SEMANTIC FEATURES OF EXPRESSIONS ON TRAFFIC SIGNS IN ENGLISH AND VIETNAMESE

ĐẶC TRƯNG NGỮ NGHĨA CỦA CÁC BIỂU THỨC TRÊN BIỂN BÁO GIAO THÔNG TIẾNG ANH VÀ TIẾNG VIỆT

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Abstract - With descriptive and contrastive methods, this paper aims to provide a detailed description of semantic features of expressions on traffic signs (EsTSs) in English and Vietnamese. The samples of EsTSs were collected from driver guide documents and from roads and streets in the two states of the USA namely Washington and California and five well-known cities in Vietnam which are Ha Noi, Ho Chi Minh, Da Nang, Nha Trang, and Hoi An via photo-taking. Based on the theories of researchers such as Quirk (1985), Alexander (1998), Nguyen Hoa (2001), and Diep Quang Ban (2009), a contrastive analysis has been conducted to explore the similarities and differences between English EsTSs and Vietnamese ones in terms of semantic features. The paper also shows the occurrence frequency of these expressions. The findings can help road users understand English and Vietnamese traffic signs to obey traffic rules, and therefore, contribute to reducing the traffic accidents.

Key words - semantic features; expressions; traffic signs; signified; contrastive analysis.

Tóm tắt - Dùng phương pháp miêu tả và so sánh, bài báo này mô tả đặc trưng ngữ nghĩa của những biểu thức trên biển báo giao thông trong tiếng Anh và tiếng Việt. Dữ liệu để phân tích được trích ra từ những tài liệu hướng dẫn lái xe và các bức ảnh chụp trên đường phố tại các bang Washington và California ở Mỹ và các thành phố Hà Nội, Hồ Chí Minh, Đà Nẵng, Nha Trang, và Hội An ở Việt Nam. Dựa trên lý thuyết của một số nhà nghiên cứu như Quirk (1985), Alexander (1998), Nguyễn Hòa (2001), và Diệp Quang Ban (2009), phương pháp phân tích đối chiếu được thực hiện để rút ra những nét tương đồng và khác biệt giữa các biểu thức trên các biển báo giao thông trong tiếng Anh và tiếng Việt về mặt ngữ nghĩa. Bài báo cũng chỉ ra tần số xuất hiện của những biểu thức này. Kết quả nghiên cứu giúp những người tham gia giao thông hiểu những biển báo giao thông trong tiếng Anh và tiếng Việt để họ chấp hành tốt luật lệ giao thông, góp phần giảm thiểu tai nạn giao thông

Từ khóa - đặc trưng ngữ nghĩa; từ ngữ; biển báo giao thông; cái được biểu hiện; phân tích đối chiếu.

1. Rationale

Together with economic development, traffic systems are also more and more developed in every country, and this makes the number of traffic signs (TSs) become larger than ever before. Based on Saussure's theory of signs (1916), English and Vietnamese TSs consist of two parts: signified and signifier. For examples,

In Vietnamese: SIGNIFIER   SIGNIFIED

Cấm đỗ xe ngày lẻ

In English: SIGNIFIER   SIGNIFIED

Workers ahead

Therefore, understanding signs in general, TSs requires some knowledge and skills. For instance, the expression "Cấm đi ngược chiều" means the roads with this traffic sign are one-way and drivers are not allowed to travel on the opposite way. But in "Flooded", a flooded area ahead, is what road users understand when seeing this expression. These meanings are all denotative. In our daily life, we still see some people breaking traffic law, they do not execute what these signs ask them to do. The problems are whether these signs are easy, clear enough to understand or not and whether they provide instant communication or not so that people can understand them easily to implement them. It is, therefore, necessary for researchers to study the semantic features of EsTSs to have academic knowledge of linguistic features of different TSs. Thus, this paper is conducted with the purpose of helping the public

participating in traffic understand, be more aware of English and Vietnamese EsTSs to obey the traffic rules well, which helps reduce traffic accidents and reach better communicative targets.

