

An Analysis of Attitude Resources in the Reading Materials of New Horizons College English (4th Edition) from the Perspective of Eco-linguistics

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Abstract—This study examines the attitude resources in six ecologically-themed texts from New Horizons College English (4th Edition) from the ecological discourse perspective. Using the UAM Corpus Tool software for annotation and statistical analysis, combined with qualitative and quantitative methods, the study investigated the distribution of attitude resources and the ecological orientation in the texts. Two findings emerged in the results. In terms of the distribution of attitudes, a relatively balanced distribution was observed among affect, judgement, and appreciation, with each subsystem emphasizing certain constituent within itself: the highest proportion of insecurity/security in affect resources reflects editors' concerns about ecological crises; negative evaluations in judgement resources reflect critical attitude toward behaviors that harm nature; and negative evaluations in appreciation resources express editors' dissatisfaction with the current ecological situation. In terms of ecological orientation, the three types of attitudes were relatively evenly distributed, with negative resources being used most. In practical implications drawn from the study, it is proposed that textbook compilers should enhance ecological awareness, increase the proportion of texts with ecological beneficial attitudes, and enhance the topical coverage of ecological topics, so as to improve the guidance and enlightening nature of the textbooks in ecological teaching.



Keywords— *Ecolinguistics, Attitude resources, Ecological orientation, College English textbooks, Discourse analysis*

I. INTRODUCTION

The ecological environment is closely related to every individual. A sound ecological environment plays a vital role in human health and well-being, green economic development, and the sustainable development of society. The Guidelines for the Ideological and Political Development of Higher Education Curricula (2020), issued by the Ministry of Education of China, explicitly emphasize the importance and necessity of integrating ideological and political education into university curricula. The guidelines require discipline-specific courses to fully explore their distinctive characteristics and incorporate ideological and political elements into

teaching, thereby helping students develop sound ecological values and ultimately cultivate a mature and comprehensive ecological philosophy.

Against the backdrop of an increasingly severe global ecological crisis, Ecolinguistics has emerged as a new interdisciplinary field. Research on language from an ecological perspective generally follows two major paradigms, namely the Haugen model and the Halliday model ^[1]. Within the Hallidayan paradigm, ecological discourse analysis (EDA) occupies a central position, referring to the ecological analysis of all forms of discourse within an ecological framework ^[2]. This approach aims to expose discourse practices that

contribute to ecological degradation and social injustice, uncover the ecological ideologies embedded in discourse, and further identify discourse resources that promote ecological sustainability. In doing so, it seeks to guide human beings toward interacting with nature in a harmonious manner through appropriate attitudes and responsible practices^[3-4]. Guided by an ecological philosophy, discourse can be classified into three categories: ecologically beneficial, ecologically ambivalent, and ecologically destructive^{[5]30}.

The linguistic foundations of ecological discourse analysis are primarily rooted in Systemic Functional Linguistics (SFL) and Cognitive Linguistics. Studies adopting the former framework have mainly focused on the transitivity system, mood system, modality system, grammatical metaphor, and context^[6]. Existing studies on the ecological analysis of teaching materials have predominantly employed the transitivity system as their theoretical framework^[7-8]. By examining the selection and representation of ecological participants and ecological processes in discourse, these studies reveal textbook compilers' perceptions, understandings, and conceptualizations of the ecological world, thereby identifying the ecological orientation embedded in teaching materials. Appraisal Theory has recently become another important theoretical framework in ecological discourse analysis. It focuses on revealing speakers' emotions, attitudes, and evaluative judgments toward the ecological world, all of which are essential for uncovering the ecological values underlying discourse^[9]. Although Appraisal Theory has been widely applied to fields such as news reporting and political discourse^[10], its application to educational discourse remains relatively underexplored.

Drawing upon He and Ma's ecological discourse analysis model, the present study investigates six ecology-related reading texts selected from the four volumes of *New Horizons College English (Fourth Edition) Reading and Writing*. Using UAM Corpus Tool, the study annotates and quantifies attitude resources in the selected texts. By combining qualitative and quantitative approaches, it examines the distribution of attitude resources in natural ecological discourse and explores the ecological orientations they convey. The findings are expected to provide insights for both English language teaching and the compilation of college English textbooks.

