

# Research on the Generation Model of President Xi Jinping's Ecological Discourse from the Perspective of Transitivity

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**Abstract.** Undeniably, ecological problems have tight contact with the development of human society. China as the largest developing country in the world, its ecological policy asserts great influence and President Xi Jinping's discourses is an important reflection. By conducting a quantitative and qualitative research from the perspective of the Transitivity theory on the generation model of President Xi Jinping's ecological discourses, this paper finds that President Xi Jinping mainly apply material process, relational process and mental process to express four kinds of ecological discourses topics which are problem response, expression of construction goal, construction methods, call for common action, finally realizing the refection of the ecological idea, that is, to achieve the harmonious development of man and nature.

## 1. INTRODUCTION

In 1972, at the United Nations Conference on the Human Environment in Stockholm, Sweden, the international community began to recognize that human development is closely linked to the state of the environment. They also began to pay attention to the fact that with the exploitation and utilization of resources by human beings, the global ecological environment is gradually being destroyed, and countries are also thinking about how to deal with this problem. As a large developing country with vast territory and abundant resources, China's ecological discourse is an important part of the international ecological discourse system, and President Xi Jinping's discourses have certain representation in China's ecological discourse system. In the speech at the International Congress of Applied Linguistics, Halliday(1990)<sup>[1]</sup> argued that linguistic research needs to take on the responsibility of addressing ecological problems. It can be seen that research on the generation model of President Xi Jinping's ecological discourses from the perspective of transitivity has certain theoretical and practical significance. On one hand, it helps Chinese people and international community understand the generation model of ecological discourse in China; on the other hand, it can elaborate the ecological idea of China.

After combing the existing research, two main linguistic perspectives on President Xi Jinping's discourses are conducted: one is from the angle of systemic functional linguistics (Huang Guowen 2017<sup>[2]</sup>; Yan Fei 2018<sup>[3]</sup>; Xi Wang 2021<sup>[4]</sup>) and the other is from the cognitive linguistics (Zhou Zhiyuan & Shao Yanchun 2017<sup>[5]</sup>; Zhou Zhiyuan 2020<sup>[6]</sup>; Zheng 2021<sup>[7]</sup>; Sun Yi 2022<sup>[8]</sup>). They both concentrate on

analyzing internal feature of President Xi Jinping's discourses. Nonetheless, the existing researches mainly conduct qualitative analysis methods while quantitative analysis is insufficient; and research from the aspects of transitivity on President Xi Jinping's discourses still needs to expand.

Transitivity system is the core method for text's realization of the Conceptual Meta-function, one of the three meta-functions in the Systemic-Functional Grammar, founded by Halliday. It provides a practical way for analyzing the organizing model of languages. Therefore, this paper conduct a quantitative and qualitative research from the perspective of the Transitivity theory on the generation model of President Xi Jinping's ecological discourse. It mainly involve the following three research questions: first, what is the ecological idea conveyed in President Xi Jinping's discourses; second, how many types of discourse themes that reflect ecological ideas are included; Third, how ecological discourses are generated through transitivity system.

## 2. THEORETICAL CONSTRUCTION

### 2.1 Transitivity System

Systemic-functional grammar studies the nature, process and application of language from the perspective of language function. It points out that language has three major meta-functions, namely ideational function, interpersonal function and textual function (Halliday, 1994)<sup>[9]</sup>. Among them, ideational function includes experiential function and logical function. The former refers to the environmental factors that reflect what

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happens in objective or subjective world, the people and things involved, and the time and place related to them, while the latter refers to the expression of the logical relationship between two or more units of meaning in language (Hu Zhuanglin, 2005:74)<sup>[10]</sup>. Transitivity system is the main way that the clause realizes the ideational function, and its role is to divide what people see, hear and do in the real world into several kinds of processes. That is, categorize experience through grammar and indicate the "participants" and "circumstantial elements" associated with the various processes. (Hu Zhuanglin, 2005: 75)<sup>[10]</sup>. Halliday (1994)<sup>[9]</sup> divided human experience into six major processes according to transitivity, including material process, mental process, relational process, behavioral process, verbal process and existential process.

## 2.2 The Framework of Analysis

This paper is carried out according to the following analysis framework: (1) corpus processing; (2) co-word analysis; (3) Clustering induction; (4) Transitivity analysis (see Figure 1). Corpus processing refers to the cleaning, noise reduction, word segmentation and keyword extraction of target corpus to provide reliable data for subsequent analysis. Co-word analysis is to determine the relationship between the topics represented in the text and form a semantic network map by using the co-occurrence of high-frequency words in the target corpus. Clustering induction refers to clustering the semantic content of text by calculating the word frequency and the network density in the semantic network map, and then summarizing the different types of discourse topics. Transitivity system (Halliday, 2000) is an important semantic system to express conceptual functions (Halliday, 2000). Transitivity analysis focuses on how to complete the expression of ecological ideas and themes through the selection and combination of clauses in President Xi Jinping's discourses. All in all, this paper analyzes the generation process of ecological ideas, ecological themes and ecological discourse in President Xi Jinping's discourses step by step by establishing a three-dimensional framework of co-word analysis, cluster induction and transitivity analysis.