2. Literature Review

2.1. Previous Studies Related to the Research

There have been up to now many published works, and journal articles on TSs. Fleyeh and Dougherty (2005) presented an overview of the roads and TSs detection and recognition. Baró et al. (2009) showed in their research that the high variability of sign appearance in uncontrolled environments made the detection and classification of road signs a challenging problem in computer vision. Ruta, Li, and Liu (2010) addressed the problem of TS recognition. Stallkamp et al. (2012) characterized TSs by a wide variability in their visual appearance in real-world environments. As seen, the previous studies of TSs chiefly discussed the variability in the visual appearance, recognition, detection and classification of TSs. However, there has been no contrastive analysis on semantic features of EsTSs between English and Vietnamese. Therefore, this paper is an attempt to examine these unsolved aspects of EsTSs so that it can make a small contribution to the study of TS language in general and English as a foreign language, especially it might help road users well obey the traffic rules to create safety on roads.

2.2. Some Theoretical Concepts

2.2.1. Traffic Signs

According   to   https://www.merriam-webster.com/ dictionary/traffic sign (retrieved May 30, 2017), TS is a sign

usually on the side of a street or highway bearing symbols or words of warning or giving directions to motorists or pedestrians and often having a characteristic shape.

2.2.2. Expressions on Traffic Signs

EsTSs are understood as words or phrases written on billboards conveying information on warning, advising, banning, directing, instructing drivers, motorists or pedestrians.

3. Research Methods

The descriptive method was used to give a detailed description of semantic features of Sets in English and Vietnamese. Also, the contrastive method was employed to identify the similarities and differences of Sets in English and Vietnamese in terms of semantics.

4. Data Collection and Analysis

200 samples in English and 190 ones in Vietnamese containing Sets were collected from driver guides and from roads and streets in the two large states of the USA namely Washington and California and prominent cities in Vietnam which are Ha No, Ho Chi Minh, Da Nang, Neha Trang, and Hoi An via photo-taking to ensure the authenticity of the data.

The data collected were qualitatively and quantitatively processed to investigate the semantic similarities and differences of EsTSs in the two languages.

5. Findings and Discussions

5.1. Semantic Features of Expressions on Traffic Signs in English

The result of data analysis shows that English EsTSs can be grouped into thirteen categories as follows.

5.1.1. EsTSs denoting difficult road conditions for driving ahead

The difficulty can be found in the following EsTS:

(1) Blasting zone ahead   {14}

The meaning denoted from the expression above indicates that the road has difficult conditions ahead. "There is a blasting zone ahead" is the meaning of example (1).

5.1.2. EsTSs denoting obstacles ahead

EsTSs also denote obstacle in front of drivers. For instance:

(2) Road machinery ahead   {134}

This EsTS lets drivers know that road crews are working ahead and road works are in progress.

5.1.3. EsTSs denoting a change of driving direction

(3) Exit closed   {42}

This EsTS denotes a change of driving direction because of the closure ahead of the road. We can see that the exit in (3) is closed. The road users, therefore, must change their driving direction.

5.1.4. EsTSs denoting mandatory meaning

(4) Keep left   {55}

The mandatory meaning conveyed in this expression indicates that a road user must take a certain action.

5.1.5. EsTSs denoting a restriction

Restrictive EsTSs indicate that a limit must not be exceeded. Examples for the case are:

(5) 60 km/h   {2}

(6) Reduce speed - Construction ahead   {117}

The examples above are about speed limit. EsTSs show the fixed speed limit or general speed limit.

(7) Weight limit 8 T   {190}

This expression is for indicating restrictions pertaining to total vehicle weight including the load. Only vehicles with their total weight of 8 tons are allowed to travel on streets attached with this expression.

There are no EsTSs found in English denoting height limits because TSs in English denoting height limits are in the form of signs with symbols, images, numbers and the names of a measurement unit. For example,

 This height limit sign is formed by a combination of a symbol, a number and the name of a measurement unit. Without the symbol, the number and the name of a measurement unit do not make sense.

5.1.6. EsTSs denoting means of transport or action prohibited

These EsTSs indicate something which must not be done. Let us consider the following example:

(8) No left turn   {75}

We can see that, "drivers are not allowed to turn left" is the meaning of the expression "No left turn".

5.1.7. EsTSs denoting lane use control

These EsTSs show how drivers can travel on the lane. For example,

(9) Single lane only - Do not pass   {150}

"Drivers must control their vehicles on single lanes and are not allowed to pass" is the meaning found in example (9).