Specifically, this study seeks to answer the following research questions:

RQ1: What are the distributional characteristics of attitude resources in the reading texts of the textbook?

RQ2: What ecological orientations are conveyed through the attitude resources in these reading texts?

RQ3: What aspects should be considered when ecological issues are addressed in the compilation of college English textbooks?

II. THEORETICAL FRAMEWORK

Appraisal Theory comprises three interrelated systems: Attitude, Engagement, and Graduation. Among these, the Attitude system constitutes the core component, while engagement and graduation serve as supplementary resources for analysis. The Attitude system focuses on language users' emotional responses and evaluative judgments toward behaviors, texts/processes, and phenomena, and therefore serves as the primary theoretical framework of the present study. Drawing on perspectives from psychology, ethics, and aesthetics, Martin and White classify attitude into three subsystems: affect, judgement, and appreciation. Affect concerns individuals' emotional experiences; judgement evaluates human behavior in terms of social norms and ethics; and appreciation concerns evaluations of phenomena, objects, or semiotic products^[11]. As shown in Figure 1, resources within all three subsystems may carry either positive or negative evaluative meanings.

From the perspective of Ecolinguistics, He and Ma further developed the appraisal framework proposed by Martin^[12] and his colleagues by incorporating both the value subject/object relationship into the analytical model. On this basis, they proposed a more operational appraisal framework for ecological discourse analysis based on the Attitude system, as shown in Figure 2.

Following He and Ma's ecological appraisal framework, the present study treats all selected texts as examples of natural ecological discourse. Accordingly, human beings and nature are adopted as the two reference points for identifying the sources of affect, the standards of judgement, and the objects of appreciation. During corpus annotation, attitude resources were identified on the basis of contextual information, the explicit or implicit meanings of evaluative expressions, and the corresponding sources of affect, standards of judgement, and objects of appreciation. Subsequently, the ecological orientation of each attitude resource was determined by examining whether the discourse conforms to the ecological philosophy of harmonious coexistence and diversity. Specifically, when a speaker expresses a positive attitude toward entities or behaviors that conform to this ecological philosophy, or a negative attitude toward those that violate it, the attitude is classified as an ecologically beneficial orientation, as it contributes to the healthy development of the ecosystem. Conversely, when a speaker evaluates ecologically responsible entities or behaviors negatively,

or expresses positive evaluations of ecologically destructive ones, the attitude is categorized as an ecologically destructive orientation. Attitudes that neither support nor contradict the ecological philosophy are classified as an ecologically ambivalent orientation [6].

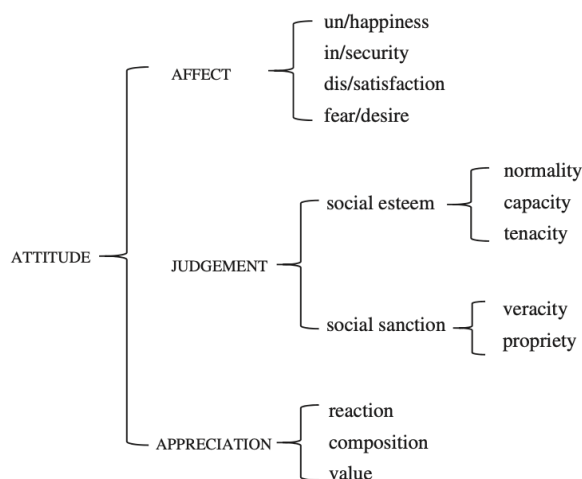


Fig.1. Classification of the Attitude System [13]

