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Theoretical framework for ecological discourse analysis: A summary of *New Developments of Ecological Discourse Analysis*

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Abstract: This article is a summary of the newly published book *New Developments of Ecological Discourse Analysis*. On the premise of reviewing the overall development of ecolinguistics, this book firstly develops the Hallidayan approach and defines Ecological Discourse Analysis as an independent paradigm. Based on the guiding principle of the ecosophy, “Diversity and Harmony, Interaction and Co-existence”, it then expands and extends the experiential, interpersonal, textual, and logical metafunctions within the framework of Systemic Functional Linguistics. Consequently, it constructs the theoretical systems of Ecological Discourse Analysis from the perspective of ecolinguistics: the transitivity system, mood system, appraisal system, Theme system, cohesion and coherence system, and logical system. This book presents readers with a comprehensive and applicable theoretical framework for Ecological Discourse Analysis, that is, “ecological grammar”.

Keywords: Ecological Discourse Analysis; ecological grammar; ecosophy; Systemic Functional Linguistics

1 Introduction

Emerged as part of a general “ecological turn” within the Humanities and Social Sciences (Stibbe 2015: 7), ecolinguistics studies the relationship between language and environment, and their mutual influencing mechanism. There are two major approaches in this field: one is the study of the effect of the environment on language, which starts with Haugen’s (1972) “The Ecology of Language”, known as “language ecology” or “Haugenian approach”; and the other is that of the effect of language on the environment, marked by Halliday’s (1990) seminal work “New Ways of Meaning: The Challenges to Applied Linguistics”, which is called as “ecological

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linguistics” or “Hallidayan approach” (Fill 2001). The latter has gradually developed into a different picture after the ensuing research: at the beginning, this approach paid attention to the unecological property of the lexico-grammar in the English language system; then, linguists began to focus on the language use, that is, the ecological property/orientation in discourse. These studies mainly apply the approaches of Critical Discourse Analysis (hereafter CDA) and Positive Discourse Analysis (hereafter PDA) to analyze the ecological discourse (e.g. environmental discourse) from an ecolinguistic perspective; more recently, Professor He Wei and her team have further developed the Hallidayan approach and defined Ecological Discourse Analysis (hereafter EDA) as an independent paradigm (He 2021). EDA is an ecology-oriented analysis of discourse from the perspective of linguistics based on an ecosophy (He and Wei 2018b: 66). Drawing from function-orientated linguistic theories, it is designed to expose the effects of language use on the environment – eco-beneficial, eco-destructive, and eco-ambivalent – to enhance people’s ecological awareness, improve their ecological behaviors, and finally promote the harmonious development of the ecosystem.

The purpose of the book, *New Developments of Ecological Discourse Analysis*, is to put forward an ecosophy and a comprehensive theoretical framework for EDA and to employ abundant examples to testify its proposed framework. This article is more a book summary than a book review, which aims to summarize the major content of this book and present the analytical framework for EDA by means of illustrations and exemplifications.

2 Organization of the book

The book consists of nine chapters in total. Chapter 1 reviews the overall development process of two approaches in ecolinguistics, namely, the Haugenian approach and the Hallidayan approach. Through the examination of the Hallidayan approach and explanation of its relationship with EDA, Chapter 2 specifically scrutinizes the connotation of EDA in the different stages, including the four aspects: the perspective of observation, the basic hypothesis, the conceptual system, and the research methods. In this chapter, it is demonstrated that EDA has been grown into an independent paradigm. On this basis, Chapter 3 proposes and elaborates the philosophical guiding principle of this paradigm, that is, the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. In Chapters 4–7, this book respectively extends the experiential, interpersonal, textual, and logical metafunctions within the framework of systemic functional linguistics (hereafter SFL) and constructs the theoretical systems of EDA from the perspective of ecolinguistics: the transitivity system, mood system, appraisal system, Theme system,

cohesion and coherence system, logical system, etc. This book also provides many examples to testify those systems in various kinds of discourse. Chapter 8 incorporates the theoretical framework based on the previous chapters and selects some complete texts to present the applying mechanism of EDA. The last chapter illuminates the characteristics of EDA in comparison with CDA, PDA, and multimodal discourse analysis (hereafter MDA), and proposes the prospects of applying EDA in discourse studies.

3 Major content of the book

On the whole, this book presents readers with a comprehensive theoretical framework for EDA based on SFL theory. The process of extending this theory from an ecolinguistic angle actually builds up an applicable “ecological grammar”, which is similar to the construction of “visual grammar” on the basis of the three metafunctions for the paradigm of MDA (see Kress and van Leeuwen 1996). The following shows some highlights of the book, including the ecosophy, the ecologically extended systems, and some examples.

3.1 The guiding principle of EDA: Ecosophy

Chapter 3 introduces the ecosophy of this book, “Diversity and Harmony, Interaction and Co-existence” (He and Liu 2020; He and Wei 2018a; Wei 2021). The proposal of any ecosophy should take into consideration the ecology theories and the categories of the ecosystem. Ecosophy is the criterion for the judgment of the ecological property and orientation of discourse. It plays a directional guiding role in people’s mind, discourse, and ecological behavior; in turn, they can also influence ecosophy, so together they form a cycle, as shown in Figure 1 (He et al. 2021: 54).

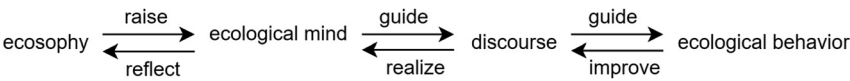


Figure 1: The cycle between ecosophy and ecological behavior (He et al. 2021: 54).

The criterion for judging the ecological orientation of discourse is the relationship between the ecosophy and the ecological property embedded in discourse. When the ecological property in discourse follows the ecosophy, it is eco-beneficial; otherwise, it is eco-destructive; when the ecological property does not follow or violate the ecosophy, it is eco-ambivalent or neutral.

Based on the ecology principles, this book combines the traditional Chinese culture and philosophy, including Confucianism, Daoism, and Mohism, together with modern Chinese diplomatic ideas to construct the ecosophy of “Diversity and Harmony, Interaction and Co-existence” (He and Wei 2018a; Wei 2021). This ecosophy accords with the characteristics of an ideal applying mechanism of both natural and social ecosystems. From the angle of the composition and operation mechanism of the ecosystem, it is indeed a general and applicable ecosophy, and an integration of all the other views (He and Liu 2020).

The EDA paradigm has three clear analytic procedures: the first step is to decide on an analytic framework for the study under the guidance of an ecosophy and in combination with a proper linguistic theory; the second step is to find the linguistic features by analyzing the discourse, and to reveal the ecological orientation and the hidden reasons; and the final step is to consider ecological measures, including proposing some suggestions to guide people’s ecological behaviors and subsequently promote the equilibrium of the ecosystem (He 2021: 25; Stibbe 2015).

3.2 The theoretical framework for EDA: Experiential metafunction

Chapter 4 introduces the experiential metafunction from the perspective of ecolinguistics. Within the SFL theory, the experiential metafunction refers to the representation of our experience of the world (Halliday and Matthiessen 2014).

From the perspective of ecolinguistics, world experience concerns the relationship between human and nature, human and society, and also among the elements within nature and society. The representation of our experience is influenced by different ecological elements, thus being presented with various ecological properties. To judge ecological property of experiential meaning in discourse through transitivity analysis is an effective way to raise people’s ecological mind and further improve their behavior (Zhang and He 2020). The overview of potential cases of ecological properties is displayed in Figure 2 (He et al. 2021: 59), and the judgement of ecological property in discourse and the operational mechanism of transitivity system, in Figure 3 (He et al. 2021: 59).

As shown in Figure 2, the judging criterion is “one-vote veto” in EDA: according to the lowest ecological property in discourse.¹ That is, only when the process type, participant role (hereafter PR), and circumstantial role (hereafter CR) are all eco-beneficial, the discourse is of eco-beneficial orientation; conversely, if

¹ Here the order of ecological property is (from high to low): beneficial – ambivalent – destructive.

