thấy *mùi rữa nát* ở đồ vật, *mùi mốc* ở cơ thể mình. (Whenever it rained he would smell *the decaying odor* of all his possessions, *the musty scent* from his own body.)

In Vietnamese, *ngửi*, *ngửi thấy*, *nếm*, *nếm thấy* are one-way verbs, but in English *smell* and *taste* are two-way verbs that can indicate cognitive activities taking place in the direction from the perceiver to the entity perceived,

Example 20: -Con chó cúi *xuống* ngửi cục xương. (The dog bent *down* to smell the bone.)

(The direction of perception is from the perceptor to the bone.)

-Chúng tôi đâu đã được nếm thử nên đâu biết mặn hay không. (We don't know if it's salty or not because we haven't tasted it.)

(The direction of perception is from the perceptor to the dish.)

and also in reverse direction, indicating cognitive activities happening in the direction from the entity perceived to the perceiver.

Example 21: - Con dê ngửi thấy mùi cỏ. (The goat smelled the grass.)

(The direction of perception is from the grass to the goat.)

-Chúng tôi nếm thấy món này có nhiều muối. (We can taste that this dish has a lot of salt.)

(The direction of perception is from the salt to the people.)

#### 4.2.1.5. The perception sharpness

The sharpness is the clarity of the perception result. A lot of information is put into the cognitive space. Such information will be addressed by the sharpness, i.e. the quantity of available information. To Express the sharpness in Vietnamese language, there are many ways, likely, *thấy không rõ* (see not clearly), *thấy rõ* (see clearly), *không thấy gì* (see nothing), *thấy rất rõ từng chi tiết* (see every detail very clearly), *thấy hơi mờ* (see a bit blurry), etc.

Example 22: -Tôi có thể *thấy rõ* mặt anh đầy kinh hãi và tái nhợt như một xác chết. (I could *see clearly* that his face was filled with horror and loathing and deadly pale.)

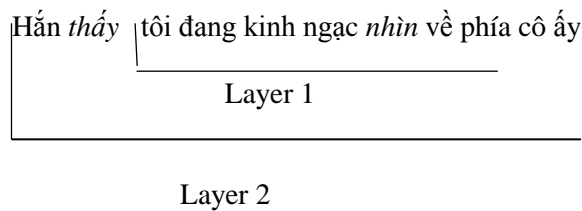
#### 4.2.1.6. Perception layer

The cognitive space, like the reality space, always has its depth, i.e. there is a complex spatial perspective with spatial layers. It can be absolutely verified that in Vietnamese language, for example, with the verb *nhìn*, there are many linguistic expressions, namely, *nhìn sâu hơn* (look deeper), *nhìn bên trong* (look inside), *nhìn bên ngoài* (look from outside), *nhìn từng mặt* (look at each side), etc.

Example 23: -Chúng *nhìn vào trong* phòng. (They *looked into* the room.)

-Cô ấy cần *nhìn nó gần* hơn không? (Does she need to *look at it closer*?)

The mental space can also be represented on the surface of a language structure with a multi-layered layout at the same time. Example 24: *Hắn thấy* tôi đang kinh ngạc *nhìn về phía cô ấy*



In the above example, “*tôi đang kinh ngạc nhìn về phía cô ấy*” is the first perception layer with the perception action of “*nhìn (look)*”, and “*Hắn thấy tôi đang kinh ngạc nhìn về phía cô ấy.*” is the second perception layer with the perception action of “*thấy (see)*”.

#### 4.2.1.7. Planning of the perception

Planning of the perception is the organization of the space of perception. Since the reality spaces are reflected by the cognitive spaces, they will also be planned to convey information which describes the world the best and most exactly. In the language of Vietnamese, there exists lots of expressions for planning perception space, such as the verb *nhìn*, there are *nhìn chi tiết* (a detailed view), *nhìn tổng thể* (a general view), *nhìn dọc* (a vertical view), *nhìn ngang* (a horizontal view), *nhìn từ trên xuống* (look from the top), *nhìn từ dưới lên* (look from the bottom up), *nhìn toàn cục* (look at the whole), *nhìn toàn cảnh* (a panoramic view), *nhìn cụ thể* (look at the specific), *nhìn tổng quan* (look at the overview), etc.

Example 25: -Rời khỏi ghế bành, Holmes uể oải tiến đến cửa sổ, *nhìn xuống*. (Leaving the armchair, Holmes walked lazily to the window and *looked down*.)