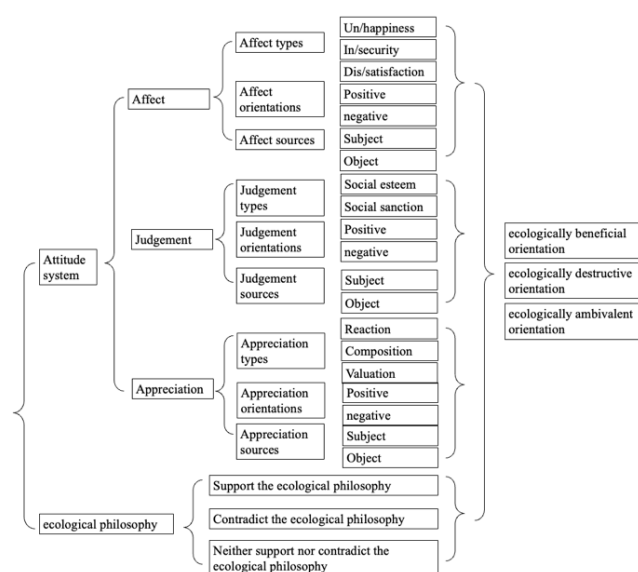


Fig.2. He and Ma's Ecological Discourse Analysis Model [6]

III. RESEARCH DESIGN

The present study focuses on natural ecological discourse. Six ecology-related reading texts were selected from the four volumes of New Horizons College English (Fourth Edition): Reading and Writing. Specifically, the corpus consists of Texts A, B, and C from Unit 4 ("Man and Nature") and Unit 6 ("Energy and Food Crises") in Book 4.

A specialized corpus was subsequently constructed using these six texts. For corpus analysis, UAM Corpus Tool was employed as the primary analytical instrument. The corpus was imported into the software, and the Manual Annotation function was used to annotate attitude resources systematically. Multiple rounds of verification were conducted to ensure the accuracy and consistency of the annotation. After the annotation process was completed, the corpus data were processed to generate statistical results. Finally, representative discourse examples were selected for qualitative analysis and discussion in order to uncover the distributional patterns and underlying characteristics of attitude resources in the natural ecological discourse presented in the textbook.

IV. RESULTS AND DISCUSSION

4.1 Distribution and Analysis of Attitude Resources

The present study investigates the use and distribution of attitude resources in six ecology-related reading texts selected from the textbook. The overall distribution of attitude resources is presented in Table 1.

Table 1. Overall Distribution of Attitude Resources

Attitude Resources	Frequency	Percentage
Affect	43	28.29%
Judgement	37	24.34%
Appreciation	72	47.37%
Total	152	100.00%

As shown in Table 1, the three types of attitude resources are relatively evenly distributed across the selected texts. Among them, appreciation resources account for the largest proportion (47.37%), followed by affect resources (28.29%) and judgement resources (24.34%). Since each type of attitude resource serves a distinct discourse function and conveys different ecological orientations and ecological values, the following sections examine the distribution and functions of the three subsystems of the Attitude system in greater detail.

4.1.1 Affect

Affect resources express people's emotional responses to entities, events, and situations. According to Martin and White (2005), affect can be classified into four subcategories: un/happiness, in/security, dis/satisfaction, and dis/inclination. Since no instances of dis/satisfaction were identified in the corpus, this category is excluded from the analysis. The distribution of the remaining affect resources is presented in Table 2. The three subcategories of affect resources are unevenly distributed. In/security is

the most frequent category, accounting for 17 instances (39.53%), followed by un/happiness with 15 instances (34.88%). Dis/inclination is the least frequent category, comprising 11 instances (25.58%).

Table 2. Distribution of Affect Resources

Affect Resources	Polarity	Frequency	Total	Percentage	Subtotal
Un/Happiness	Unhappiness	9	15	20.93%	34.88%
	Happiness	6		13.95%	
In/Security	Insecurity	4	17	9.30%	39.53%
	Security	13		30.23%	
Dis/Inclination	Disinclination	0	11	0.00%	25.58%
	Inclination	11		25.58%	
Total		43		100.00%	

More specifically, within the in/security category, security resources outnumber insecurity resources. This finding suggests that, while the texts portray environments characterized by safety and confidence, they also encourage readers to pay greater attention to ecological issues and environmental protection. In contrast, unhappiness resources occur more frequently than happiness resources, reflecting the authors' negative emotional responses to the current state of the natural environment. As for dis/inclination, only inclination resources are identified, indicating that the texts consistently express human willingness and determination to protect the ecological environment.