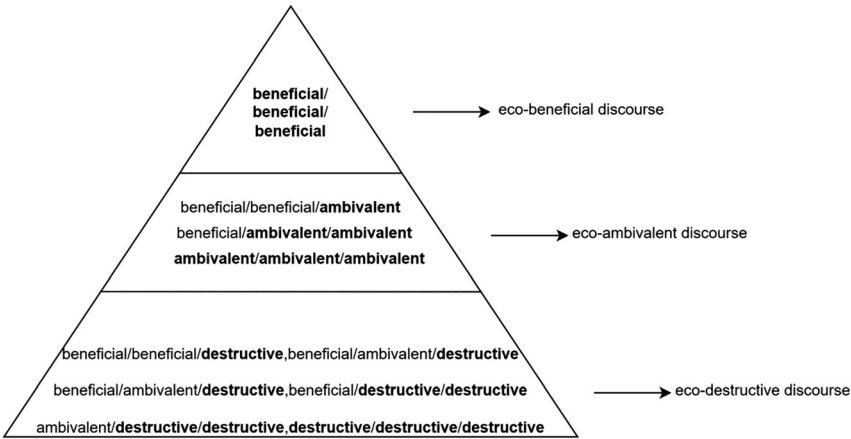


Figure 2: Overview of potential cases of ecological properties (He et al. 2021: 59).

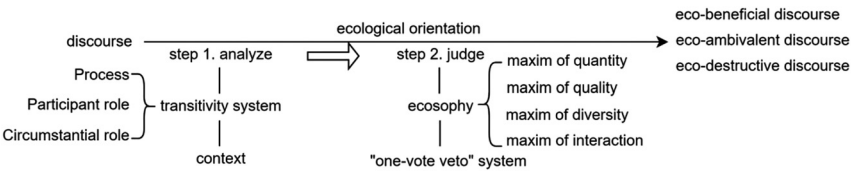


Figure 3: Judgement of ecological property and mechanism of transitivity system (He et al. 2021: 59).

one of them is eco-destructive or eco-ambivalent, then the discourse is, respectively, of eco-destructive or eco-ambivalent orientation. As illustrated in Figure 3, the mechanism of transitivity system is operated in EDA as follows: combined with the relevant context and culture, the EDA of transitivity system should examine whether the process type, PR, and CR are all correspondent with the ecosophy of “Diversity and Harmony, Interaction and Co-existence” as well as the four eco-sophy maxims (maxim of quantity, quality, diversity, and interaction), thus managing to find out the ecological orientation of discourse: eco-beneficial, eco-destructive, or eco-ambivalent.

According to the basic level theory, our experience of the world can be divided into three levels: the superordinate level, the basic level, and the subordinate level. At the superordinate level, there are the domains of the physical and social world, the mental world, and the abstract world (He Forthcoming). Our world of experience can be distinguished into a number of domains, which is represented by the transitivity system at the level of language (He Forthcoming). The transitivity

system construes the world of experience into a manageable set of process types (Halliday and Matthiessen 2014): the domain of the physical and social world is sorted into four sub-categories: doing, happening, creating, and behaving; that of the mental world is distinguished into five sub-categories: emotion, desideration, perception, cognition, and communication; that of the abstract world is differentiated into seven sub-categories: attribution, identification, location, direction, possession, correlation, and existence (He Forthcoming).

From a cognitive functional perspective, the categories of experience are distinguished into two modes – autonomous and influenced. Autonomous experience refers to the experience occurring on their own, whereas influenced experience refers to the experience that is brought about by some other objects or events (He Forthcoming). The two modes form a conjunctive relationship with those 16 types above. In addition, the world experience can also be differentiated into two types: natural and social. The categorization of experience of the world is concluded as Figure 4 shows (He et al. 2021: 61).

The process type is the core part of the transitivity system, which this book redefines from an ecolinguistic perspective. There is a mapping relationship between the experience of the world and the transitivity system, as shown in Figure 5 (He et al. 2021: 62). At the superordinate level, the experience of physical and social world, mental world, and abstract world are represented respectively by action, mental, and relational processes.

Meanwhile, there is also a one-to-one correspondence between the basic level experience and the process types of the same level, as shown in Figure 6 (He et al. 2021: 63).

Apart from the process type, PR is another essential component of the transitivity system. Figure 7 is the ecological PR system, which combines semantic functional types of PRs in different transitivity processes with the ecological properties (He et al. 2021: 64–65). According to the semantic functions, the PRs are related to the process types. From the ecolinguistic perspective, in terms of the ecosystem category, the PRs can be distinguished into natural PRs (the elements in the nature, such as rivers and trees) and social PRs (the elements in human society, such as national policy and culture). In terms of the number and quality of PR, it can be respectively categorized into individual and group, and life and lifeless; then, it can be further divided into human and non-human to foreground the effect of human consciousness and cognition. Finally, in terms of the perspective of the observer, PR can be sorted into autonomous and influential types to distinguish the responsibility bearer of the process.

CR is the last key part of the transitivity system, which supplements the information provided by the process and PRs to completely present the ecological property in experiential meaning. Figure 8 is concerned with the types of CRs

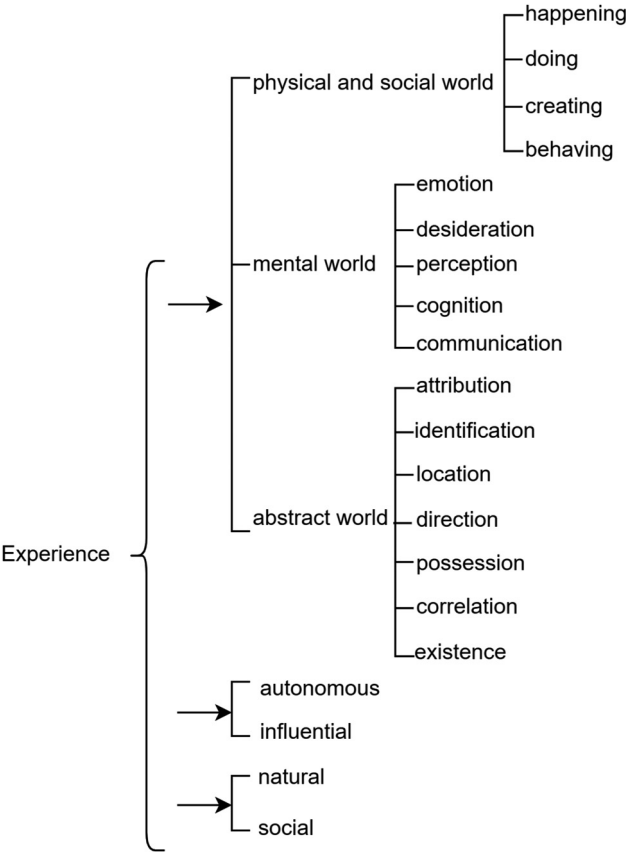


Figure 4: Categorization of experience of the world (He et al. 2021: 61).²

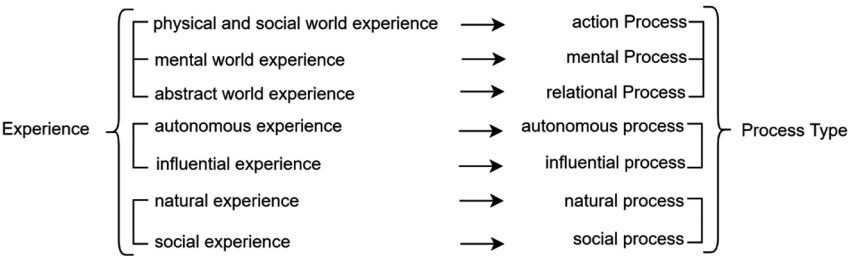


Figure 5: The mapping relationship between experience and process type (He et al. 2021: 62).

² In Figures 4–18 and Figures 24–26, the curly brackets stand for ‘and’ and the square brackets stand for ‘or’.

