

An Ecological Discourse Analysis of TED Talks

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ABSTRACT

Sylvia A. Earle is a renowned oceanographer, explorer, writer, and lecturer. In this paper, her TED speech is analyzed from the perspective of ecological discourse analysis. By analyzing the distribution features of transitivity processes, mood and modality system, the paper explores the implied ecological ideology in the discourse.

KEYWORDS

TED talks; Ecological discourse analysis; Transitivity processes; Mood and modality system

1 Introduction

Marine pollution is an increasingly serious environmental issue. Intensive marine development has led to a decline in the resource, poor near-shore environmental quality, and degradation of marine and coastal ecosystems. Land-based pollution is a prominent issue, with marine debris pollution gradually becoming apparent and marine ecological disasters such as red tides and green tides occurring frequently. The issue of marine pollution has attracted the attention of scientists around the world. Sylvia A. Earle is a renowned oceanographer, explorer, writer, and lecturer. She has dedicated her career to establishing “Places of Hope” around the world—areas that are critical to the health of the oceans—with the aim of protecting marine ecosystems and raising public awareness of marine conservation. In 2009, Earle was awarded the TED Prize. Standing on the TED stage, she hopes to inspire the public to become passionate about marine conservation and work together to save the oceans. In this paper, her speech “My wish: Protect our oceans” is analyzed from the perspective of ecological discourse analysis.

2 A brief introduction of ecological discourse analysis

The ecological discourse analysis was created by Halliday who put forward that the language system itself is ecologically destructive ^[1]. Chinese scholars have achieved fruitful results in the study of EDA from different dimensions and angles. HE Wei and LI Shu-jing constructed an international ecological discourse analysis mode of news language. This mode provides an approach to studies of international relations from the perspective of ecolinguistics ^[2]. Wu Jun and Li Ya analyzed the “Joint Declaration” signed by China and Russia from the perspective of transitivity processes and participant roles ^[3]. Hong Jie and Yuan Zhoumin analyzed the rhetorical features, transitivity processes, and ecological value orientations of public signs ^[4].

3 Transitivity system of ecological discourse analysis

EDA refers to the analysis of discourses from an ecolinguistic perspective based on ecosophy. According to Sttibe, discourses can be categorized as beneficial, ambivalent or destructive depending on their ecological orientation ^[5]. Beneficial discourses actively encourage environmental protection, whereas destructive discourses may lead to resource depletion and environmental destruction. Ambivalent discourses contain aspects that are consistent with ecosophy, but also aspects that are destructive from an ecological ideological perspective.

The transitivity system provides an operational analytical framework for EDA. There are six types of process: material, mental, relational, behavioral, verbal and existential processes ^[6]. Material processes are processes of action or doing. These processes are realized by verbs, while the participants, including the Actor and the Goal, are realized by nominal groups. Mental processes are related to mental reactions, such as cognition, affection and perception. The third type of process is behavioral process, meaning physiological and psychological behaviour. A verbal process is a process of saying. A relational process is a process of being. The final type of process is the existential process, involving one participant: the Existent. According to He Wei, from the perspective of eco-linguistics, the participants of processes can be divided into two categories: individual and group, animate and inanimate. Besides, the processes can be extended from the perspective of ecology and be further divided into eco-beneficial, eco-destructive and eco-ambivalent ones ^[7].

4 Mood and modality system for ecological discourse analysis

Mood is an important means of constructing interpersonal meaning. In English, typical moods in clauses include the declarative, interrogative and imperative moods. These mood types reflect the different social roles and power relations of the speakers involved.

Modality is used to discuss the probability, frequency, obligation or inclination of proposals. Modal operators can be categorized according to their degree of certainty or usuality. Those with a high degree include 'must', 'certainly', 'always', etc. Those with a median degree include 'may', 'probably' and 'usually'. Those with a low degree include 'might', 'possibly', 'sometimes', etc. According to Hei Wei and Zhang Ruijie, different modal values represent that the information in the clause or discourse is negotiable. When a discourse with a high modal value embodies an ecological protective view, the modality used in the discourse is eco-beneficial. In contrast, when a discourse with an affirmative and high modal value represents an ecologically destructive view, the modality used in the discourse is eco-destructive^[8].

5 Ecological discourse analysis of TED talks based on transitivity system

The speech analyzed in this paper was given by famous US ocean researcher Sylvia Earle. In the speech, she emphasized the importance of marine conservation, calling on people to use every available means, such as films, expeditions, the internet and new submarines, to win the public support for the cause.