4.1.1.1 Un/Happiness

Happiness resources primarily depict desirable ecological environments. For instance, in Example (1), the expression *free from* conveys liberation from urban pollution and artificial constraints while expressing a longing for the authenticity and joy of nature. By contrast, unhappiness resources mainly describe environmental degradation and energy-related problems. In Example (2), the metaphor *prisons* vividly portrays the alienation of human living spaces brought about by industrialization. Likewise, the word *pleasure* in Example (3) evokes the harmonious coexistence that humans once enjoyed with nature, implying that such happiness has since disappeared. This expression reflects nostalgia for an original ecological state while simultaneously expressing regret and criticism of humanity's destruction of that harmonious relationship.

Example (1): *Let's sit down here, all of us, on the open prairie, where we can't see a high way or a fence, free from the debris of the city.* (Text B, Unit 4, Book 4)

Example (2): *You live in prisons which you have built for yourselves, calling them homes, offices, or factories.* (Text B, Unit 4, Book 4)

Example (3): *However, you don't have that pleasure of coexistence with nature anymore.* (Text B, Unit 4, Book 4)

4.1.1.2 In/Security

Across the corpus, security resources occur more frequently than insecurity resources, suggesting that the texts seek not only to emphasize ecological risks but also to convey confidence in addressing environmental challenges. In Example (4), the phrase *in jeopardy* highlights the severe threat posed by ecological degradation, while *human-driven* explicitly identifies human activities as the primary cause of the crisis, implicitly criticizing development models that prioritize economic growth over environmental sustainability. In Example (5), the expression *intermittent uncertainty* emphasizes the persistent and unpredictable nature of ecological crises, thereby conveying a strong sense of insecurity. By comparison, security resources are relatively limited. As illustrated in Example (6), expressions such as *sufficiently high* and *stay strong* focus mainly on short-term economic indicators. Although these expressions appear to acknowledge the effectiveness of technological or economic solutions, they also imply underlying concerns about long-term ecological sustainability.

Example (4): *However, the future of life on our planet—and thus our own—is in jeopardy due to human-driven ecological change.* (Text A, Unit 4, Book 4)

Example (5): *Intermittent uncertainty in food markets will animate people to act when they would otherwise remain calm.* (Text B, Unit 6, Book 4)

Example (6): *Stocks of wheat are at sufficiently high levels, and the turnout from some big producers is still expected to stay strong.* (Text B, Unit 6, Book 4)

4.1.1.3 Dis/Inclination

Only inclination resources are identified in the corpus,

with the majority occurring in the unit "Man and Nature," accounting for 63.6% of all inclination resources. These expressions primarily promote concrete actions for environmental protection by employing highly urgent language to encourage readers to take immediate action.

In Example (7), the phrase *no delay* conveys a strong sense of urgency, framing environmental protection as a moral obligation that requires immediate action. Similarly, Example (8) contrasts *small steps* with *giant leaps*, while the phrase *dire need* further reinforces the urgency of environmental action. Together, these expressions suggest the author's dissatisfaction with the current scale of environmental efforts and advocate a shift from incremental actions to more systematic and transformative measures.

Example (7): *For the sake of the survival and health of all species on earth, including our human race, we need to act*

with no delay. (Text A, Unit 4, Book 4)

Example (8): *People have started to protect the environment in small steps, but there is a dire need to take giant leaps.* (Text A, Unit 4, Book 4)

4.1.2 Judgement

Judgement resources evaluate human attitudes and behaviors and are generally classified into two categories: social esteem and social sanction. Social esteem comprises three subcategories, namely normality, capacity, and tenacity, while social sanction includes propriety and veracity, which concern moral and ethical standards. Since no instances of normality or veracity were identified in the corpus, these two subcategories are excluded from the analysis.