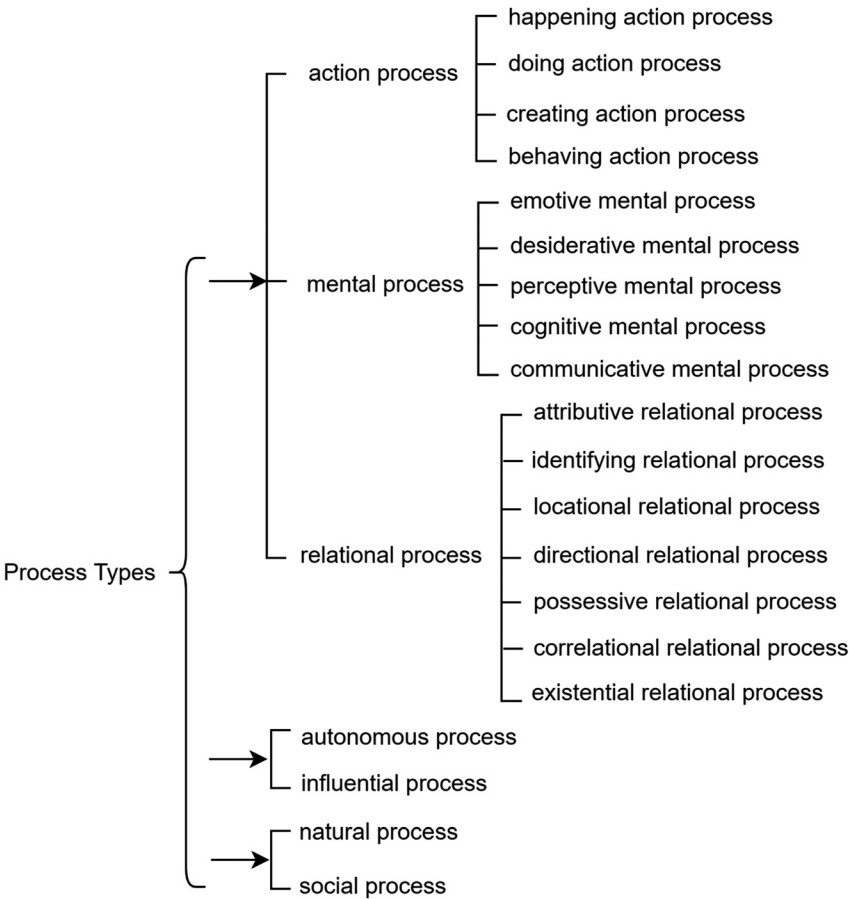


Figure 6: Process types (He et al. 2021: 63).

(He et al. 2021: 66). According to the categorization of Adjunct (He and Wang 2019: 129), the CRs are divided into four kinds in terms of the functions of semantic categories: experiential, interpersonal, textual, and logical. The experiential type is sorted into time, location, manner, state, comparison, and degree; the interpersonal type is classified into validity, affect, politeness, confirmation-seeking tag, view-point, and manner of speaking; the textual type is categorized into inferential, respect, and addition; the logical type includes cause, purpose, condition, concession, adversative, and increase/decrease. Similarly, in terms of the discourse type, there are natural and social types of CRs.

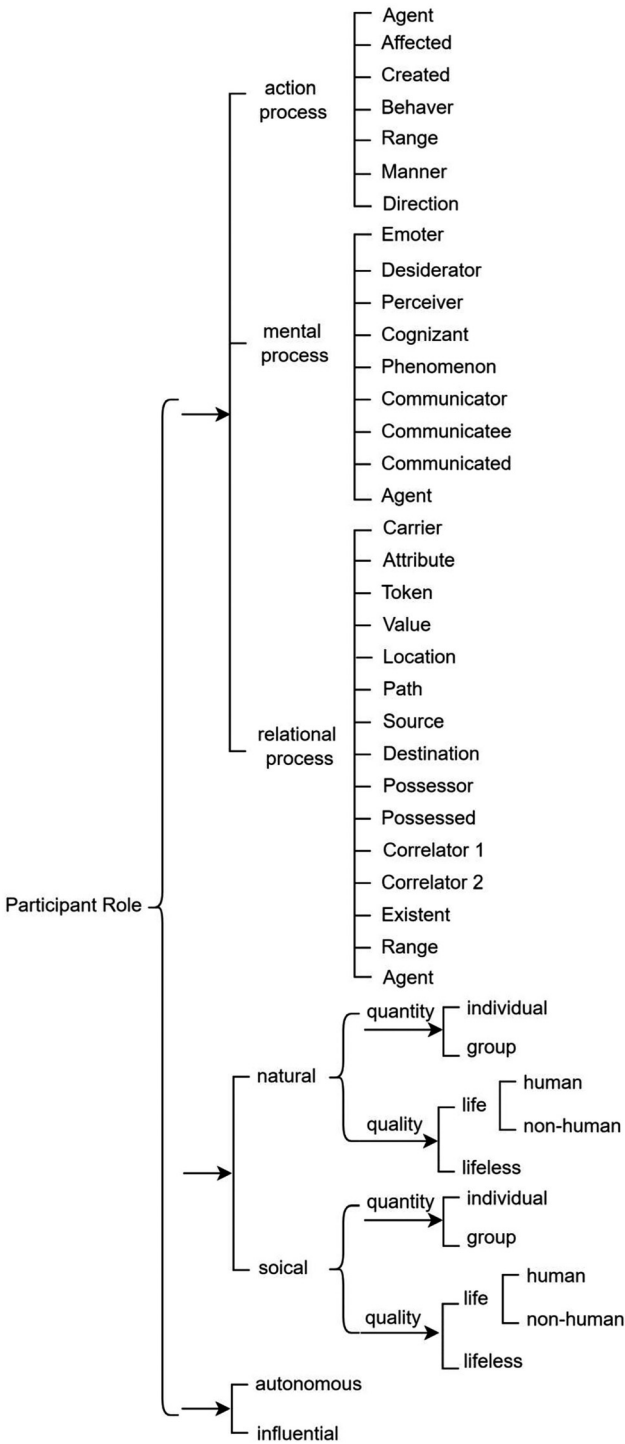


Figure 7: Ecological Participant Role system (He et al. 2021: 64–65).

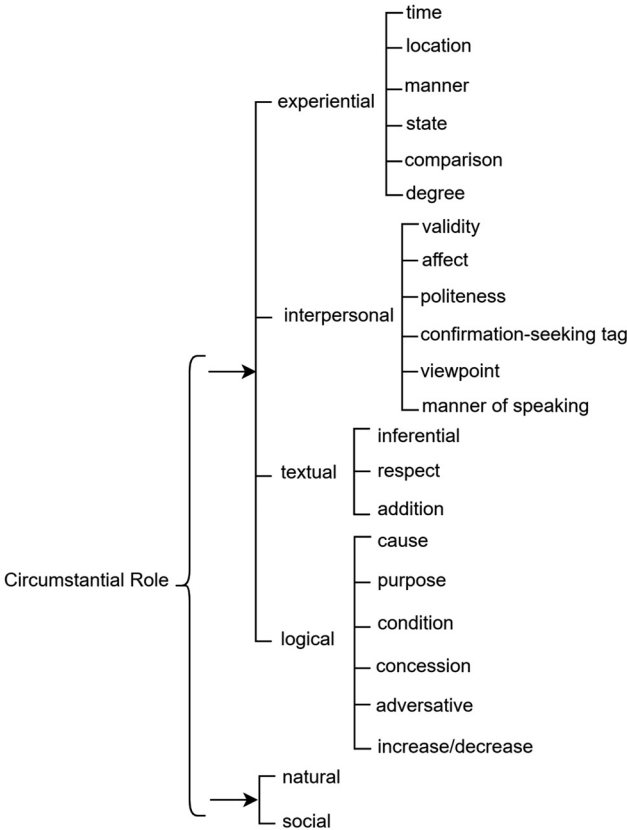


Figure 8: Circumstantial Role types (He et al. 2021: 66).

