

# Ecological Discourse Analysis from the Perspective of Systemic Functional Linguistics

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**Abstract.** Ecological discourse analysis is an important field in the study of ecolinguistics, which attempts to reveal the relation between human beings and the ecosystem through discourse analysis within an ecological framework. The view of language in systemic functional linguistics provides theoretical perspectives for ecological discourse analysis. The interpretation of ecological discourse through the experiential, interpersonal and textual meaning can provide insights into how discourse plays a role in constructing the relationship between human beings and the ecosystem. With the help of this framework, researchers can effectively and directly reveal the ecological meaning realized through languages, so that they can identify the types of discourses to promote eco-beneficial one, resist eco-destructive ones and refine ambivalent ones.

## 1. Introduction

Since the 21st century, with the emergence of ecological crisis, ecological problems have been widely concerned by the world and have been studied from different perspectives. The emerging interdisciplinary subjects related to ecology also began to rise and develop. Ecolinguistics came into being in this event, which believes that linguists should also contribute to the work of ecological protection. The purpose of Ecological Discourse Analysis is to reveal not only the relationship between language and ecology but also the unreasonable way of thinking and dealing with nature in order to awaken the ecological consciousness of human beings and finally to alleviate and eliminate the ecological crisis. Ecolinguistics is a newly developed subject in recent decades. In the study of Ecolinguistics, the ecological discourse analysis has been a hot topic in recent years (Huang Guowen, Zhao Ruihua 2017). This paper will discuss how to construct the relationship between human and ecosystem by using the theory of systemic functional linguistics, and reveal the ecological concept and ideology behind the ecological discourse.

## 2. The Birth and Development of Ecolinguistics

With the rapid development of human beings, ecology has gradually attracted the attention of all walks of life, and a variety of new disciplines have emerged, such as “ecological sociology”, “ecological economics”, “human ecology”, etc. Since the beginning of this century, the concept of “ecolinguistics” has been gradually introduced into human activities. Ecolinguistics is a new branch of linguistics which combines ecology with linguistics and looks at language from an ecological and sustainable perspective.

In the article by Alexander & Stibbe (2014), they define Ecolinguistics as follows: “Ecolinguistics is the study of the impact of language on the life-sustaining relationships among humans, other organisms and the physical environment. It is normatively orientated towards preserving relationships which sustain.” Ecolinguistics is an interdisciplinary linguistic branch that has been developed in the West in recent decades under the background of the deterioration of global ecological environment and human desire for ecological harmony. It is an interdisciplinary subject which combines ecology and linguistics. Its task is to reveal the interaction between language and environment by studying the relationship between them (Huang, 2016).

At present, there are two main models in the field of ecolinguistics: the “Haugen model” and “Halliday model”. The “Haugen model” sees language as part of a larger ecology based on the mutual interactions among human mind, society, and natural environment (Haugen, 1972). In 1972, Professor Haugen first proposed the concept of “ecology of language” to study the environmental factors that may strengthen or weaken linguistic functions. He defined the concept of “ecology of language” as “interaction between any given language and its environments” (Haugen, 1972). The concept of “ecology of language” has laid a foundation for the study of ecolinguistics. Moreover, it has aroused people’s attention to the relationship between language and environment, and promoted linguists and social scientists to study the interaction between language and language user (Huang, Chen, 2017). Even though it only has a history of only about forty years, it already has a complete theoretical basis and a practical basis for extensive application. It has become an independent discipline focusing on exploring the relationship between language and environment and revealing the ecological rules of language development.

Halliday takes a functional approach to language research to promote the recognition of ecolinguistics among the entire linguistic community. The “Halliday model” refers to the connections between language use and environmental degradation. The “Hallidayan tradition” tends to relate their research to the intersection between ecolinguistics and critical discourse studies. (Stibbe, 2014) For instance, to propose ecolinguistics as a form of critical discourse studies. According to Stibbe (2015), the contemporary media is dominated by discourses promoting consumerism and material growth, which becomes the subject of ecological discourse studies and offers ecolinguistics valuable theoretical contributions to creating ecological awareness. In a similar vein, Brigitte Nerlich (2010, 2014) also addresses the importance of language in the climate change and how metaphors such as “greenhouse effect” and “carbon footprint” involve us to think and interpret climate change from the perspective of risk assessment and management.

There are essential differences between the “Haugen model” and “Halliday model” in ecolinguistics, but both of them embody the ecological principles of “peaceful coexistence”, “interdependence”. Therefore, the two models are complementary rather than mutually exclusive (Fill 2001; Steffensen 2007).

### **3. The Ecological Discourse Analysis**

According to Stibbe (2015), “ecolinguistics analyses language to reveal the stories we live by, judges those stories according to an ecosophy, resists stories which oppose the ecosophy, and contributes to the search for new stories to live by” (p.183).