-Đến canh ba, bà ngồi ở bậc cửa, *nhìn xéo sang* nhà người hàng xóm thấy đèn vẫn sáng, bà đứng vụt dậy và chạy qua. (She sat on the doorstep until the third cock's crow, *looking sideways* at her neighbor's house where the lamp was still burning.)

Nhưng anh chàng nào cũng ngán ngẩm bỏ đi khi các chàng trai đến chơi cứ *thấy bốn cô gái độc thân nằm bốn góc nhà*. (But when they came to visit, as soon as they'd *see four old maids, sitting one to each corner of the room*, they'd lose their appetite and leave as quickly as possible.)

#### 4.2.2. Ontological elements

Human is inherently a very complex being. Human is the subject of the human language. Ontological elements are the attributes of the subject that have dominated human language. And, so, it can be said that ontological elements are the human attributes in language. When examining a language, all these attributes have to be considered in order to comprehend that language. Within the limit of this research with this group of Vietnamese perception verbs, the basic ontological elements are as follows.

##### 4.2.2.1. Volitionality

Volitionality is the intentionality of the perceptor. Vietnamese perception verbs can be verified based on the volitionality of the perceptor. Some Vietnamese verbs of perception require perceptor (agent) volitional and others require perceptor (experiencer) non-volitional.

###### a) Non-volitional, the perceiver is also the experiencer:

The perceptor is not a volitional one. The perceptor is the experiencer. And the perceptor do not purposely put his focus on the perceived entity.

Example 26: -Tôi cũng có *thấy nhiều nhà bị lở* hồi đó nhưng không ngờ lở mau như vậy. (Back then I had seen it coming, but I really never imagined.)

-Đé ơi, tao mê mày lắm nhưng mày không thể theo tao đi cứu chị Nhan của tao, *nhỡ người lớn trong nhà họ nghe thấy tiếng gáy của mày* thì nguy cho chị em tao lắm. (But you can't be with me if I'm going to save my sister Nhan, *in case the people hear your song*.)

-Con chó *ngửi thấy* mùi con mồi đang ở rất gần. (The dog smelled that the prey was very close.)

-Trong món kho này bà có thể *nếm thấy tỏi*. In this stew you can taste *the garlic*.)

-Tôi chỉ *thấy máu* khi sờ lên *mặt* lúc tỉnh dậy. (I only saw blood when I touched my face when I woke up.)

###### b) Volitional, the perceptor is the agent:

The perceptor is volitional. The perceptor is the agent. And the perceptor purposely set his focus on the perceived entity.

Example 26: -Tôi *nhìn vào đôi mắt anh* *mênh mang buồn*. (I looked into the immense sadness in his eyes and my heart ached.)

-*Ngôn ngữ lặng thầm của những người đau khổ biết nói mà làm thinh không nói* phải được *lắng nghe* đầy đủ bởi những người làm lãnh đạo. (You should learn to *listen attentively to the silent language of the miserable who can speak, but don't*.)

-Con chó cúi *xuống* *ngửi* cục xương. (The dog bent *down* to smell the bone.)

-Chúng tôi đâu đã được *nếm thử* nên đâu biết mặn hay không. (We don't know if it's salty or not because we haven't tasted it.)

-Bà ấy sờ soạng *mồ mẫm* các thứ từ bàn ăn đến tủ bếp. (She touched for everything from the dining table to the kitchen cabinets)

For the argument above, Leech (2004) said about perception volitional as: "I go out of my way, physically, to focus my attention on some object" (p. 28). Vendler (1957) additionally suggested that the perception verbs volitional aim to address the activities that the perceiver directs focus on the entity perceived. Thus, with these perspectives, perception volitional can be understood as the metaphorical shiftment from the perceiver to the entity perceived, while perception non-volitional is, vice versa, from the perceived entity to the perceptor. In short, the volitionality of the perceiver is a vital element that determines the perceptor of the perception action and helps to distinguish the verbs of perception



in two categories: the non-volitional and the volitional, in which the group of non-volitional is at a higher perceptual level as compared to the group of volitional from the perspective of cognitive linguistics because the group of non-volitional represents the cognitive results, which is the final stage of the perception process.

#### 4.2.2.2. Way of perception

Way of perception is the way in which the action of perception is carried out, the way in which the event occurs.