Data analysis reveals that the discourse comprises five processes: material, mental, relational, verbal, and existential. A total of 255 transitivity processes were identified in the discourse. The material process accounts for the largest proportion of these, with 152 processes making up 60% of the total. The relational process is second, with 46 instances accounting for 18%. Third is the mental process with 28 instances, accounting for 11%. The existential process comes next, with 19 instances accounting for 7%. Finally, there are 10 verbal processes, accounting for 4%.

From an ecological perspective, these processes can be further divided into eco-beneficial, eco-destructive, and eco-ambivalent ones. Of all the transitivity process types, the beneficial process accounts for the highest proportion, with 115 processes accounting for 45% of the total. This is followed by the ambivalent process, with 87 processes accounting for 34% of the total. The smallest proportion is the destructive process, accounting for around 21%. Some examples are analyzed below.

(1) With every drop of water you drink, every breath you take, you're connected to the sea.

(2) Yet we have this idea, we humans, that the Earth, all of it — the oceans, the skies — are so vast and so resilient it doesn't matter what we do to it. That may have been true 10,000 years ago, and maybe even 1,000 years ago, but in the last 100, especially in the last 50, we've drawn down the assets, the air, the water, the wildlife that make our lives possible.

(3) I suppose you want to know what my wish is. I wish you would use all means at your disposal — films, expeditions, the web, new submarines and campaign to ignite public support for a global network of marine protected areas — hope spots large enough save and restore the ocean, the blue heart of the planet.

(4) The poet Auden said, "Thousands have lived without love; none without water." 97% of Earth's water is ocean. No blue, no green.

Example (1) is a series of clauses that describe the importance of the ocean for humans. There are three processes: "drinking", "taking" and "being connected". The semantic configuration formed by these processes is "actor + action process + goal". These clauses illustrate that the water we drink and the air we breathe are ultimately provided and regulated by the ocean. The ocean is essential to our survival. The transitivity processes in these clauses are beneficial processes.

Example (2) shows that humans believe the ocean's resources are inexhaustible. They have neglected to protect it. There are six processes: "have; are; do; have been; draw down;" and "make". The semantic configurations formed by "have; draw down; make" are "actor + action process + goal" while the semantic configurations formed by "are" and "have been" are "carrier+ relational process + attribute". These clauses reveal that people believe marine ecosystems have a strong ability to repair themselves. However, humans take from the ocean without restraint and ignore the fact that marine ecosystems need time to recover. These clauses convey negative ecological values and contribute to destructive material processes.

Example (3) involves both mental and material processes. The mental process reflects the speaker's cognition of external things. The semantic configuration of the mental process is "senser + mental process (assumed) + phenomenon". In Example (3), the speaker used the mental process of "wish" alongside the material processes of "use, ignite, save and restore" to call on the international community to take stronger action to protect the oceans. These clauses promote a positive ecological view, and are beneficial processes.

Example (4) involves three types of processes: relational, verbal and existential. The semantic configuration of the verbal process is "sayer + verbal process + verbiage". By quoting the poet, the speaker emphasized the importance of

water to humanity. “No blue, no green” is an elliptical sentence that embodies an existential process. The existential process reveals that there is something. It involves one participant: the Existent. In this clause, the Existent is represented by “blue” and “green”, meaning the ocean and the earth. These clauses reflect the interdependent relationship between the ocean and the land. They promote a positive ecological outlook and are beneficial processes.

6 Ecological discourse analysis of TED talks based on mood and modality

Data analysis shows that speech mainly involves three mood structures: the declarative, interrogative and imperative moods. The declarative mood represents the largest proportion, accounting for approximately 92%. In contrast, interrogatives account for around 5%, while imperatives represent around 3%.

From a systemic functional linguistic perspective, modality can be expressed by modal verbs and modal adjuncts. The speech involves three main types of modal element. Those with a median degree account for approximately 65% of the total, while those with a high degree represent 13%, and modal expressions with a low degree account for 22%. The following examples are drawn from the collected data.

(1) We need to learn everything we can about it and do everything we can to take care of it. 97% of Earth’s water is ocean. No blue, no green.

(2) Protected areas provide hope that the creatures of Ed Wilson’s dream of an encyclopedia of life, or the census of marine life, will live not just as a list, a photograph, or a paragraph.

