



A Cognitive Study of Chinese Transportation Vocabulary

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Abstract. Clothing, food, housing and transportation are an important part of our daily life and they are also the basic guarantee of human survival. Among them, “intersect” is an important link between interpersonal communication and activities, which realizing the smooth transmission of people and things. The language of transportation is a relatively rigorous language, with strict standards and a unified form to ensure that the information can be conveyed accurately and without ambiguity. In recent years, with the rapid development of society, language has also made breakthroughs, and gradually some traffic words are no longer limited to the original semantics, but have produced new semantics and usage. This paper will analyze the new meaning of traffic language based on the theory of conceptual metaphor, find its source and target domains, and explore the semantic pragmatics, so as to provide reference for the application and development of transportation language.

Keywords: transportation language, metaphor, cognitive linguistics

1 Introduction

The change and development of society promotes the variation of language, at the same time, the development of language give impetus to the development and change of society. In recent years, "new words and new phrases" have attracted people's attention, but a large part of these "new words and new phrases" come from people's continuous cognition. Cognitive linguistics is a relatively hot field in the field of linguistic research in recent years. It is a new approach to the study of natural language that understands language as a tool for organizing, processing and transmitting information[1].It adheres to the three-dimensional interaction principle of "language-cognition-society"[2].

Today's phenomenon of "new usage of old words" is a manifestation of language achieving new usage through human cognitive processing. Some of these new semantics and pragmatics are well known because they are used more frequently, while others are not. Each industry in China has its own industry terms , these become an essential part of the Chinese vocabulary[3].Therefore, this paper will be based on the relevant theories of cognitive linguistics, try to discover the linguistic phenomenon of semantic evolution in words related to the language of transportation, explore the metaphorical mechanism behind it, and consider the impact of this phenomenon on human's life and

language systems. Hope to provide reference for transportation and artificial intelligence related fields.

2 Language of Transportation

The four basic needs in life include: food, clothing, housing and transportation. Among them, “transportation” is the key link between people to people, and things to things[4]. The three elements of road traffic include: people, vehicles, and roads. There are a lot of words related to “people, vehicles and roads” in Modern Chinese, but few research articles.

Malone (2000) believes that transportation language is a kind of traffic regulations embodied in language, which can convey relevant information on traffic roads to people; In 2006, the transportation language system was further defined as a medium for communication between traffic managers and travelers. According to Duan Liren (2013) the transportation language is composed of road language and related content; Zhang Xu (2024) summarized and redefined the definitions of related transportation languages defined by predecessors. He defined the broad and narrow senses of transportation language and believed that transportation language is a carrier of traffic information in the broad sense. Anything that can convey traffic information can be collectively called traffic language. Transportation language in the narrow sense, is a more rigorous tool for conveying accurate traffic information to pedestrians or drivers, usually including traffic lights, signs, etc. This paper refers to the transportation language is to draw on the definition of Zhang Xu's broad sense of transportation language: things can convey traffic information to people that can be counted as traffic language.

From the perspective of the existing research on transportation language, there are not many special studies on transportation language, which shows that there is less attention in the academic community in terms of Chinese transportation language. As mentioned by Shao Haipeng (2005), transportation language involves a very wide range of fields, which can include psychology, linguistics, traffic management etc. Therefore, the language of transportation still has a lot of research space and great research significance.

3 Conceptual Metaphor

Cognitive linguistics is an important research category in linguistics, which believes that language must contain deeper meanings behind its using. From the perspective of cognitive linguistics, it can be found that many new words that have emerged in recent years can find the shadow of existing vocabulary or cognition, but the level of cognitive ability is reflected in the use of language. It can also be said that cognition is intrinsically driven, and the performance of language is extrinsic.

Conceptual metaphor is one of the most important theories in the framework of cognitive linguistics, which believes that metaphor is not a simple rhetorical method, but a law of human general cognition of things. They allow us to understand abstract con-

cepts through more concrete experiences, which can simplify abstract ideas and facilitate comprehension[5]. The theory of metaphor was first proposed by Lakoff and Johnson (1980) in their book *Metaphors We Live by*, which argues that the essence of metaphor is a way to understand one kind of thing through another, or it can be said to be a way to understand unknown and unfamiliar things based on the human's personal perception and experience, combined with already familiar things. The process of metaphorization implies interrelation of two knowledge structures, namely cognitive source domain and target domain[6], this process of projection is mainly based on people's association of the similarity between two things, so that the target domain can obtain some relevant characteristic information. Lakoff and Johnson (1980) also mentioned metonymy and argued. These two things belong to the same conceptual domain, The difference between metaphor and metonymy is that metaphor is a projection between two different cognitive domains, whereas metonymy is a mapping that takes place in the same conceptual domain. The extension of this concept of metaphor and metonymy to the linguistic level realizes the emergence of new words and meanings.