Example 27: -Chị cay đắng nhìn hắn. (She *looked* bitterly at him.)

-Mọi người hy vọng cô ấy sẽ tình cờ nhìn thấy từ một vị trí chưa xác định. (People hope she will see him by chance from an unknown location).

-Tay cầm ngược tờ báo mà miệng gã cứ há hốc nghe nàng cười nói. (Stood there, the upside-down newspaper clutched in his hands, *his mouth hanging open*, listening to her laughing and speaking.)

-Trong cảnh vắng lặng của đêm khuya tôi bỗng nghe thấy cái tiếng huýt sáo mà chính chị tôi từng nghe thấy trước lúc chết. (In the silence of the night, I suddenly heard the whistle that my sister had heard before she died.)

-Con chó cúi xuống ngửi cục xương. (The dog bent *down* to smell the bone.)

-Cứ mưa là ông ngửi thấy mùi rửa nát ở đồ vật, mùi mốc ở cơ thể mình. (Whenever it rained he would smell *the decaying odor* of all his possessions, *the musty scent* from his own body.)

-Chúng tôi đâu đã được nếm thử nên đâu biết mặn hay không. (We don't know if it's salty or not because we haven't tasted it.)

-Trong món kho này bà có thể nếm thấy tỏi. In this stew you can taste *the garlic*.)

-Bà ấy sờ soạng mò mẫm các thứ từ bàn ăn đến tủ bếp. (She touched for everything from the dining table to the kitchen cabinets)

#### 4.2.2.3. Perceptuality

Perceptuality is only for sentient objects. Not intended for inanimate objects.

Example 28: Được trang bị như một phòng khách, căn phòng phía trước nhìn ra một bến tàu và dẫn vào một phòng ngủ nhỏ. (Fitted as a living room, the front room *overlooks a pier* and leads into a small bedroom.)

In this sentence, the word nhìn (look) certainly cannot be replaced with the word thấy (see) because the room is not a subject capable of perception.

#### 4.2.2.4. Direct perception and indirect perception

##### a) Direct perception

Direct perception is the way in which the perceptor perceives the object directly after a perception action.

Example 29: Tôi thấy một thiếu phụ, thân hình đầy đà, đang đứng trên lề đường đối diện khi nhìn qua vai anh. (I saw that on the pavement opposite there stood a large woman when looking over his shoulder.)

Here, the cognitive process can be explained as follows:

I look over his shoulder. After that I saw that on the pavement opposite there stood a large woman. That is direct perception, because I see it directly.

#### b) *Indirect perception*

It is not always after a perception action that the perceptor perceives the object easily, but sometimes it is a complex process of judgment, inference, comparison, synthesis, analysis, with knowledge, rich life experience to draw the cognitive results.

Example 30: Từ xa, rất xa vẫn thấy máu trong ngực bà đang chảy do trăng sáng quá. (From afar, far away, she could still see the blood in her chest flowing because the moon was so bright.)

Here, it was certainly impossible to see the blood in her chest flowing directly. But that can only be seen by a life experience. If comparing the example sentence above with the following sentence:

Example 31: Tôi biết mình không thể làm chuyện đó khi vừa thấy cô. (I knew I couldn't do that as soon as I saw her.)

It is clear that the example 30 is a sentence containing an indirect perception action, while the example 31 contains a direct perception action.

#### 4.2.2.5. *Cultural elements*

Cultural elements are factors that governs linguistic perception. For instance, for the linguistic expression "Anh ấy nhìn thấy một con rồng lớn. (He saw a big dragon.)", but receiving it as two different people from different continents, European and Asian, the perception space constructed in the minds of these two people, the image and the attributes of the dragon will be very different because the Asian dragon is different from the European dragon very much.

#### 4.2.2.6. *Intellect*

Intellect is also a factor that governs language perception. Take the linguistic expression, for example, "ngôi sao (star)", but receiving it are two different people, one has a good understanding of physics, of the concept and definition of what a star is and an ordinary person who does not have that knowledge of physics, then, the perception ability of these two people about the star can have a great difference. Those who have a rich knowledge in physics know the fact that in the Solar System there is only one star, the Sun. The other person might think that the solar system has ten stars.

#### 4.2.2.7. *Ethnicity*

Ethnic factors also influence language perception. For example, Asians, Europeans and Africans, because they belong to different ethnic groups, they have different racial attributes. Thus, in the perception of each human race, the “cao (tall)” concept, for example, can have a great difference in terms of how much it is to considered someone 'tall'.