(3) to ignite public support, save and restore the ocean, the blue heart of the planet. How much? Some say 10%, some say 30%. You decide: how much of your heart do you want to protect? Whatever it is, a fraction of one percent is not enough.

(4) If you think the ocean isn’t important, imagine Earth without it. Mars comes to mind. No ocean, no life support system.

(5) But business as usual means that in 50 years, there may be no coral reefs — and no commercial fishing, because the fish will simply be gone. Imagine the ocean without fish. Imagine what that means to our life support system.

Example (5) highlights the urgency of protecting the oceans, which cover the vast majority of the Earth’s surface and are vital for the survival of life on land. The mood structure in example (5) is a declarative mood, providing authentic information. It represents the highest level of mood value. The modal operator “need to” in example (5) has a high modal value, expressing a stronger sense of obligation and determination. Its use implies that humans must learn as much as possible about the ocean and do everything in their power to protect marine resources and the environment. The modal operators in the sentence align with ecosophy and promote ecological values.

In example (6), the speaker uses declarative clauses to express her views and spark the interest and resonance of the audience. The speaker wants to convey the idea that humans must act early to preserve the health and biodiversity of marine ecosystems. The modal operator “will” in example (6) has a median value, expressing a strong sense of possibility. Its use implies that, with protection, various species in the future will not merely exist as abstract and static records. Instead, they will survive and thrive as living, breathing organisms. The ecological values of these mood and modal elements are beneficial because they uphold the ecosophy.

Example (7) has a combination of declarative and interrogative clauses. The speaker adopts the interrogative mood to fulfill the interactive function of speech discourse. The speaker wants to use the question to ask the audience to think about the importance of ocean protection. It attracts the audience and reduces the distance between the speaker and listeners. The question emphasizes the urgency of protecting and restoring the ocean, as it is as important as the human heart.

Example (8) contains both declarative and imperative clauses. The imperative mood expresses an interpersonal meaning which is primarily command. By using the imperative mood, the speaker is reminding the audience that without oceans, the Earth would be as lifeless as Mars. “No ocean, no life support system” uses the declarative mood. This implies that oceans are of great significance to the survival and development of human society. The mood operators in the sentence align with ecosophy and promote ecological values.

In example (9), the modal operator “will” has a median value, indicating a strong possibility in the future. It implies that if people continue to engage in large-scale traditional ocean fishing practices, marine fishery resources will become depleted. The modal operator “may be” has a low value. It shows that as a scientist, the speaker is being cautious about her predictions for the future. In example (9), the speaker adopts imperative clauses to urge people to consider the dire consequences that the loss of marine resources would have on human society.

7 Conclusion

The speech conveys ecological meaning through linguistic features such as transitivity processes, mood and modality. Analyzing discourses from an EDA perspective can help people understand the important role that protecting the marine ecological environment plays in ensuring national ecological security, promoting sustainable marine development and achieving harmony between humans and the sea.

Funding

The paper is a part of achievements of Jiangsu Province Higher Education Philosophy and Social Science Research Project. (NO: 2022SJYB1958)

References

- [1] He Wei. "Ecological Discourse Analysis: A further Development of Halliday Model". *Foreign Language Education*, Vol. 42, No. 1, PP. 20-27, 2021.
- [2] HE Wei, LI Shu-jing. "International Ecological Discourse Analysis Model for News Genre". *Foreign Languages Bimonthly*, No. 4, PP. 44-54, 2025.
- [3] Wu Jun, Li Ya. "International Eco-discourse Analysis on the Basis of Transitivity System". *Foreign Language Research*, No. 2, PP. 34-42, 2025.
- [4] Hong Jie, Yuan Zhoumin. "Transitivity Analysis of Public Signs for Environmental Protection: From the Perspective of Ecological Discourse Analysis". *Foreign Languages in China*, Vol. 21, No. 6, PP. 35-41, 2024.
- [5] Stibbe, A. *Ecolinguistics: Language, Ecology and the Stories We Live by*, London and New York: Routledge, 2015, PP. 24-33.
- [6] Suzanne Eggins. *An Introduction to Systemic Functional Linguistics*, New York and London: Continuum, 2004, PP. 215-239.
- [7] He Wei, Wei Rong. "An analytical framework of transitivity for international ecological discourse". *Modern Foreign Languages*, Vol. 40, No. 5, PP. 597-607, 2017.
- [8] He Wei, Zhang Ruijie. "An Ecological Analytical Framework for Discourse". *Foreign Languages in China*, Vol. 14, No. 5, PP. 56-64, 2017.