4 Metaphors for Transportation Vocabulary

In this paper, we chose to use the "Top Ten Popular Words" released by the "YaoWenJiaoZi Editorial Department" and "Baidu Boiling Point Annual Hot Search List" in the past 10 years as the research object. We searched all the popular words, including "New Track", "Retrograde Person" and "Veteran Driver", and combined with the Weibo corpus for semantic and pragmatic analysis.

4.1 "New Track"

The "New Track" is one of the buzzwords in the "Top Ten Buzzwords" released by the Editorial Department of YaoWenJiaoZi in 2022. The "New Track" belongs to the category of "Road" in the transportation language. Due to its widespread use of semantics Changes occurred and it became a hot word on the Internet.

Meaning: Original meaning: "Track" originally meant a track specifically designed for racing, i.e. a race area used for racing, while "new" meant the latest to appear, with a higher quality grade, and had not been used. "New track" refers to new, unused, higher-end racing tracks.

As in the example sentence:

Example 1: In addition to new cars and new race tracks, there are also many new ways waiting us to reveal one by one. (Weibo - NetEase Top Speed)

Example 2: How was the experience of the new track, let's listen to driver Zhou Guanyu. (Weibo - F1 World Championship)

Example 3: New track, new and unknown challenges are waiting us in this week. (Weibo - Mercedes-AMG F1 Team)

In the above three examples, "new track" refers to a racing track that will be used for the first time in a racing competition. It has new changes compared to the old racing track and will bring surprises to the racers.

Metaphorical meaning: usually refers to a new or special choice and beginning. This new choice will achieve new breakthroughs in ideas, new developments in fields, technological innovations or unique and unconventional ideas based on the original ones.

As in the example sentence:

Example 4: Godzilla King Kong opens new track for publicity. (Twitter - Mango Entertainment)

Example 5: Bioeconomy is expected to become the fourth industrial revolution in the future, a new track and new business format after the agricultural revolution, industrial revolution, and digital revolution. (Weibo - Cloud Finance)

Example 6: The president hopes that the graduates will always cherish the feelings of family and country and have the courage to open up new tracks! (Weibo - Xinhua News Agency)

In several of the above examples, the "new track" refers to innovative choices or beginnings.

Projections from the source domain to the target domain of the term "new track"(Figure 1).



Fig. 1. Projections from the source domain to the target domain of the term "new track"

Source domain: brand new track - Target domain: new start, new journey, new choices

Usually, we think that metaphor does not directly describe how "A" is, but activates people's understanding of "A" by using the similarity between "B" and "A", which is a kind of "single activation". Wang Wenbin (2006) mentioned that similarity refers to some similar or similar features or characteristics between two cognitive domains. Such features and characteristics can be divided into external feature similarity, action-behavior similarity and attribute-value similarity.

The similarity between the source and target domains of the "new track" is that they are both new and unexperienced roads, and should belong to the projection activated by the similarity of external features.

4.2 “Retrograde Person”

The word "Retrograde Person" is a buzzword in the "Top Ten Buzzwords" released by the Editorial Department of YaoWenJiaoZi in 2020. The "Retrograde Person" belongs to the category of "Person" in the transportation language. Because its widespread use of semantics Changes occurred and it became a hot word on the Internet.

Meaning: It refers to pedestrians or vehicles going against the prescribed correct direction. In the Modern Chinese Dictionary, the word "Retrograde" means to go against the prescribed direction (or vehicle, etc.).

As in the example sentence:

Example 1: However, in daily traffic, there are also some misfits "retrograde person" who ignore traffic laws and drive in the opposite direction. (Weibo - Beijing Daxing)

Example 2: big truck case collection! Do not do life line "retrograde person". (Weibo - Zhejiang Traffic Police)

In these two examples, the meaning of "Retrograde Person" is the person who goes against the road and violates the traffic rules.

Metaphorical meaning: refers to a person who, in the event of a major dangerous accident, disregards his personal safety, rises to the occasion, and chooses to save the lives and property of others. It was first used in the Covid-19 epidemic to refer to people who are doctors.

Example 3: Pay tribute to the retrograde person in the fire, and hope everyone returns safely. (Weibo - CCTV)

Example 4: Thank you, the retrogrades person who ride the wind and waves! (Weibo - Chongqing Radio and Television 1st Eye)

In these examples, the word "retrograde person" describes a type of person who is not afraid of danger and moves forward bravely.

Projections from the source domain to the target domain of the term "Retrograde Person"(Figure2).



Fig. 2. Projections from the source domain to the target domain of the term "Retrograde Person"

Source domain: pedestrians or vehicles going against to the road - Target domain: A hero who is not afraid of danger and moves forward.

The similarity between the source and target domains of the "retrograde person" is that both are traveling in the opposite direction to the majority of the population, and should belong to the projection activated by the similarity of action behavior.