#### 4.2.2.8. *Geography*

Geographical factors also have a profound impact on the perception ability, thereby, affecting the way the language user select the linguistic expressions. Take Vietnamese as example, those who live in the Central Highlands say xuống Sài Gòn (going down to Saigon); while those who live in the SouthWestern say lên Sài Gòn (going up to Saigon). The reason for this way of speaking is entirely due to the geographical factors.

#### 4.2.2.9. *Politics*

Although politics is not a factor capable of vetoing language, it is not without significant effects on language, especially on linguistic cognition. For example, when mentioning “America, Russia, China”,

immediately, the cognitive concept in Vietnamese mind will identify these as big countries. This is precisely due to the fact that political factors affect the concept of language.

#### 4.2.2.10. Thinking

Humans possess thinkings. As people utilize their language consciously, they have the need to do the reasoning much more. So, thinking is definitely a dominant element for language. Comparing and contrasting English and Vietnamese, interesting points of thinking can be seen. For example, Vietnamese says *một căn hộ đẹp* (a/an - apartment - nice) which shows that Vietnamese thinks from the unity (*căn hộ*: apartment) to the attributes (*đẹp*: nice). Whereas, in English, it would be 'a nice apartment'. This way of reasoning goes from the attribute to the unity. So, can it be concluded that Vietnamese people prefer deductive thinking while the British have an inductive way of thinking? This still needs to be investigated, researched and proven a lot more. However, this partly shows that thinking can affect language and language perception.

#### 4.2.3. Factors of information

Language has the function to store and convey information details. This is the main function of the language. Therefore, information factors will certainly be the extremely basic factors that affect language perception. Below, the most basic information factors affect the perception space of Vietnamese perception verbs are examined as follows.

##### 4.2.3.1. Mechanism of reception – emission

Unlike Vietnamese, in English *smell* and *taste* can refer to the action of emitting a stimulus and can also refer to the action of receiving a stimulus.

Example 32: -She hasn't washed for months and is starting to smell. (emission)

-She says she can smell gas when she enters the house. (reception)

- In this dish you can taste much salt. (reception)

-It tastes sweet. (emission)

In English, the sentence "It tastes sweet." can only be understood as "It" is the subject that emits the taste. Thus, in English, the same verb can be used for two mechanisms, but with different structures:

smell (1) (subj./exp. – obj./ stim.)

Example 33: She says she can smell gas when she enters the house. (reception)

smell (2) (subj. / source – of-comp./ stim.)

Example 34: She hasn't washed for months and is starting to smell. (emission)

##### 4.2.3.2. Point of view

In this research, the cognitive space of the Vietnamese perception verbs is analyzed. Hence, the concept of *point of view* here is the viewpoint belong to the mental space of the utterance. From the viewpoints of cognitive linguistics in general, as well as from Fauconnier's specific viewpoint of cognitive space, the point of view is necessary to determine the cognitive space of an utterance. In the perception action, the point of view has a key part in determining the perception results. In cognitive linguistics, point of view is an indispensable and significant factor for determining the meaning of linguistic expressions. Thus, we need to investigate the point of view within the perception activity of Vietnamese verbs of perception. Below, the following examples will be examined:

Example 35: *Cô ấy nhìn tôi.* (She look at me.)

In the above sentence, we can see that the viewpoint of that action is from the girl's side "Cô ấy (She)" towards "tôi (me)". But with the below example, it is forced to review its point of view.

Example 36: *Em ấy nhìn rất đẹp gái.* (She looks very beautiful.)

Obviously, with this sentence, the set of words is "Em ấy nhìn (She looks)", however, it is not "Em ấy (She)" has the activity of "looks (nhìn)", or in other words, the perception action does not come from "Anh ấy (He)", or it can be said that "Anh ấy (He)", here, is not the perceptor. In this situation, the point of view must come from a perceptor located outside towards him "Anh ấy (He)". A remark can be drawn here that the perceptors don't always coincide totally with the sentence's subject. For example, in the following examples, the perceptor certainly cannot be the subject of the sentence.

Example 37: - *Được trang bị như một phòng khách, căn phòng phía trước nhìn ra một bến tàu và dẫn vào một phòng ngủ nhỏ.* (Fitted as a living room, the front room *overlooks a pier* and leads into a small bedroom.)