This book illustrates and exemplifies all the 16 process types in the basic level and 47 different semantic configurations in the subordinate level. The following takes a natural ecosystem discourse in the book as an example (He et al. 2021: 72).

- (1) A research by the Thai Ministry of Natural Resources and Environment found that rubbish thrown into the sea (Ag) can travel (Pro) all over the world (CR). (“Sustaining Mother Earth for Future Generations”, *China Daily*, May 25, 2019)³

Example (1) is selected from the news report concerning sustaining development. The underlined clause shows that “rubbish thrown into the sea” is the Agent of

³ http://www.chinadaily.com.cn/kindle/2019-05/25/content_37473836.htm (accessed December 10, 2021).

doing action process (“travel”). In this instance, the lifeless PR (“rubbish”) becomes the doer of the action, so the real doer is tactfully hidden, that is, the persons who unrestrictedly throw rubbish into the sea, thus making the factual situation more obscure. Meanwhile, the location CR (“all over the world”) emphasizes the extensive range of risks of marine waste, which corroborates the hazard of the Agent. Therefore, this example is of eco-destructive property for hardly arousing people’s consciousness of environmental protection.

3.3 The theoretical framework for EDA: Interpersonal metafunction

Chapter 5 introduces the interpersonal metafunction from the perspective of ecolinguistics and extends the mood, modality, and appraisal systems within the framework of SFL. The interpersonal metafunction is a function to establish and maintain appropriate personal and social links with other people (Halliday and Matthiessen 2014). The interpersonal metafunction mainly comprises the mood system and appraisal system: the former is composed of the mood type system and the mood force system (including internal mood force and external mood force), and the latter consists of the attitude system, engagement system, and graduation system (He et al. Forthcoming; Martin and White 2005).

From the angle of ecolinguistics, the interpersonal metafunction can represent the identity, status, relationship, attitude, and judgment of speech roles (including life and lifeless speakers) in the ecosystem. The ecological property of interpersonal meaning in discourse should be combined with the experiential meaning, and based on the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. The following is the figure of the mood ecological element system (He et al. 2021: 140).

As shown in Figure 9, the EDA of mood types should take into consideration the ecological property of speech roles, motivations, and targets, based on the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. The factors that affect the ecological property of mood are called the mood ecological elements, including the context, speech motivation, speech functions, and roles. According to the judging criterion, the mood can be beneficial only if the speech roles, targets, and motivations are all eco-beneficial. Considering the generality and particularity of different mood types, the following specifically elaborates the declarative, interrogative, and imperative mood systems from an ecolinguistic perspective.

The ecological declarative mood system (Figure 10) is extended from three dimensions, apart from ensuring the discourse type and combining the ecosophy

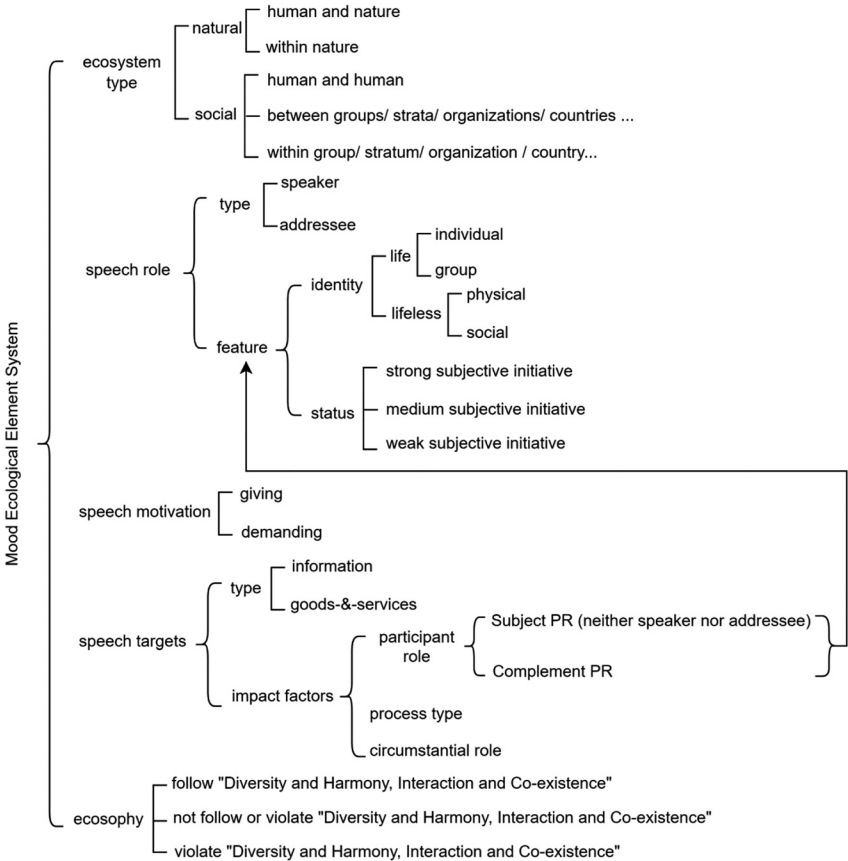


Figure 9: Mood ecological element system (He et al. 2021: 140).

of “Diversity and Harmony, Interaction and Co-existence” (He et al. 2021: 146). The first is the ecological property of information giver and information receiver, which mainly refers to the influence of their identities and status on the interpersonal relationship between speech roles. The second is the ecological property of Subject PR and Complement PR, namely, that of “information”. The third is the ecological property of the speech motivation of information giver. When the speaker follows this ecosophy, he/she generally gives information in a positive and directive way to the addressee to promote the development of interpersonal relationships and ecosystem; then, the declarative mood is eco-beneficial. When the speaker violates this ecosophy, he/she usually indirectly gives negative information to destroy the interpersonal relationship and exert a detrimental effect on the ecosystem; then,

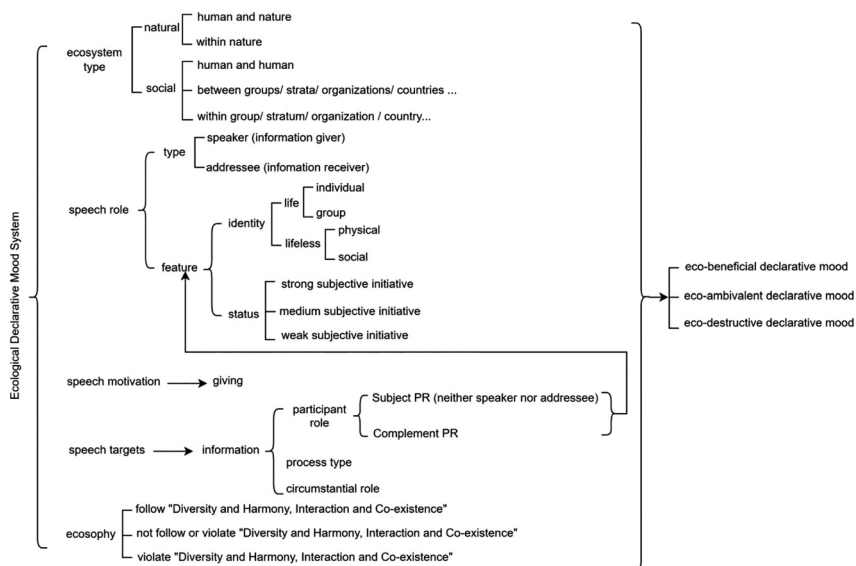


Figure 10: Ecological declarative mood system (He et al. 2021: 146).

the declarative mood is eco-destructive. When the speaker remains neutral, he/she often gives information in an equivocal way; then, the declarative mood is eco-ambivalent.