## 3. RESEARCH DESIGN

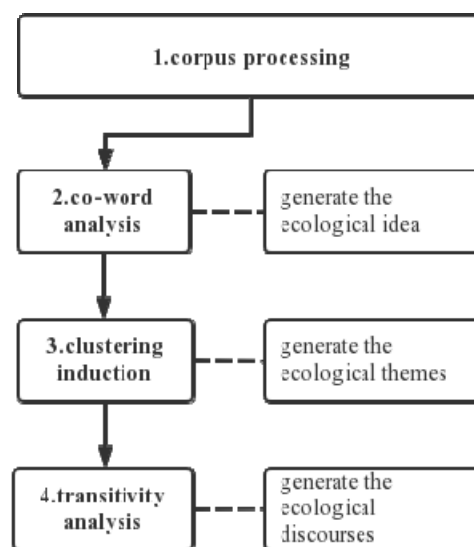
### 3.1 Corpus Selection

Based on the database including a series of speeches by President Xi Jinping on the CPC News Network, the author sorted out President Xi Jinping's replies, speeches and reports on ecology from 2012 to 2023. Total of 60 pieces are found out including 73362 tokens.

### 3.2 The Method of Analyzing

Firstly, the 60 target texts are processed as corpus, including the deletion of discourses that have nothing to do with ecological topics and some symbols that affect

the system processing. Then, the ROSTCM6 content analysis tool developed by the ROST team of Wuhan University was invoked to perform word segmentation and word frequency statistical processing on the target text, and then the 80/20 law method was used to determine the threshold of high-frequency words in the field with reference to the academic community (Liu Yibin et al. 2017: 46)<sup>[11]</sup>; that is, from high to low, words



**Fig. 1.** The framework of analysis

with a cumulative proportion of 20% are selected as high-frequency words in this field, and "push", "promote", "China" and "country" are treated as identity words, and words with a frequency higher than 56 are selected as high-frequency words. Finally, 59 high-frequency words are extracted and the parts of speech classification of high-frequency words is carried out. Furthermore, the processed target corpus is imported into the ROSTCM6 content analysis tool to generate the spatial structure of the semantic network, and the different topic types reflected by the clustering are summarized. Finally, the target corpus is analyzed from the perspective of transitivity system. According to Halliday's (1994)<sup>[9]</sup> classification of transitivity systems, the author used BFSU Qualitative Coder 1.2, a corpus marking tool developed by the corpus team of Beijing Foreign Studies University, to manually label the process types and participants of clauses for two times. The data were marked by the author and a fellow linguistics major respectively, and the similarity rate of the data was 87%, which has high reliability.



ecological civilization construction. The extensive use of the relational process makes many concepts related to the construction of ecological civilization clearly explained, which can make the people more clearly realize the achievements achieved in the construction of ecological civilization, the challenges faced and the direction of future efforts. Mental processes express the sensor's attitude and opinion about things or things that have happened. The application of multiple mental processes help to clarify the issues that the CPC and the people should pay attention to, and emphasizes the importance of correctly understanding the issues related to the construction of ecological civilization.

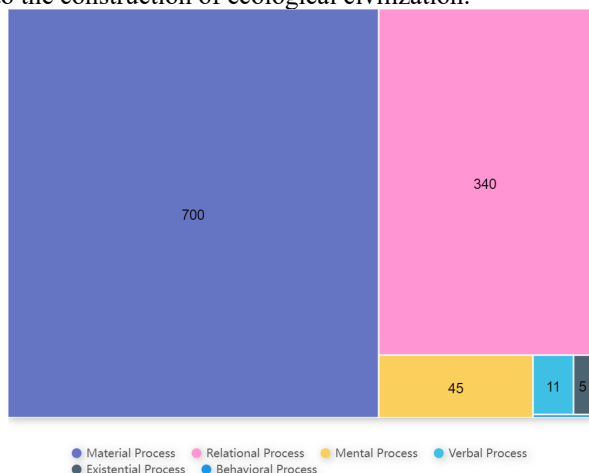


Fig. 3. The distribution characteristics of the transitivity system

## 5. CONCLUSION

By conducting a quantitative and qualitative research from the perspective of the Transitivity theory on the generation model of President Xi Jinping's ecological discourses, this paper finds that President Xi Jinping mainly apply material process, relational process and mental process to express four kinds of ecological discourses topics which are problem response, expression of construction goal, construction methods, call for common action, finally realizing the refection of the ecological idea, that is, to achieve the harmonious development of man and nature.

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