4.3 “Veteran driver”

The "Veteran driver" is a hot word in the “2016 Baidu Boiling Point Annual Hot Search List” released by Baidu Search in 2016, and it also belongs to the category of "person" in the transportation language. It has become an Internet buzzword due to changes in semantics in the course of widespread use.

Meaning: a driver who have been driving more than three years and have fewer traffic accidents.

As in the example sentence:

Example 1: Mika can learn to drive as early as 15.5 years old, so he is also a veteran driver with 10 years of driving experience now. (Weibo - Mika)

Example 2: During the internship period, you cannot go on the highway alone, and you must be accompanied by a veteran driver with more than three years of driving experience. (Weibo - Xuancheng City Radio and Television)

Example 3: The customer claimed to be a veteran driver for more than 10 years, and the test drive collided with 4 cars in a row, the salesperson urgently called a stop. (Weibo - Star Video)

In the above examples, “veteran driver” is used to refer to a driver with some experience, who has been driving for more than three years. This is the only way to refer to this type of person.

Metaphorical meaning: usually refers to people who are familiar with certain aspects of the industry, senior, knowledgeable and experienced, not limited to the "driver" industry; it can also refer to people who are very knowledgeable about certain aspects of the information.

Such as the example sentence:

Example 4: All love is clumsy, don't be an "veteran driver" in love, there is no meaning. (Weibo - China News Network)

Example 5: Lewandowski is a veteran when he comes to becoming Poland's Mr. Football. (Weibo - FC Bayern München)

Example 6: Please take your time and watch it when you have time. Gu Gu is indeed a veteran driver, and he is particularly good at sliding down slides. (Weibo - Little Bunny Paper Moon)

As in the example above, “veteran driver” has been extended to all walks of life and can be summarized as being highly skilled in a particular area.

Projections from the source domain to the target domain of the term "Veteran driver"(Figure3).



Fig. 3. Projections from the source domain to the target domain of the term "Veteran driver"

Source domain: drivers who have been driving for a long time - Target domain: people who are very skillful in a certain area

The similarity between the source domain and the target domain of "veteran driver" is that they are both experienced people who have been doing the same thing for a long time, and should belong to the projection activated by the similarity of attribute values.

5 Motivation and Development of the Popularity of the "New Meaning" of Transportation Language

5.1 Popular Demand for Recreation

Happiness is the public's pursuit of the goal of life, different from the more standardized use of words, Internet buzzwords are often more witty and humorous, young people in contemporary society dare to break through the traditional thinking, the pursuit of novelty, the pursuit of the new wave of psychology, become their way of self-expression[7], in life we need to have such a class of vocabulary, can be funny and humorous,

to meet people's pursuit of life entertaining demands. Therefore, people begin to combine their personal cognition of the "transportation language" to make a new interpretation, so we can use more relaxed and pleasant words to express more of our emotions and make communication easier.

5.2 Development of the Internet Industry

With the progress of society and the rapid development of the Internet industry, a variety of social media software platforms have emerged. The rise of network platforms has made information dissemination more and more convenient, and the emergence and dissemination of the "new meaning" of transportation language are highly dependent on the continuous development of network platforms. The continuous dissemination of the network platform has rapidly increased the frequency of the use of the "new meaning" of traffic language, so that it appears in people's field of vision at a higher frequency in a positive cycle.

Since the selection of "Top Ten Buzzwords" and "Top Ten Hot Words" on the Internet began to appear, more and more platforms have begun to pay attention to Internet buzzwords and hot words. The emergence and popularity of network catchwords is not only a linguistic phenomenon, but also a social phenomenon. This kind of selection is a language "wind vane" with a sign of the times, so it has also become the focus of young people's attention.

5.3 Development of the Language of Transportation

As one of the more numerous and important categories of words in the language system, the transportation language is used very frequently in daily life. Language is a developing language, the more people use these words, there may be a demand for the meaning of the words, after the demand is generated, the transportation language may produce "new meaning", therefore, the semantics and pragmatics of the "transportation language" have a lot of room for expansion.

Niche buzzwords are short-lived, these words tend to have a lot of personality and can highlight the characteristics of a specific field, but they are not used by the general public, and these niche buzzwords will gradually disappear over time. Because traffic words are a more rigorous class of words, the "new meaning" produced is also more standardized than other Internet hot words, so it is widely used and circulated for a longer time, so it is worthy of attention, research and recording.

6 Conclusion

Transport vocabulary is a kind of essential vocabulary in human life, and the generation of "new words and new meanings" of these vocabularies reflects the development and change of society and highlights the characteristics of this era. The mapping between the source domain and the target domain is an important mechanism for the realization of metaphors. Meanwhile, some old words generate new meanings under the action of

the metaphor mechanism. These new meanings also show us that rich semantics and connotations can better meet the needs of popular language expression. Therefore, from the perspective of cognitive linguistics, we can explore the mechanism of the formation of new transportation vocabularies, which can help us adapt to the development of society in a better way.

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