The following exemplifies the analytical process of the ecological declarative mood system in social ecosystem discourse (He et al. 2021: 219):

- (2) The greatest enemy we face is not the coronavirus itself — it is the stigma that turns us against each other. (Selected from the speech of Dr. Tedros Adhanom Ghebreyesus on Munich Security Conference, February 15, 2020)⁴

Example (2) is extracted from the speech about COVID-19 at Munich Security Conference, which is concerned with the relationship between country and people in the social ecosystem. The speaker is Dr. Tedros Adhanom Ghebreyesus, chief of the World Health Organization, who has a strong subjective initiative, so the speech stands for the mainstream views of world organization and international society. The addressee is the representatives and audience of various countries. The two sides share equal status in the social ecosystem; therefore, they are eco-beneficial speech roles. The speaker uses negative appraisal words “the greatest

⁴ <https://www.who.int/director-general/speeches/detail/munich-security-conference> (accessed December 10, 2021).

enemy we face” as the Subject PR to introduce the huge challenge at the beginning of the epidemic period; however, “the coronavirus itself” is not to blame. The second clause reveals the answer in the Complement PR, that is, “the stigma that turns us against each other”. The speaker identifies the biggest rival at present as groundless rumor, which fails to unite the world to combat the epidemic together, so this example transfers eco-beneficial information. The speech motivation is to call for stopping polarizing each other for selfish benefits and to help the globe to maintain a healthy and stable international relationship, thus being an eco-beneficial giving. Consequently, there are three eco-beneficial mood elements. This example conforms to the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, and belongs to eco-beneficial declarative mood.

The ecological interrogative mood system (Figure 11) focuses on the three aspects as well (He et al. 2021: 154). The first is the ecological property of speech roles, including speaker and addressee, namely, information seeker and responder in this case. The second is the ecological property of speech motivation, that is, the demanding type and feature. The third is the ecological property of speech targets, mainly referring to the analysis of Subject PR and Complement PR. When the speaker adheres to the ecosophy of “Diversity and Harmony, Interaction and Co-existence”,

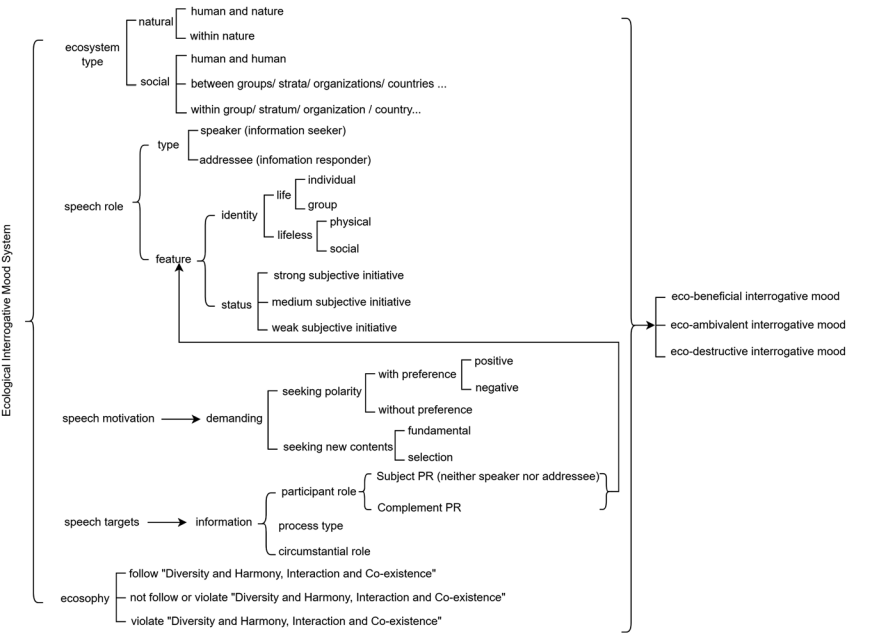


Figure 11: Ecological interrogative mood system (He et al. 2021: 154).

he/she usually demands information without unreasonable purposes, which is advantageous for establishing and maintaining eco-beneficial interpersonal relationship with the addressee, so the interrogative mood is eco-beneficial; then, if the addressee responds the question in the speaker's expectation, he/she also presents an eco-beneficial mood; otherwise, he/she presents an eco-destructive mood. When the speaker runs counter to this ecosophy, he/she often demands information with an ulterior motive, which is possible to ruin the interpersonal relationship, so the interrogative mood is eco-destructive; then, if the addressee responds to the question against this ecosophy, he/she also presents an eco-destructive mood; otherwise, an eco-beneficial mood. When the speaker neither follows nor violates this ecosophy, the interrogative mood is eco-ambivalent.

The book further elaborates on the EDA of the ecological interrogative mood system in natural ecosystem discourse, which is as follows (He et al. 2021: 155):

- (3) Only 19 percent of primary forests remain (where human intervention has been minimal), compared with the global average of 32 percent. So **what will the future of our forests** look like? **Will we** continue down this road or will **we** work together to improve things? (“It’s Vital to Save Our Forests to Save Ourselves”, *China Daily*, June 19, 2019)⁵

Example (3) pays attention to the natural ecological problem of declining forest area. In this instance, the speaker and the addressees share the same identity and equal status in the ecosystem, so they are both eco-beneficial speech roles. There are three interrogative clauses with group Subject PRs (“the future of our forests” and “we”), indicating that the speaker puts himself and the addressees in the same place; that is, human beings should all attach significance to the shrinking forest and work together to improve this problem. Hence, the PRs are eco-beneficial, since the speaker and the addressees are connected by this common responsibility. The first question is a WH- interrogative: the question of the “future of our forests” can arouse the reflection of the addressees on the aggravating deforestation. The second question specifies the thinking content in yes–no interrogative about “our” response: to maintain the status quo or to take action immediately. It can be deduced from the context that the speaker prefers the latter choice so that the speech motivation is an eco-beneficial demanding. The information that the clauses demand is related to the pursuit of the harmonious development of the natural ecosystem, which corresponds to the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, thus being eco-beneficial. In conclusion, there are

⁵ http://www.chinadaily.com.cn/kindle/2019-06/19/content_37482380.htm (accessed December 10, 2021).

three eco-beneficial mood elements, so this example is an eco-beneficial interrogative mood.

The ecological imperative mood system is extended as illustrated in Figure 12 (He et al. 2021: 160). The imperative mood can generally express seven types of meanings of the speaker: command, request, ruling, statement of hope, suggestion, offer, and statement of wish. It can not only give or demand goods-&-services, but also show some compulsory characteristics and power relation patterns (He et al. Forthcoming).

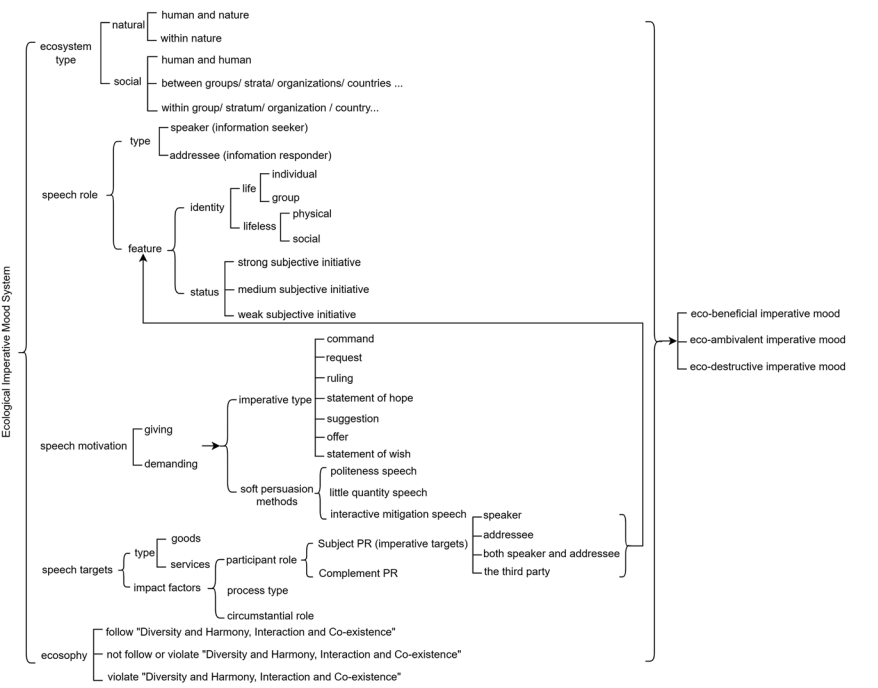


Figure 12: Ecological imperative mood system (He et al. 2021: 160).