5.1.8. EsTSs denoting a stop

(10) Stop   {165}

The meaning of these EsTSs is that drivers or pedestrians must completely stop before proceeding. When seeing these expressions, they must wait until crossing vehicles and pedestrians have cleared. They must stop at the stop line if one is present.

5.1.9. EsTSs denoting yield

This warning can be found in the following expression:

(11) Yield   {194}

This expression asks drivers to give the right of way to other drivers at an intersection. When seeing the sign, drivers must slow down and yield the right of way to traffic in the intersection they are crossing or road way they are entering.

5.1.10. EsTSs denoting no entry

Signs with no entry expressions mean that drivers, motorists or pedestrians cannot enter. For instance:

(12) No entry   {73}

There are also expressions denoting the meaning of not entering of one specific type of vehicles.

(13) No trucks   {88}

5.1.11. EsTSs denoting route for specific vehicles

(14) Bike route   {12}

The expression provides motorists with route information. It indicates a route for a specific vehicle, the bike.

5.1.12. EsTSs denoting guide

EsTSs denoting guide provide motorists with information on distance to destinations on their selected route of travel. For example,

(15) Turnout ¼ mile   {179}

EsTSs denoting guide information also show distance to various locations. Below is an example:

(16) Bellevue 8   {7}

5.1.13. EsTSs denoting services

There is a large number of EsTSs denoting services in English. These signs are usually found on interstate highways, usually near exits.

(17) Hospital   {52}

This expression means that hospital is also featured on TSs. It is used to provide drivers with medical care service.

They also show drivers the parking service.

(18) Bike parking   {11}

The data collected also shows that EsTSs inform road users about the availability and the location of various services, such as rest areas, gas stations, weight stations, campgrounds, and other services:

(19) Downtown shopping   {30}

5.2. Semantic Features of Expressions on Traffic Signs in Vietnamese

5.2.1. EsTSs denoting difficult road conditions for driving ahead

Look at the example:

(20) Dốc xuống nguy hiểm   {101}

This sign tells road users about possible road conditions on the route. The expression mentions that drivers need to pay attention to possible dangers because of the difficult road conditions for driving ahead.

5.2.2. EsTSs denoting obstacles ahead

These EsTSs inform road users that there are obstacles ahead.

(21) Công trình đang thi công. Đi chậm   {70}

5.2.3. EsTSs denoting a change of driving direction

(22) Đi hướng này   {92}

This expression asks road users to follow the indicated direction. The drivers, therefore, have to change their driving direction when seeing this EsTS.

5.2.4. EsTSs denoting mandatory meaning

Mandatory EsTSs indicate that road users must take a certain action. In general, their meaning is to give orders, represent commands to road users. For example,

(23) Chú ý để tránh va đập lái xe đi thẳng, xe cách xe

5m   {67}

Drivers must control their vehicles with a distance of 5 metres from other ones when seeing the expression in example (23).

5.2.5. EsTSs denoting a restriction

Speed limit EsTSs consist of fixed speed limit and general speed limit. The maximum or minimum safe speed allowed belongs to fixed speed limit. For example,

(24) Hạn chế tốc độ   {133}

(25) Hạn chế tốc độ 20 km/h   {134}

The general speed limit expression in example (24) only cautions drivers that they have to limit their speed, whereas the fixed speed limit expression in example (25) indicates that divers must limit their vehicles' speed to 20 kilometers per hour for their vehicles when driving on the road.

(26) Cầu yếu. Cấm các phương tiện trên 8 tấn lưu thông qua cầu   {51}

This weight limit expression means that vehicles weighing eight tons or over are not allowed to travel on that bridge.

(27) Chiều cao hạn chế 3,5 m   {53}

Height limit expressions denote that vehicles with an overall height greater than a certain limit shall be prohibited from proceeding. The expression in (27) means that vehicles with the height from road or bridge surface to the highest point of the vehicle or cargo of 3.5 meters are allowed to travel on the road having this expression.

5.2.6. EsTSs denoting means of transport or action prohibited

The prohibitory EsTSs indicate something not allowed to do. They show prohibited actions and force drivers to comply with them. For examples,

(28) Cấm ô tô chở súc vật qua hầm   {31}

This expression forbids vehicles that carry animals to travel inside tunnels.