In other words, ecolinguistics seeks to explore linguistic phenomenon from the perspective of ecological philosophy. Ecolinguistics adopts “ecosophy” as its principle normative framework. According to this definition, in order to fulfill the social responsibility of language researchers, ecolinguists should examine and criticize human’s actions and thoughts based on their own “ecosophy”. Therefore, Arran Stibbe proposes in his famous work of *Ecolinguistics: Language, ecology and the stories we live by* that discourses can be divided into eco-beneficial discourses, eco-ambivalent discourses and eco-destructive discourses (Stibbe, 2015).

Eco-beneficial discourse refers to those texts that are very harmonious with nature. Human beings should have benevolent hearts towards our nature and environment and live in harmony with living places without willful violation of the law of nature. If the discourse delivers such ecological meaning, then this discourse is regarded as eco-beneficial discourse with eco-beneficial ecosophy, which should be encouraged and promoted. If the discourse delivers opposite meanings, then it will be regarded as eco-destructive and should be denied by the readers. If the discourse does not have a clear ecological meaning, then this discourse is labeled as eco-ambivalent and requires further critiques and refinements.

Based on this understanding, Alexander & Stibbe (2014) believed that ecolinguistics should not only study the discourse related to Ecology (such as the discourse on environmental issues, climate issues, economic development, advertising), but also study discourse related to “life sustainability” (the relationship to maintain life). For instance, how the government's discourse affects the media's discourse, the media discourse affects the vast audience and how the advertisement influences and misleads the consumers.

The ecosophies, discourses and behaviors are mutually interacting with each other. To make a harmonious ecology, the discourses perform as a bridging role. As to the destructive discourses, it is necessary to find the linguistic features of them and try to avoid such uses, thus reducing the production of such discourses. As to the ambivalent discourses, they have the potential to become either destructive or beneficial one. The best way is that they can be guided towards the beneficial directions gradually. The fundamental purpose of the present study is to provide resources for researchers to distinguish the three types of discourses efficiently with the well-reasoned ecosophy.

#### **4. Ecological Discourse Analysis from the Perspective of Systemic Functional Linguistics**

Developed by Halliday, "systemic functional grammar (SFG) is a sociologically oriented functional linguistic approach and one of the most influential linguistic theories in the twentieth century with great effect on various disciplines related to language" (Hu, 2011). Halliday proposes that there are three metafunctions: ideational metafunction (experiential & logical), interpersonal metafunction and textual metafunction.

##### **4.1 Ecological Discourse Analysis of Experiential meaning**

Experiential metafunction explores the interaction between language and "the external world-things, events, qualities, etc.-or our internal world-thoughts, beliefs, feelings, etc." (Thompson, 2008). In systemic functional linguistics, human experiences are modeled as events of happening, doing, sensing, saying, being or having, which are all realized through processes with participants directly involved and circumstances that are attendant on it. The Process is the most core element among them.

From an ecolinguistic perspective, the interaction between a human being and other elements in a place can be realized through a process, which can reflect people's ecological preference. People's ecological preference can be reflected in three ways: the emotional attitude towards a place, a cognition of a place and the action people may take to a place. Evaluated through the principles of benevolence and intimacy with nature, these three types of attitudes can be distinguished into beneficial, ambivalent and destructive ones.

If the process brings positive influences on people's conception of human-nature relationship, then the whole clause will be an eco-beneficial process; if the process induces negative results, the whole clause will be an eco-destructive process; if it is difficult to decide whether the clause directly reflects beneficial or destructive meaning, then we will just categorize it as an ambivalent clause.

##### **4.2 Ecological Discourse Analysis of Interpersonal meaning**

Interpersonal function plays an essential part in setting up and maintaining social relationships, and indicates the roles of the participants in the communication (Halliday, 2002). According to Halliday, the interpersonal function is mainly realized through modality. Modality refers to the intermediate degrees between "yes" and "no", such as probability (possible, probable, certain, etc.) and usuality (sometimes, usually, always, etc.). This category of modality is defined as modalization. Modalization expresses the degree of probability and usuality. The scales can be further divided into three levels of degrees, high, medium or low. Therefore, modalization represents people's subjective views towards certain proposition and their realizations are distant with variants of value (high/medium/low) and orientation (subjective/objective and explicit/implicit).

The modality system serves to reflect people's judgment on the status of what is being said. Ecological discourse analysis of interpersonal meaning will discuss how the interpersonal resources in language reflect the people's relationship with places and their attitudes towards the living places. Take the following clauses for example.

e.g. (1). Protecting the environment is every man's responsibility.

(2). Someone say protecting the environment is every man's responsibility.