From the ecolinguistic perspective, first, the EDA of the imperative mood should judge the identity and status of the speaker, addressee, and imperative target in the ecosystem, which is conducive to identifying their power relations. When the identity and status of the speaker are superior to those of the addressee or the imperative target, the power relation shown by the imperative mood is salient; otherwise, it is implicit. When giving or demanding goods-&-services, the speaker endows himself/herself, the addressee, Subject PR (imperative target), and Complement PR with different ecological properties, which are the primary factors that influence the ecological property of imperative mood. Second, the EDA

of the imperative mood should judge the speech motivation and speech target of the imperative mood. When the speaker observes the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, the “giving” or “demanding”, and “goods-&-services” should all be eco-beneficial. For example, the speaker can offer some good statement of hope that echoes in the heart of the addressee, or give some things or help needed by the addressee; he/she can also appeal to the imperative target for some acts and measures that are beneficial for the harmonious development of the ecosystem. When the speaker runs counter to this ecosophy, the “giving” or “demanding”, and “goods-&-services” should all be eco-destructive. For instance, the speaker issues an unequal command or request, or gives improper suggestions. Furthermore, the ecological property of speech target is still mainly based on that of Subject PR and Complement PR.

It is noteworthy that there is another important subsystem in the imperative mood, that is, soft persuasion methods, including using politeness speech, little quantity speech, and interactive mitigation speech. This subsystem is an eco-beneficial mood element for making the interpersonal relationship between speech roles more harmonious.

The following is the exemplification of applying the ecological imperative mood system in social ecosystem discourse (He et al. 2021: 188).

- (4) As tax cuts create new jobs, let's invest in workforce development and let's invest in job training, which we need so badly. Let's open great vocational schools so our future workers can learn a craft and realize their full potential. And let's support working families by supporting paid family leave. (“Full Text of President Trump's First State of the Union address”. *CBS News*. January 30, 2018)⁶

Example (4) is selected from the State of the Union address in 2018, which concerns the relationship between the government and people in the social ecosystem. The speaker is President Trump, who stands for the US government; the imperative target covers both the speaker himself and the addressees, including the bipartisan members and all the American people. The two sides have the relationship of the government and people: the former serves the latter, and the latter selects the former, so they are both eco-beneficial speech roles. The underlined part includes four imperative clauses that offer suggestions as well as commands that list some specific measures and propose to make an effort for people's work and life, which work to enhance their belief and hope. It shows that the speaker calls for the whole society to facilitate the development of the social ecosystem. Thus, the speaker

⁶ <https://www.cbsnews.com/news/2018-state-of-the-union-address-trump-transcript-full-text/> (accessed December 10, 2021).

presents an eco-beneficial speech motivation. Since the speech targets can establish a harmonious and stable relationship between the government and its people, this example is in keeping with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. Hence, the underlined part is an eco-beneficial imperative mood.

Mood force, largely developed from the modality system (Halliday and Matthiessen 2014), is the linguistic device that indicates subjective attitude, judgment, and stance of the speaker in the exchange of proposition or proposal with the addressee (He et al. Forthcoming). The mood force system can realize personal will and emotion, including the internal mood force that shows the subjectivity of the speaker in the exchange, and external mood force, such as the degree and speed of speech, which is not the focus of this book. The internal mood force is divided into two types: fundamental and non-fundamental. The former is a statement of fact with no subjective expression, while the latter is categorized into the types of *realis* and *irrealis*. The *realis* mood force shows the attitude of the speaker towards experiential events that have already taken place, including the subcategories of confirmation and expectation. The *irrealis* mood force expresses the judgement of the speaker on something that has not happened yet or happened in the mind, including modalization and modulation.

The ecological internal mood force system mainly contains five dimensions, as shown in Figure 13 (He et al. 2021: 173). The first is the judgement of the discourse type, which highlights the potential influence exerted on either natural or social ecosystems. The second is to judge the ecological property of the proposition or proposal; that is, the process type, PR, and CR are eco-beneficial, eco-ambivalent, or eco-destructive. The third is to identify the lexico-grammatical device and fixed expression that use internal mood force to show the subjective attitude of the speaker. The fourth is the internal mood force value, which influences the interpersonal negotiation space between the speaker and the addressee: a high internal mood force value indicates a small negotiation space, whereas a low internal mood force value implies a large one. The last is the internal mood force orientation, which refers to the way that the speaker shows his/her attitude towards the proposition. In terms of the perspective, when the speaker chooses the subjective orientation, it shows that he/she is willing to acknowledge the ecological responsibility of the proposition; when the speaker adopts the objective perspective, it means to obscure the responsible party, or to evade the responsibility for the proposition by denying the validity. In terms of the representation way, the implicit internal mood force is expressed in the same clause as the main proposition, which implies the vague attitude of the speaker, whereas explicit internal mood force in a separate clause, which gives prominence to the responsibility bearer and makes his/her attitude obvious (Halliday and Matthiessen 2014: 181).

The following is the exemplification of EDA of internal mood force in the natural ecosystem discourse (He et al. 2021: 187).

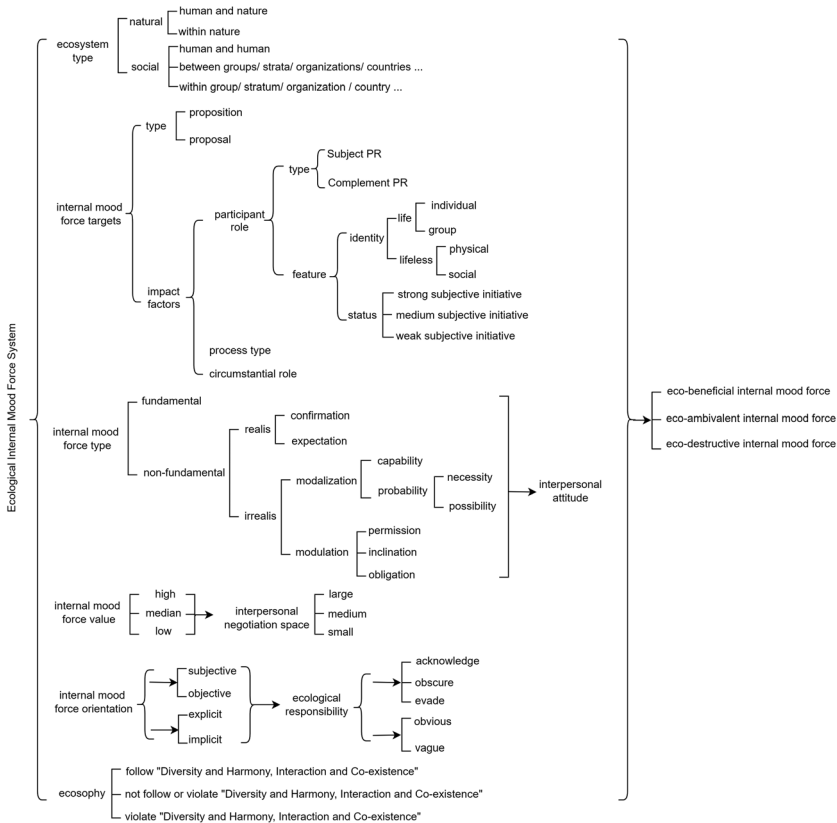


Figure 13: Ecological internal mood force system (He et al. 2021: 173).

