An Analysis of the Application of Computer-based Multimodal Discourse Analysis in English Teaching Reform

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Abstract. Metaphor is ubiquitous in people’s daily life. Color is a cognitive way of human beings to the outside world. When we use the basic category of color to express other cognitive domains, we form the cognitive metaphor of color. Due to the common cognitive characteristics, the English and Chinese nationalities have a certain degree of similarity in the recognition of color words. However, influenced by various external factors, their recognition of color words shows their own unique personality. By comparing the conceptual metaphors of color idioms between English and Chinese, this paper reveals the similarities and differences between the metaphors of Chinese and English color words in a language environment close to nature, and finds out the characteristics of the metaphors of color words. The development of computer technology provides us with the possibility of analyzing specific problems. This article analyzes the application of computer-based multimodal discourse analysis in English teaching reform.

Keywords: Cognitive Contrastive, Metaphor, Color Terms, English and Chinese, Computer

1. Introduction

The working mechanism of conceptual metaphor is mapping from a source domain to a target domain. Source domain is usually a well-known concept. Cross-domain mapping between source domain and target domain is a way of thinking and cognition. It is a way of perceiving unknown and abstract concepts by referring to known and familiar concepts. The same is true of the working mechanism of color metaphor. When other cognitive domains are explained by color domains, the cognitive mechanism of color metaphor is formed. Through perception and imagination, when people use color words to describe things without color, they map some abstract concepts into color words. Semantic conflict and mental commonality are two basic conditions for color metaphor. Because of cultural differences, different countries and nations will have different perceptions and understandings of even the same color. Thus, color metaphors with abundant quantitative connotations will emerge. Whether from the visual or emotional point of view, people will react to color and give them specific meanings.

2. Analysis and comparison of color metaphors

2.1. Conceptual metaphor theory

Conceptual metaphor is an important concept of Lakoff’s metaphor theory, and it is also an important part of cognitive linguistics. Conceptual metaphor is different from what we usually call metaphor. It is a general summary of metaphorical expressions. Its most striking characteristics are traditionality, systematicness and
abstract generality. Conceptual metaphor can help us understand more clearly the abundant ways of metaphorical expression in our daily life. Next, I will use conceptual metaphor theory to make a cognitive comparison and analysis of yellow, green and red in English and Chinese\[1\].

2.2. Cultural similarity and cognitive equivalence
Cognitive attributes of words refer to the various attributes in the meaning of words condensed from the cognitive experience of the concepts or entities represented by language users in a particular language. The existence of color in nature is objective, and the corresponding words in different languages will not change, because living on one earth, people's lives and cultures have amazing similarities.

2.3. Cultural conflict and cognitive difference
Culture has its commonness as well as its individuality. Similarly, when projected into the cognitive system, the result is that the meaning expressed is different. Although the conceptual meaning of the same color word corresponds to that of the Chinese and English languages, its socio-cultural color and emotional connotation may differ greatly due to its different social and cultural backgrounds. Due to the differences between English and Chinese cultures, people’s living environment, mental state and thinking mode are not identical. The complete equivalence and equivalence of vocabulary in different languages are limited and relative\[2\].

3. Metaphorical cognitive commonalities of English and Chinese color words

3.1. Specific color words present metaphorical generality
Because human beings have the same physiological mechanism and visual nervous system, there should be no qualitative difference in the perception of color stimulus in theory, and it is reasonable that the metaphors produced from it have similarities. For example, in Western culture, “black” is the basic taboo color, symbolizing the devil, evil, pain and misfortune, however, in Chinese, the metaphorical meaning of “black” is very similar to that of English. Derivatives are always associated with the meanings of bad, disgraceful, unfortunate, disaster and evil. Thus, people’s perception of “black” in Chinese and English cultures is similar.

3.2. Metaphor of color words presents functional generality
In addition to literally referring to a certain color, color words can also metaphorically superimpose certain cultural content to produce different associative meanings, reflecting certain emotional values and social functions, so that color words show strong social attributes. For example, in both English and Chinese, color words can be used to metaphorize power, honour and status\[3\].