Table 3. Distribution of Judgement Resources

Judgement Resources	Polarity	Frequency	Total	Percentage	Subtotal
Capacity	Negative	2	6	4.65%	13.95%
	Positive	4		9.30%	
Tenacity	Negative	0	4	0.00%	9.30%
	Positive	4		9.30%	
Propriety	Negative	17	27	39.53%	62.79%
	Positive	10		23.26%	
Total		37		100.00%	

As shown in Table 3, a total of 37 judgement resources were identified, and their distribution is highly uneven. Propriety is the most frequent subtype, accounting for 27 instances (62.79%), followed by capacity, with 6 instances (13.95%), and tenacity, with 4 instances (9.30%). Notably, most propriety resources occur in Text B, Unit 6 ("A Worldwide Food Crisis?") and Text A, Unit 4 ("Save the Earth, Save Life").

Overall, positive judgement resources, which evaluate desirable behaviors, occur 18 times (48.65%), whereas negative judgement resources, which criticize human behaviors and activities, occur slightly more frequently, with 19 instances (51.35%). This finding indicates that the reading texts tend to adopt a more critical stance toward human actions in relation to ecological issues.

4.1.2.1 Capacity

Capacity resources evaluate whether an individual or entity possesses the ability or competence to perform a particular action. Positive capacity resources mainly highlight human capabilities and achievements. For example, in Example (9), the expression *have*

mastered emphasizes Chinese solar thermal power companies' command of core technologies for constructing large-scale molten-salt tower power plants. This expression not only recognizes the technological competence of Chinese enterprises but also suggests that they meet international standards and are becoming increasingly competitive in the global market.

By contrast, negative capacity resources describe the loss or impairment of abilities resulting from human intervention in nature. In Example (10), the word *impaired* indicates that humans have transformed certain species of wild birds into domesticated chickens by damaging their ability to fly. This description implicitly conveys the author's negative evaluation of human interference with and alteration of the natural world.

Example (9): *China's solar thermal power generation companies have mastered the core technology of building large-scale molten salt tower thermal power plants, and are ready to go global.* (Text C, Unit 6, Book 4)

Example (10): *You have also made some types of wild birds into chickens—creatures with wings so impaired that*

they cannot fly. (Text B, Unit 4, Book 4)

4.1.2.2 Tenacity

Tenacity resources evaluate determination, commitment, and perseverance in carrying out particular actions. Among the four instances identified in the corpus, three occur in Text C of the unit "Man and Nature." Examples (11), (12), and (13) respectively highlight China's long-term commitment to combating desertification, Wang Wenbiao's sustained dedication to desert control, and the Chinese government's continuous efforts to restore desert ecosystems. These examples collectively express positive evaluations of perseverance in ecological conservation.

Example (11): *In China's persistent efforts to fight against desertification, Wang Wenbiao, better known as the "Son of the Desert", is playing an exemplary role.* (Text C, Unit 4, Book 4)

Example (12): *However, for the past 30 years, as chairman of the Elion Resources Group, Wang has dedicated his life and work to the battle against desertification.* (Text C, Unit 4, Book 4)

Example (13): *In 1999, thanks to government efforts to tame the desert, a 115 km highway through the middle of the desert opened to traffic.* (Text C, Unit 4, Book 4)

4.1.2.3 Propriety

Propriety resources evaluate behaviors in terms of moral and ethical standards. They constitute not only the largest subtype of judgement resources but also one of the most prominent categories within the entire Attitude system. Negative propriety resources are concentrated primarily in the unit "Man and Nature," where they depict various forms of environmental destruction caused by human activities. Such behaviors are portrayed as violating ecological norms and therefore deserving criticism.

For instance, in Examples (14) and (15), the expressions *overreached* and *ruthlessly* characterize humanity's excessive exploitation and ruthless consumption of natural resources. These evaluations criticize the relentless pursuit of economic prosperity at the expense of the environment, conveying strong moral condemnation of environmentally destructive behavior. Likewise, the term *overreaction* in Example (15) refers to market responses that exceed reasonable limits. The metaphor comparing such behavior to *a pistol to the head* emphasizes the potentially catastrophic consequences of irrational market actions, such as panic buying and food hoarding.