- (5) We have already put too much carbon dioxide into the atmosphere. But we can slow this down. We can prevent the worst-case scenario. The only way of doing that is by reducing our carbon dioxide emissions. This is important for both you and me, for industry, for governments. (Selected from the TED Talk “How pollution is changing the ocean’s chemistry” by Triona McGrath)⁷

Example (5) talks about the reduction in greenhouse gases to protect the ocean, which concerns the relationship between the nature and human beings in the natural ecosystem. The propositions of the two underlined clauses are respectively “we slow this down” and “we prevent the worst-scenario”, and the internal mood force types in the two clauses are both “can”, implying that the speaker believes

7 https://www.ted.com/talks/triona_mcgrath_how_pollution_is_changing_the_ocean_s_chemistry/transcript (accessed December 10, 2021).

that the two sides, including addresser and the addressees, can achieve the propositions. Given the fact that the carbon dioxide over-emitted to the atmosphere by human beings has already accelerated the ocean acidification, people are capable of improving this situation and are supposed to shoulder the responsibility of realizing those propositions. Therefore, the discourse is advantageous for amelioration of the natural ecosystem, so Example (5) presents an eco-beneficial internal mood force.

The appraisal system focuses on the ontological meanings of appraisal resources in the language system, including the systems of attitude, judgement, and graduation (Martin and White 2005). To present an appraisal system applicable to EDA, this book extends its three sub-systems and adds the ecosophy of “Diversity and Harmony, Interaction and Co-existence” to the original appraisal system, as is demonstrated in the following.

The ecological attitude system (Figure 14) includes three new dimensions, i.e. affect origination, judgement standard, and appreciation object (He and Ma 2020: 51). They can all be divided into either nature-based or human-based in the natural ecosystem discourse, and either righteousness-based or interest-based in the social ecosystem discourse. The extended attitude system is concluded as follows: when the speaker shows a positive attitude towards the content that follows the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, or when he/she shows a negative attitude towards the content that violates this ecosophy, the discourse presents an eco-beneficial attitude for constructing harmonious interpersonal relationship and maintaining the good development of ecosystem; when the speaker shows negative attitude towards the content that is by this ecosophy, or when he/she shows a positive attitude towards the content that goes against this ecosophy, the discourse presents an eco-destructive attitude for destroying the interpersonal relationship and the development of ecosystem; when the attitude of the speaker is neither for nor against this ecosophy, the discourse presents an eco-ambivalent attitude.

The following example explains the applying mechanism of the ecological attitude system in the social ecosystem discourse (He et al. 2021: 75).

- (6) When we travel to other places, we know little about the locals, but the people we meet on the road are always willing to offer a **helping** hand when needed and also give us an **enthusiastic welcome**, he said. (“Two-wheeled Safety Advice Offered by Volunteers”, *China Daily*, October 7, 2020)⁸

⁸ <http://www.chinadaily.com.cn/a/202010/07/WS5f7d2c40a31024ad0ba7d60e.html> (accessed December 10, 2021).

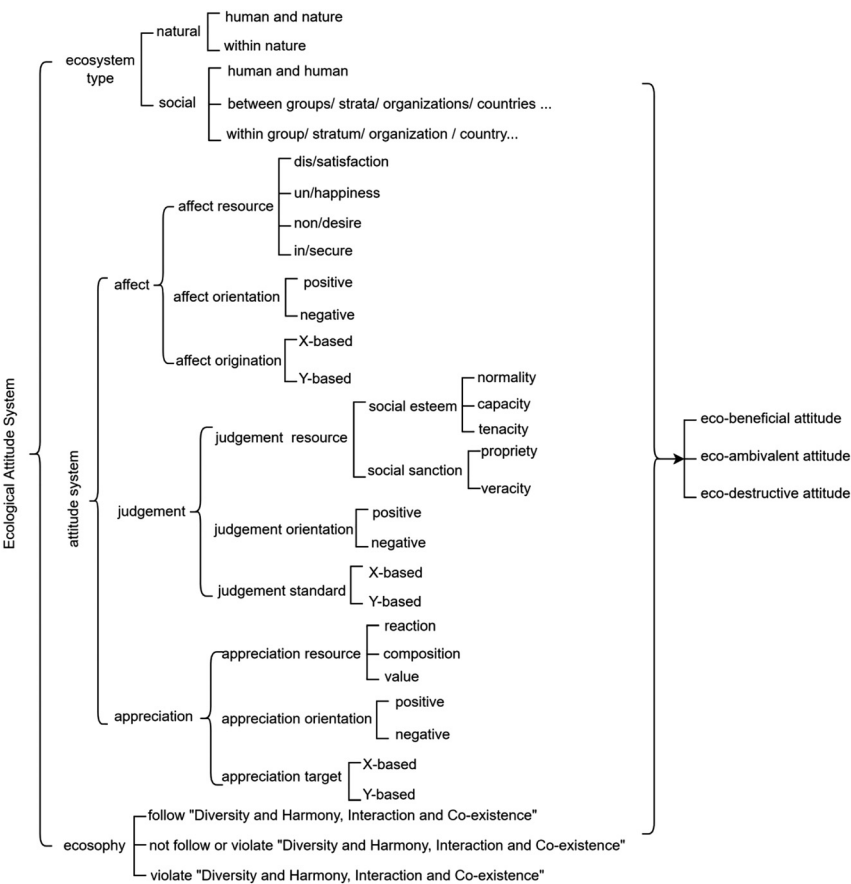


Figure 14: Ecological attitude system (He et al. 2021: 204).

Example (6) talks about the experience and feelings of tourists, so it is concerned with the social ecosystem. According to the context, the Subject PR, “people we meet on the road”, refers to the local two-wheeled volunteers, and the Complement PRs are “a helping hand”, “us” (referring to the tourists), and “an enthusiastic welcome”. The speaker adopts positive appreciation resources “helping” and “enthusiastic welcome” to give credit for the warm reception and help from the volunteers. Hence, the appraisal valuation expressed by the speaker is beneficial for establishing a harmonious interpersonal relationship, which works to promote the good development of the social ecosystem. Thus, this example follows the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, and presents an eco-beneficial attitude.

The ecological engagement system is mainly represented from four dimensions: engagement manner, engagement orientation, engagement source, and engagement content, as seen in Figure 15 (He and Ma 2020: 54). First, in terms of the original engagement system (Martin and White 2005: 103), engagement manner is distinguished into contraction and expansion: the former closes down the space for dialogic alternatives, whereas the latter opens up the dialogic space for alternative positions. The extended engagement system divides contraction into “proclaim” (concurrence, pronouncement, endorsement) and “disclaim” (denial and countering), and expansion into “entertain” (relative entertain and absolute entertain) and “attribute” (acknowledgment and distancing). Second, engagement orientation refers to the definite or reserved stance of the speaker on the speech content. Generally, monogloss manner does not refer to other voices and opinions, such as the description of fact or common sense, so the speaker takes all the responsibility of his/her speech, in which case the engagement orientation is very definite; different heterogloss manners vary with their engagement orientations. Third, engagement source cares about the identity of the speaker: either individual or non-individual (including some group like organization and country). At last, engagement content is related to the experiential meanings in discourse, such as the stance, opinion of the engagement source (He and Ma 2020: 53).

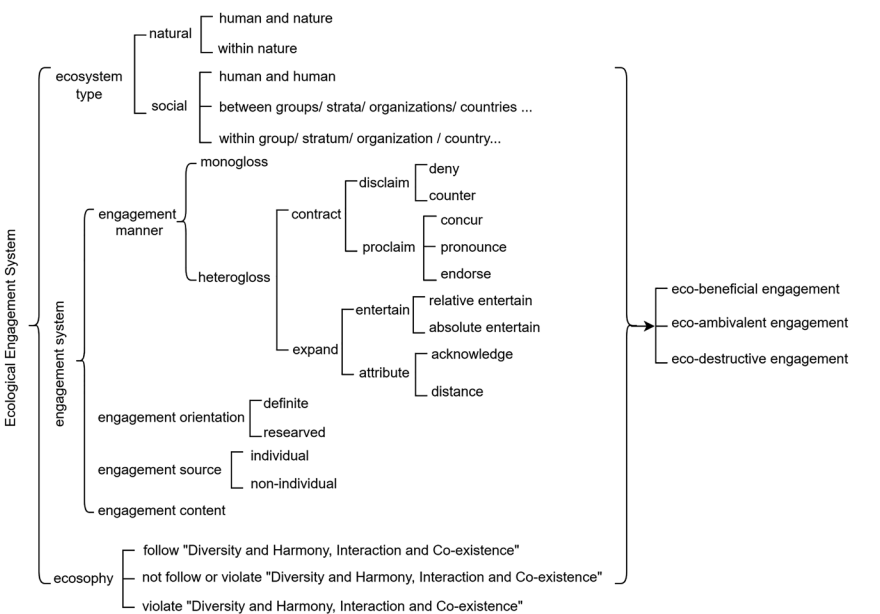


Figure 15: Ecological engagement system (He et al. 2021: 217).