In above examples, clause (1) describes a definite proposition, or in other words, a "it is" proposition. Clause (2) applies an objective orientation, which means the addresser doesn't want to take credit for the proposition of "Protecting the environment is every man's responsibility". This modality choice suggests that the addresser has doubts about the truth of this proposition. Therefore, the proposition of clause (1) is eco-beneficial and should be advocated. Clause (2) downplays it as a proposition to be questioned and discussed, which in a way reduces its strong assertion in people's mind. Based on these discussions, clause (2) has more eco-destructive than clause (1).

We can find that the use of modality directly represents people's ecological preferences. It is true that if one uses a high modality or an explicit subjective orientation, then the proposition has a much stronger effect. For an eco-beneficial proposition, a high degree of modality would bring out stronger benefits than a low degree of modality. For an eco-destructive proposition, a high degree of modality would bring out stronger destruction than a low degree of modality. Thus, the degree system of modality needs to be expanded to accommodate the ecolinguistic purpose. With this modality system, researchers can directly categorize the negative or positive values of the modality in discourses and can also help produce more positive discourses.

#### **4.3 Ecological Discourse Analysis of Textual meaning**

Text is defined by Halliday & Hassan (1976) as "any passage, spoken or written, of whatever length, that does form a unified whole". Text is a semantic unit that is realized through textual component. By referring to the previous information in the text, the thematic system sets the stage and pushes the entire text forward. Halliday defines Theme as "the point of departure for the clause" (Halliday, 1967). The remainder of the clause that locates after the Theme is called the Rheme by Halliday (2008). The function of theme relies on the ecological effects of the combined meaning of the preceding and following clauses. The textual theme connects a clause to a preceding one and can be realized by conjunctions or conjunctive adjuncts.

From an ecolinguistic perspective, since all linguistic choices are meaningful, the ecological meaning potential of a piece of text relies a lot on the choices of the textual themes. This section will talk about how thematic choices contribute to the construction of ecological information and how they contribute to the establishment of human-nature relationships. Take the following two clauses for example:

e.g.(1). The events of air quality deterioration occur frequently in China. Therefore, air quality prediction has attracted more and more attention.

(2). We must achieve modernization of science and technology; otherwise we will lag behind other nations.

In example (1), the preceding clause represents negative situation of the environment and the following clause describes the reactions towards it. This causal relationship is eco-beneficial. In example (2), the preceding clause describes the condition of achieving modernization and the following clause describes the potential result if the condition is not met. As a result, this clause becomes eco-destructive because of the destructive condition.

Therefore, if the researcher wants to discover the ecological function of the textual theme of a clause, he firstly needs to start analyzing the ecological function of its preceding clauses. If the preceding clause represents eco-beneficial information, the choice of a reinforcing type of textual theme will introduce another clause that is with similar ecological values. Thus, this textual theme will become an

eco-beneficial one. If the preceding clauses deliver eco-destructive information, then a similar choice of textual theme will become an eco-destructive one. If the preceding clauses represent eco-beneficial information, the choice of a modifying textual theme brings in contrary information instead. For example, if the textual theme is a contrastive theme, then the information after this theme will become eco-destructive information. In this case, the contrastive theme plays a negative role for the ecology. If the textual theme is an alternative theme and the alternative clause is another eco-beneficial clause, then the alternative theme is also an eco-beneficial resource.

To sum up, the textual theme of a clause functions as the linking device to the previous information, which plays an important role in the construing of ecological meaning. Some types of textual theme work to reinforce the ecological meaning of the preceding clauses and some of the theme work to reduce the ecological meaning of the preceding clauses.

## 5 Conclusion

Ecolinguistics studies how language influences the relationship between human beings and other organisms and physical environments in favor of life continuity (Alexander & Stibbe, 2014). Based on ecolinguistics, ecological discourse analysis focuses on the ecological consciousness and ecological concept constructed when language represents ecological and environmental problems, especially the attitude of human towards other species and the relationship between human and ecological environment. The ultimate goal of Ecological Discourse Analysis is to improve people's awareness of ecological protection and build a harmonious ecological relationship between human and nature. The ecological discourse analysis is mainly under the framework of systemic functional grammar combined with Stibbe's division of ecological discourses into eco-beneficial discourses, eco-ambivalent discourses and eco-destructive discourses. If the discourse delivers eco-beneficial information that works towards the survival and well-being of humans and other species in the future, then this discourse should be promoted and its linguistic pattern should be followed by other people. If the discourse delivers eco-destructive information that destroys the system we live by, then the discourse should be criticized and eliminated. If the discourse bears information representing an ambivalent attitude towards the human-nature relationship, it is necessary to consider the discourse in a grander context and find out ways of diverting the text into an eco-beneficial one. In conclusion, discourse analysis based on systemic functional linguistics is helpful to explain how ecological discourse constructs the relationship between human and ecosystem, and to reveal the ecological concept and ideology behind ecological discourse. Hopefully this paper will exert a profound influence on the future horizons of ecolinguistics with the increasing consensus of viewing the discipline as a life science in achieving ecological harmony.

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