5.2.7. EsTSs denoting lane use control

These EsTSs instruct drivers to control their vehicles on appropriate lanes; they force drivers to follow the right lanes guided in accordance with the journey of their vehicles. For example,

(29) Làn đường rẽ trái   {152}

This expression allows or force vehicles to turn left into the lane.

5.2.8. EsTSs denoting a stop

Vietnamese EsTSs denoting stop caution that drivers or pedestrians must stop when seeing these expressions before crossing the road. For example:

(30) Đèn đỏ dừng lại   {79}

The expression (30) means that drivers or pedestrians must stop when the traffic light turns red. They are allowed to continue travelling when the traffic light turns green.

5.2.9. EsTSs denoting yield

(31) Đi chậm nhường đường   {90}

This expression asks the drivers to slow down and yield

the right of way to vehicles travelling on the opposite direction.

5.2.10. EsTSs denoting no entry

(32) Đường cấm {108}

This expression indicates that the road is prohibited and all types of vehicles are not allowed to travel on both directions.

5.2.11. EsTSs denoting route for specific vehicles

(33) Đường dành cho xe cư dân {115}

This expression indicates a route for vehicles whose owners live in a residential area led into by that route.

5.2.12. EsTSs denoting guide

Some EsTSs guide road users to directions, distances or other useful things. Below are some examples:

(34) Nút Điện Biên Phủ - Nguyễn Tri phương đang thi công. Cấm xe tải có khối lượng hàng trên 2,5 tấn, xe khách từ 16 chỗ trở lên vào khu vực nút giao đang thi công {167}

This one asks some types of vehicles not to travel on a specific road because of some specific reasons. Below is an expression guiding drivers a distance to a destination.

(35) Hà Nội 20 km {132}

This expression shows that the distance from where their vehicles stop to Ha Noi is 20 kilometers.

(36) Nơi đỗ xe đưa, đón học sinh {165}

The example (36) means there is a parking place for vehicles that are used to take children to schools and bring them home.

Another expression informs drivers of the duration they can park their vehicles. For example,

(37) Ô tô dừng không quá 3 phút {168}

EsTSs also indicate the state of the roads ahead. They may be slippery, weak, or rough. The drivers need to be careful when driving on these roads.

(38) Đường cụt bên phải {111}

The expression below gives permissions to travel to a specific type of vehicles.

(39) Xe buýt được phép hoạt động {183}

The following expression gives some rules that drivers must follow when their vehicles travel inside tunnels.

(40) Quy định các loại xe không được qua hầm

Người đi bộ, xe máy, xe thô sơ

Xe chở chất dễ cháy, nổ

Xe có chiều cao > 4,5m

Xe có chiều ngang > 3,2m {172}

5.2.13. EsTSs denoting services

These EsTSs show the location of various services such as rest areas, stations, places for sightseeing and some other services. For example,

(41) Bãi đỗ xe tham quan làng rau Trà Quế {6}

This expression means that there is a parking place for vehicles whose passengers visit Tra Que vegetable village.

(42) Nhà hàng ăn uống {160}

The expression in example (42) means that there are

food and beverage services nearby.

(43) Chùa Hương {68}

This is an expression that is about a place to visit-Huong pagoda.

5.3. Similarities and Differences between Expressions on Traffic Signs in English and Vietnamese

5.3.1. Similarities

Table 1. *Semantic Features of EsTSs in English (E) and Vietnamese (V)*

Semantic Features of EsTSs	E	V
Difficult road conditions for driving ahead	+	+
Obstacles ahead	+	+
A change of driving direction	+	+
Mandatory meaning	+	+
A restriction	+	+
Means of transport or action prohibited	+	+
Lane use control	+	+
A stop	+	+
Yield	+	+
No entry	+	+
Route for specific vehicles	+	+
Guide	+	+
Services	+	+

According to Table 1, all of EsTSs in the two languages convey the same semantic fields which can be classified into thirteen themes as mentioned in the previous part. Each theme is characterized by the word denoting the meaning of that theme. It can be seen that there is a large number of words appearing with different frequency. They help the road users identify the meanings of the signs easily and rapidly thanks to the explicit meaning of the words in each sign.