Therefore, identifying the viewpoint is definitely vital in assisting to determine the meanings. For example, consider the following example:

Example 38: *Cô ấy nhìn cũng được.*

If there are no context, or, in other words, being lack of a pre-defined point of view, this sentence can lead to ambiguity.

a) *Cô ấy nhìn cũng được (không đến nỗi xấu trai).* (She's good looking (not ugly).)

b) *Cô ấy nhìn cũng được (nhưng chưa được rõ lắm).* (He can see well (but not very well).)

Or as in English, if we can determine the point of view, we can distinguish the different meanings between the following two sentences:

Example 39: He *smells* good. (emission) and He *smells* well. (reception)

#### 4.2.3.3. Cognitive focus

According to information theories, every message has its information focal point. The same goes for the group of Vietnamese perception verbs. In their utterances, there is always a cognitive focus.

Example 40: *Họ thấy cô ấy đang đi trong công viên.* (They saw her walking in the park.)

For this example, the cognitive point that needs to be focused on is "cô ấy (her)", and "công viên (the park)" represents a background image. In language, when using cognitive focus transference within one mental space to address set focal points, it is metonymy.

Example 41: *Tôi thấy anh ấy là tay đánh chủ lực của đội cờ.* (I see him as the main player of the chess team.)

For this example, the cognitive space is a player, but the speaker has directed his focus on the player's *hand* (tay), because as a soccer player, the *hand* (tay) is a very valuable focal point in terms of information.

In the other case, if a cognitive focal point in one cognitive space is transferred to apply to a cognitive focus in another space, it is a metaphor.

Example 42: *Ngày ngày mặt trời đi qua trên lăng,* (The sun passes over the mausoleum day by day,)

*Thấy một mặt trời trong lăng rất đỏ.* (A very red sun in the mausoleum can be seen.)

Mặt trời (sun) in the second sentence above has a metaphor of Uncle Ho in Vietnam.

It is also important to understand here that focus and point of view are two different concepts. The focus is the goal, and the viewpoint here is the originating point. In case nhìn (look) is a process, then

the focal point is the destination and the viewpoint is the starting point. The viewpoint is the place from which one is directed to the destination, and the focal point is the destination one wants to reach. In addition, the focal point is what is always inside the perception space, while the point of view can be outside the perception space.

Example 43: Arthur nói, đôi mắt nhìn xuống. (Arthur said, his eyes looking down.)

For this example, the focal point of information is “đôi mắt nhìn xuống (the eyes looking down)”, but the point of view could be from Arthur looking down, and it could also be from an outside perceptor observing Arthur.

## 5. Conclusions

In this research, theories of cognitive space and frame semantics have been applied as a basis to analyze and fully indicate the elements and cognitive characteristics of the perception verbs in Vietnamese.

Through the research, the cognitive space of the Vietnamese perception verbs can be identified as a complex body consisting of two large groups of tangible and intangible elements. In each group, there are sub-groups including various components corresponding to the complexity of the outer reality space surrounding the human being.

The results obtained in this research show that cognitive space is an appropriate theory for linguistic research from the cognitive point of view, which has been tested not only in the field of language but also in psychology, neuroscience, etc. Applying the cognitive space characteristics can explain many different linguistic matters.

In addition, the cognitive space of the perceptive verb has its own way of perceiving. The research results can be applied to the study and teaching of Vietnamese in a correct and effective way, avoiding mistakes as well as linguistic cognitive impairments, and can assess accurately the language ability of Vietnamese learners.

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#### **AUTHOR BIODATA**

**Phuong Nguyen Hoang** is currently a full-time lecturer in Faculty of Vietnamese Studies, University of Social Sciences and Humanities, Vietnam National University – Hochiminh City, Vietnam. He has been teaching for 20 years in many big universities in Vietnam and has been visiting lecturer in Chungwoon University, Korea. He is a Ph.D. in linguistics. His majors are contrastive linguistics, cognitive linguistics, English and Vietnamese for foreigners. He has published many scientific works in international journals on contrastive linguistics, cognitive linguistics and language teaching for foreigners. He has given presentations of many papers in many international linguistics conferences in India, Srilanka, Thailand, Taiwan, Korea and Vietnam. He is currently interested in researching Vietnamese linguistics, Vietnamese language teaching for foreigners, compiling textbooks on Vietnamese for foreigners.