Example (14): *Humanity has overreached in its pursuit of affluence and used the earth's resources ruthlessly.* (Text A, Unit 6, Book 4)

Example (15): *In other words, the overreaction of market players will act like a pistol to the head, creating a crisis when none should exist.* (Text B, Unit 6, Book 4)

By contrast, positive propriety resources advocate environmentally responsible behaviors and emphasize the necessity of appropriate institutional regulation. In Example (16), the adjective *stringent* expresses support for stricter environmental laws and regulations designed to deter environmentally harmful activities and ensure compliance by both businesses and individuals. Similarly, in Example (17), the expression *clear-eyed* encourages policymakers and society to adopt a rational and forward-looking approach to food production. This recommendation aligns with the principles of food security while highlighting the importance of long-term planning and preparedness.

Example (16): *More stringent laws and rules must be formulated to deter actions that are harmful to the environment, and to ensure business and individuals comply with required standards.* (Text A, Unit 4, Book 4)

Example (17): *While we may not be seeing all the symptoms of a food shortage syndrome yet, we must be clear-eyed in our ongoing support for food production.* (Text A, Unit 6, Book 4)

4.1.3.1 Reaction

Reaction resources express people's immediate responses to external phenomena. In the corpus, they are predominantly used to describe the adverse consequences of environmental degradation.

For example, in Example (18), the expressions *force many people to migrate* and *faced poverty and hardship* portray the direct impact of desert expansion on human life. While some residents are forced to leave their homes, those who remain must endure poverty and hardship. These successive negative evaluations vividly illustrate the profound social consequences of ecological deterioration.

Similarly, in Example (19), the expressions *enormous structural problems* and *great imbalance* characterize the agricultural sector as suffering from severe structural deficiencies that have resulted in a serious imbalance between supply and demand. These evaluations emphasize the gravity of the problem and reinforce readers' perception of its urgency.

Example (18): *The constant expansion of the desert used to force many people to migrate, while those who stayed faced poverty and hardship.* (Text C, Unit 4, Book 4)

Example (19): *There are enormous structural problems with the agriculture industry, which has caused great imbalance between supply and demand.* (Text B, Unit 6, Book 4)

4.1.3.2 Composition

Composition is the least frequently occurring subtype of appreciation resources in the corpus. Interestingly, all identified instances are positive, although their evaluative meanings are somewhat implicit.

In Example (20), the adjective *sophisticated* denotes technological complexity, precision, and advanced integration. With reference to technologies such as biofuel-powered automobiles, the term highlights sophisticated technological design that contributes to more efficient resource utilization. Consequently, it indirectly conveys a positive evaluation of technologies that promote energy conservation and environmental sustainability.

Example (20): *They desire not only the basic essentials of life, but also more sophisticated technologies like automobiles that use biofuels.* (Text A, Unit 6, Book 4)

4.1.3.3 Valuation

Valuation resources constitute the largest category within the Appreciation system, with positive and negative evaluations occurring in relatively balanced proportions. Positive valuation resources primarily emphasize the importance and benefits of environmental protection.

For instance, in Example (21), the expression *ever-growing* modifies *human population*, highlighting the continuous growth of the global population. Although this expression appears to describe an objective fact, it also implicitly conveys concern about the increasing demand for natural resources resulting from population growth.

Likewise, the adjective *fundamental* in Example (22) evaluates environmental protection as not merely desirable but indispensable to human survival, emphasizing its essential ecological and social value.

Example (21): *After all, we need to use the land and oceans to feed the ever-growing human population.* (Text A, Unit 4, Book 4)

Example (22): *Protecting the environment is not a luxury but fundamental to us all.* (Text A, Unit 4, Book 4)

By contrast, the unit "Energy and Food Crises" contains 19 negative valuation resources, accounting for 86.36% of all negative valuation resources identified in the corpus. Most of these evaluations concern the high economic costs associated with alternative energy sources, suggesting that the author repeatedly emphasizes their limited cost-effectiveness.

For example, in Example (23), the adjective *cost-prohibitive* highlights the economic limitations of solar technology, indicating that although solar panels are suitable for limited applications, their large-scale adoption remains prohibitively expensive. Similarly, Example

(24) uses the expression *costly drawbacks* to evaluate biomass energy as economically inefficient, implying that it is currently incapable of replacing fossil fuels on a large scale.