Most of EsTSs in both English and Vietnamese contain words of similar meanings. In the group of EsTSs denoting difficult road conditions, the most particular words are "closed", "ahead", and "end" in English and "chú ý", "nguy hiểm", and "đi chậm" in Vietnamese. English EsTSs denoting obstacles ahead include words "construction", "road", "work", and "workers" and Vietnamese ones with "công trình", and "thi công". In the field of mandate, the similiar words such as "only", "must", and "quy định" are found in English and Vietnamese respectively. In EsTSs of restriction, words such as "limit" in English and "hạn chế" in Vietnamese are found. As for prohibition EsTSs, we can find the words of similiar meaning "do not", "no" in English and "cấm", "không được phép" in Vietnamese. In the theme of lane use control, the word "lane" is found in English EsTSs and "làn" is found in Vietnamese ones. EsTSs denoting a stop include word "stop" in English and "dừng lại" in Vietnamese. In EsTSs of yield, words such as "yield" in English and "nhường đường" in Vietnamese are found.

5.3.2. Differences

Although both English and Vietnamese EsTSs display the same semantic fields, there are some differences. Firstly, in EsTSs about restriction, no EsTSs to limit vehicles' height are found in English. Moreover, some Vietnamese EsTSs

consisting of a large number of words take more time for road users to read than the English ones do.

The frequency of English and Vietnamese EsTSs in terms of semantic features shown in the table below display occurrences (Os) in raw number and in percentage.

Table 2. *Frequency of EsTSs in English (E) and Vietnamese (V)*

EsTSs	E		V	
	O	%	O	%
Difficult road conditions for driving ahead	31	16	12	6.3
Obstacles ahead	17	8.5	8	4.2
A change of driving direction	13	6.5	4	2.1
Manda tory meaning	27	13.5	29	15.3
A restriction	13	6.5	13	6.8
Means of transport or action prohibited	25	12.5	38	20
Lane use control	10	5	8	4.2
A stop	5	2.5	3	1.6
Yield	8	4	1	0.5
No entry	7	3.5	2	1.1
Route for specific vehicles	4	2	1	0.5
Guide	18	9	41	21.6
Services	22	11	30	15.8

It can be seen from the table that the percentage of frequency of EsTSs denoting different themes in English and Vietnamese is quite different. The predominated frequency of occurrence of English EsTSs denoting difficult road conditions for driving ahead is at 16%, whereas, those in Vietnamese just account for 6.3%. The highest percentage of Vietnamese EsTSs is on EsTSs denoting means of transport or action prohibited with 20%, while this meaning in English EsTSs is 12.5%. This difference reveals the traffic system and infrastructures in Vietnam are different from those in the United States. Roads in the United States of America crowded with vehicles have a wide range of obstacles and many difficult conditions for driving, whereas in Vietnam, EsTSs denoting guide and services make up high percentages indicating that Vietnamese EsTSs consist of a lot of words or phrases for guiding drivers and tourists as tourism develops in Vietnam.

6. Conclusions and Suggestions

From the semantic analysis of the EsTSs in English and Vietnamese, we can come to the conclusion that there are no differences in the meanings denoted by EsTSs in the two languages. They both denote thirteen themes.

There is a small difference in the field of restrictive meaning. English data has no EsTSs denoting vehicles' limit height. Moreover, the percentages of frequency of each semantic field of EsTSs in English are not the same as those in Vietnamese. Lastly, it takes time to understand the meaning of some EsTSs in Vietnamese because of a lot of words used in Vietnamese EsTSs.

In order to help drivers understand EsTSs easily and quickly, which helps to reduce accidents, some suggestions for drivers and traffic signs' designers are put forward:

To start with, most of English and Vietnamese EsTSs contain key words. It is, therefore, necessary for road users to pay attention to these words in order that they can get the overall meaning of EsTSs quickly.

Second, for Vietnamese translators, when they translate EsTSs, it is advised that they focus on the meanings of these expressions. That is, they, should pay attention to aspects of traffic systems, especially traffic infrastructures in Vietnam so that they can select appropriate translational equivalents.

Last, it takes time for drivers to read and understand the meanings of EsTSs. Vietnamese EsTSs should be shortened with content words to make it easier for drivers to catch EsTSs' meaning and help to reach the communicative target.

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