Color can not only stimulate people's visual nerves, but also trigger people’s different interests, giving people different feelings such as warmth, excitement or depression, so color words are often used to refer to people’s emotions, in addition, color words can also metaphor occupation. Thus, the cognitive basis and working mechanism of metaphor are the same in both English and Chinese, that is, analogical association, which shows some abstract and difficult concepts, quality characteristics and other specific things. As far as color metaphor is concerned, although there are regional and cultural differences in metaphorical thinking between English and Chinese, there are also many similar metaphorical abstract expressions.

4. Differences between English and Chinese color word metaphors and the causes
The category of color tends to be consistent basically, with the same rational concept and commonality. However, due to the influence of natural environment and human factors, for the colorful color world, each nation has its own unique perspective of appreciation, and produces different analogical associations for the same color, thus having different metaphorical expressions. These expressions store all the labour and life experience of a nation’s predecessors, reveal the nation’s habitual tradition, present the nation’s cultural mentality, contain the nation’s way of thinking, reflect the nation’s values, aesthetic tastes, moral standards and religious consciousness. For the metaphorical thinking and abstract expression of color words, the differences between English and Chinese are mainly shown in Figure 1.
The physical visual phenomenon of color is relatively acceptable to the West, which experienced feudal society for a relatively short time, and the popularization and rapid development of modern education and science. From the very beginning, Western civilization paid more attention to the scientific rational education and the discovery of scientific methods, and adopted a realistic and scientific attitude towards the objective world and the objective understanding[4].

The metaphorical thinking and abstract expression differences of color words between English and Chinese are mainly shown in table 1[5].

### Table 1. Details of metaphorical differences

| Contents                                      | Details                                                                                                                                 |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Differences in natural environment and historical background | The reason why some color words have metaphorical meanings like this or that is actually related to the historical life of the nation. |
| Differences in religious beliefs              | Different religious beliefs lead to different color metaphors between East and West.                                                    |
| National psychological differences            | Western civilization paid more attention to the scientific rational education and the discovery of scientific methods, and adopted a realistic and scientific attitude towards the objective world and the objective understanding. |
| Differences in the influence of literature and art | Literature and art is a mirror reflecting social life. The metaphor of color words in art works reflects distinct national personality. |

5. Changes in metaphorical differences between English and Chinese color words

On the one hand, the differences in Metaphors between English and Chinese color words are due to the changes in social culture and living habits caused by the changes of the times. On the other hand, with the increasing frequency of international exchanges, Chinese and Western cultures infiltrate and interact with each other, which makes Chinese and Western cultures present an unparalleled appearance. However, with the development of the times and the innovation of people’s ideas, many western forms are gradually accepted by eastern people, which shows that people’s metaphorical perception of color has changed under the influence of Western culture[6].

Although the metaphor of color words is influenced by cultural background, they are not invariable. They will change with the changes of the times and interact with each other because of cultural blending. For example, due to the change of the times, some of the metaphorical objects of “black” in Chinese disappear gradually; due to the cultural blending, the metaphor of “red” in English and Chinese presents a peculiar blending phenomenon. This kind of change deserves our consideration. Just like many other things, language will change with the changes of the times. Therefore, when doing linguistic research, over-tradition often
leads to incorrect conclusions. It is scientific and wise to keep pace with the times and to be at the forefront of language development.

6. Conclusion
In summary, human's perception of color is gradually developed, which is related not only to human physiological mechanism, but also to human living environment, historical background, religious beliefs, national psychology, literature and art and other external factors. The same color represents the same meaning in different languages, but there are also many differences. There are similarities in the conceptual metaphor of color between English and Chinese, but through the use of computer technology to analyze and compare the metaphorical cognitive analysis of color words in English and Chinese, we can see that there are also many personalities, it contains a great deal of cultural information, and the conceptual metaphorical meanings are different from each other both visually and psychologically. The purpose of analyzing the similarities and differences between them is to enhance the relationship between language culture and social culture, and to effectively carry out cross-cultural verbal communication, so as to improve the pragmatic competence of cross-cultural communication.

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