In contrast, Example (25) describes petroleum and natural gas as *versatile and high-quality* energy sources. This positive evaluation emphasizes their practical value and broad applicability, standing in sharp contrast to the preceding negative assessments of renewable energy technologies. It also reflects the continued dominance of fossil fuels within the current global energy system.

Example (23): *It would be cost-prohibitive to take the intricate gadgets of solar energy from the fringe of "green" society to the mainstream for major world consumption.* (Text A, Unit 6, Book 4)

Example (24): *So, for the time being, biomass has too many costly drawbacks to be a workable alternative to fossil fuels.* (Text A, Unit 6, Book 4)

Example (25): *Petroleum and natural gas are exploited as versatile and high-quality energy products.* (Text A, Unit 6, Book 4)

4.2 Distribution and Analysis of Ecological Orientations

As shown in Table 5, the reading texts under the theme of "Man and Nature" exhibit three ecological orientations. Among them, the ecologically destructive orientation occurs most frequently, with 37 instances (35.58%), followed by the ecologically beneficial orientation, with 35 instances (33.65%). The ecologically ambivalent orientation is the least frequent, accounting for 32 instances (30.77%). Ecologically beneficial orientations are typically realized through both positive and negative attitude resources, whereas ecologically destructive orientations are predominantly realized through negative attitude resources. Ecologically ambivalent orientations, by contrast, are generally conveyed through attitude resources that present ecological issues objectively without making explicit ecological evaluations.

Table 5. Distribution of Ecological Orientations

Ecological Orientation		Frequency	Percentage
Ecologically beneficial orientation	beneficial	35	33.65%
Ecologically destructive orientation	destructive	37	35.58%
Ecologically ambivalent orientation	ambivalent	32	30.77%
Total		104	100.00%

4.2.1 Ecologically Beneficial Orientation

Ecologically beneficial orientations are conveyed in both direct and indirect ways. The direct approach either explicitly praises desirable ecological environments or directly encourages readers to protect the environment. The indirect approach, by contrast, promotes positive ecological values through criticism of environmentally harmful conditions or behaviors.

In the unit "Man and Nature," whose central theme is returning to nature, the author opens the text with Example (26), encouraging readers to establish direct physical and emotional connections with the natural world. By urging people to free themselves from the constraints of industrialized life and reconnect with nature through firsthand experience, the discourse represents a typical ecologically beneficial orientation. It enables readers to envision a harmonious ecological relationship between humans and nature and, in doing so, implicitly guides them toward developing sound ecological values. Direct appeals such as Example (27) are even more common throughout the corpus, explicitly expressing support for environmental protection and encouraging environmentally responsible behavior.

Example (26): *Let's sit down here, all of us, on the open prairie, where we can't see a highway or a fence, free from the debris of the city. Let's have no blankets to sit on, but let our bodies converge with the earth, the surrounding trees and shrubs. Let us have the vegetation for a mattress, experiencing its texture, its sharpness, and its softness. Let us become like stones, plants, and trees. Let us be animals, think and feel like animals.* (Text B, Unit 4, Book 4)

Example (27): *Protecting the environment is not a luxury but fundamental to us all. The task is monumental and everyone has to play a part.* (Text B, Unit 4, Book 4)

Indirect expressions of ecologically beneficial orientation are even more prevalent across the corpus. In Example (28), also taken from "Man and Nature," the author describes people living in enclosed buildings as "cage dwellers" and criticizes their alienation from nature through dependence on artificial environments, such as air-conditioned buildings and electronic entertainment. By portraying this lifestyle as undesirable, the author implicitly advocates a return to nature and promotes an environmentally friendly way of living. Such indirect expressions encourage readers to reflect critically on their relationship with nature, thereby fostering more sustainable lifestyles and contributing to the healthy development of the ecosystem.

Example (28): *You're cage dwellers, residing in boxes which shut out the hot humidity of summer and the chill of winter, living inside a body that no longer has a scent. You're hearing the noise from the hi-fi instead of listening to the sounds of nature. You're watching actors on TV having a make-believe experience when you no longer experience anything for yourself. That's your way. It's no good.* (Text B, Unit 4, Book 4)

4.2.2 Ecologically Destructive Orientation

Ecologically destructive orientations are typically expressed through negative representations of the current state of environmental protection. In Example (29), the author adopts an energy-oriented perspective to criticize the long-term neglect of agriculture, particularly the failure to provide the resources and technologies required to sustain agricultural development. Such discourse is clearly inconsistent with the ecological philosophy of harmonious coexistence and diversity.

Similarly, in Example (30), the author adopts perspectives centered on both nature and energy, pointing out that more than half of the Earth's habitable land has been devoted to food production and that global fish stocks have been severely overexploited. These descriptions highlight human exploitation of natural resources and are therefore incompatible with the ecological principle of harmonious co-existence.

Example (29): *Food production is suffering from decades of neglect of agriculture, a period when the sector was starved of the resources and technology it needed to keep up with rising world demand.* (Text B, Unit 6, Book 4)

Example (30): *Over half of the planet's habitable surface is now used to produce food. The ocean has fared no better, with a huge number of the world's fish stocks having been overfished.* (Text A, Unit 4, Book 4)

4.2.3 Ecologically Ambivalent Orientation

Discourse exhibiting an ecologically ambivalent orientation primarily focuses on describing objective facts and informing readers about current ecological issues without explicitly evaluating ecological behaviors.

In Example (31), the author objectively traces the transformation of food crises from local events into global concerns, while also describing how droughts have driven up wheat prices and intensified public fears of another worldwide food crisis. Likewise, Example (32) presents an objective comparison between renewable energy and fossil fuels in terms of their economic and environmental costs. Such factual analyses provide useful information for energy-related decision-making but do not involve explicit value judgments regarding ecological behaviors.

Example (31): *Historically, only local governments worried about a widespread food crisis, but today, a sharp spike in food prices and the resulting food crisis can quickly become a worldwide phenomenon. In the past, droughts along the equator and in countries which account for a large portion of world wheat exports caused wheat prices to surge. Many worry the tight supply today will cause inflationary prices. They fear the skyrocketing grain costs which once harshly struck the world's poor and led to food riots will recur.* (Text B, Unit 6, Book 4)

Example (32): *Although renewable energies are not yet economically competitive with fossil fuels, their prices become more attractive when compared with the health and environmental costs associated with burning coal and oil.* (Text A, Unit 6, Book 4)

V. CONCLUSION

From the perspective of Ecolinguistics, this study applied He and Ma (2020)'s ecological discourse analysis framework to analyze the attitude resources in six ecology-related reading texts from New Horizons College English (Fourth Edition): Reading and Writing. Using UAM CorpusTool and a combination of qualitative and quantitative methods, the study examined the distribution of attitude resources and the ecological orientations reflected in the texts.

The results showed that attitude resources are relatively evenly distributed among the three subsystems of affect, judgement, and appreciation, although each displays different characteristics. In/security resources are the most frequent within the affect system, reflecting concern about ecological crises. In the judgement system, negative evaluations of human behavior predominate, particularly those criticizing environmentally destructive actions. Within the appreciation system, negative appreciation resources occur more frequently than positive ones, indicating dissatisfaction with the current ecological situation. Regarding ecological orientation, the three orientations are relatively balanced, with ecologically destructive orientations occurring slightly more frequently. Notably, negative attitude resources are widely used in both ecologically beneficial and ecologically ambivalent orientations, suggesting that the textbook emphasizes the seriousness of current ecological problems and conveys concern about the state of the natural environment.

The findings also provide implications for the compilation of college English textbooks. First, textbook developers should strengthen ecological awareness by incorporating more discourse with ecologically beneficial orientations to help students develop sound ecological values. Second, textbooks should include a wider range of ecological

topics, such as biodiversity conservation, climate change, and sustainable development, to enhance students' ecological literacy. Finally, greater attention should be paid to balancing attitude resources and reducing ecologically ambivalent discourse, so that ecological values are conveyed more explicitly.

This study has several limitations. The corpus consists of only six ecology-related reading texts from one textbook series, which limits the generalizability of the findings. In addition, the study focuses only on the Attitude system and does not examine the roles of the Engagement and Graduation systems. Future research could address these aspects to provide a more comprehensive understanding of ecological discourse.

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