The judging standards of the ecological engagement system are concluded as follows: eco-beneficial engagement is the engagement manner which is definitely for the engagement content that complies with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, and the one which is definitely against the engagement content that goes against this ecosophy; eco-destructive engagement is the engagement manner which is definitely against the engagement content that conforms to this ecosophy, and the one which is definitely for the engagement content that is not in conformity with this ecosophy; eco-ambivalent engagement is the engagement manner which is reserved about the engagement content.

The following example extracted from this book illustrates the applying procedure of the ecological engagement system in the natural ecosystem discourse (He et al. 2021: 220).

- (7) **I contend**, furthermore, that we have allowed these chemicals to be used with little or no advance investigation of their effect on soil, water, wildlife, and man himself. (Carson 1962: 13)

Example (7) is concerned with the adoption of chemicals in agriculture, which belongs to the natural ecosystem discourse. From the perspective of lexicogrammar, the formulation, “I contend”, is the “pronouncement” type of “proclaim” contraction, which means that the speaker shows “authorial emphases or explicit interventions or interpolations” (Martin and White 2005: 127). This contractive manner, though allowing for alternative voices, is quite definite to emphasize the warrantability of the engagement source, namely, the speaker “I”. The engagement content is the negative judgement that people permit the application of chemicals before studying the side effect “on soil, water, wildlife, and man himself”, which is originated from the nature-based value. Therefore, this instance shows an eco-beneficial engagement, for the speaker rightfully recognizes the destructive impact of fertilizers and pesticides. However, it is still worth mentioning that the engagement source is an individual, who can only exert an influence in a limited range, so the degree of eco-beneficial property engagement, to some extent, is declined.

The ecological graduation system specifies the graduation types and adds two dimensions: reference orientation and reference scale, as shown in Figure 16 (He and Ma 2020: 56). In a similar vein to the ecological attitude and engagement systems, the EDA of graduation meaning should be under the guidance of the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, and the first step of applying the mechanism is still to judge the discourse type, concerning either natural or social ecosystem, which helps to ensure the potentially influenced ecosystem. The graduation system is categorized into focus and force: focus is divided into “sharpening” and “softening”, and force into “intensification” and

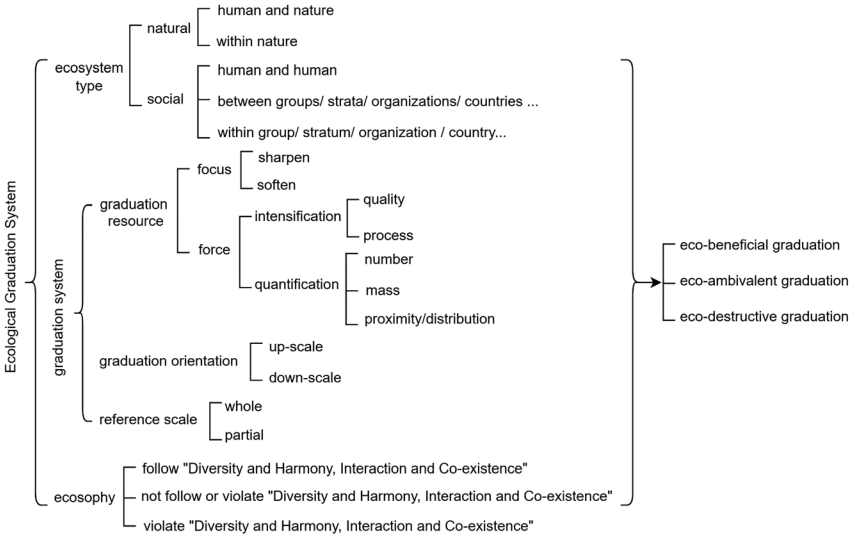


Figure 16: Ecological graduation system (He et al. 2021: 222).

“quantification” (Martin and White 2005: 137–140). Graduation orientation includes two types: up-scale and down-scale; seen through an ecological lens, up-scale orientation invests more attitudinal meaning, which can increase the degree of the ecological property, whereas down-scale orientation invests less attitudinality, which is potential for decreasing the degree of the ecological property. Graduation scale considers the relationship between the appraisal target and its entirety in the process: the whole or one part of it. When the graduation scale stands for the entirety, the target evaluated by the speaker is more representative, so the degree of its ecological property is raised. Therefore, together with the three dimensions, the ecological graduation system is concluded as follows:

Eco-beneficial graduation is the graduation resource that is in accordance with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. In general, the degree of the eco-beneficial graduation is increased when the orientation is up-scale rather than down-scale, and when the reference scale represents the whole rather than one part. Eco-destructive graduation is the graduation resource that is inconsistent with this ecosophy, and generally, the degree of the eco-destructive graduation is raised higher under the two circumstances above. Eco-ambivalent graduation is the graduation resource that neither follows nor violates this ecosophy.

The following instance exemplifies the application of the ecological graduation system in the social ecosystem discourse (He et al. 2021: 102).

- (8) In San Francisco's Chinatown I saw the slave girl Sing Yee dipped **slowly, inch by inch**, in boiling almond oil to make her swear she would never see her American lover again. (O. Henry 1920: 141)

Example (8) is concerned with the description of torture which belongs to the social ecosystem discourse. The appraising target is a slave girl of the yellow race, who is forced to promise to break with her American lover of the white race. The graduation resources “slowly” and “inch by inch” are process intensification of the force graduation. They are of down-scale orientation; however, they work to magnify the ruthless degree of the abuse process and method. The phenomena of slavery, racial discrimination, and torture all go against the ecosophy of “Diversity and Harmony, Interaction and Co-existence”. Moreover, the speaker adopts a perceptive mental Process to hide the Agent of “dip” and “make”, so the cruelty of the Agent is tactically blurred. Therefore, this instance presents an eco-destructive graduation. Furthermore, the story of the graduation target, Sing Yee, actually reflects the common phenomenon in the entire society at that time, thus increasing the degree of eco-destructive property.

3.4 The theoretical framework for EDA: Textual metafunction

Chapter 6 introduces the textual metafunction from the perspective of ecolinguistics. Under the framework of SFL, the textual metafunction is comprised of Theme system, and the cohesion and coherence system (Halliday and Matthiessen 2014). The Theme is “the prominent part of a message which necessarily involves what the message is about, i.e. what participant it is about and optionally involves circumstances” (He 2017: 948–951). Cohesion refers to “the linguistic devices by which the speaker can signal the experiential and interpersonal coherence of the discourse”, and coherence is a mental phenomenon so that it “cannot be identified or quantified in the same way as cohesion” (Thompson 2014: 215). From the angle of ecolinguistics, the textual metafunction means that the clause can relate the experiential and interpersonal metafunctions with the context, and represent ecological property from the textual perspective that is mainly realized by the Theme of clause, and cohesion and coherence.

The ecological Theme system is extended as shown in Figure 17 (He and Ma 2020a: 25). From an ecolinguistic perspective, the ecological property is mainly concerned with the ecological element in the Theme of clause. Theme can be categorized into simple Theme, multiple Theme, and conflated Theme. Simple Theme is composed of experiential Theme, which is realized by PR or process. Multiple Theme consists of three kinds of combinations of Themes: the first is

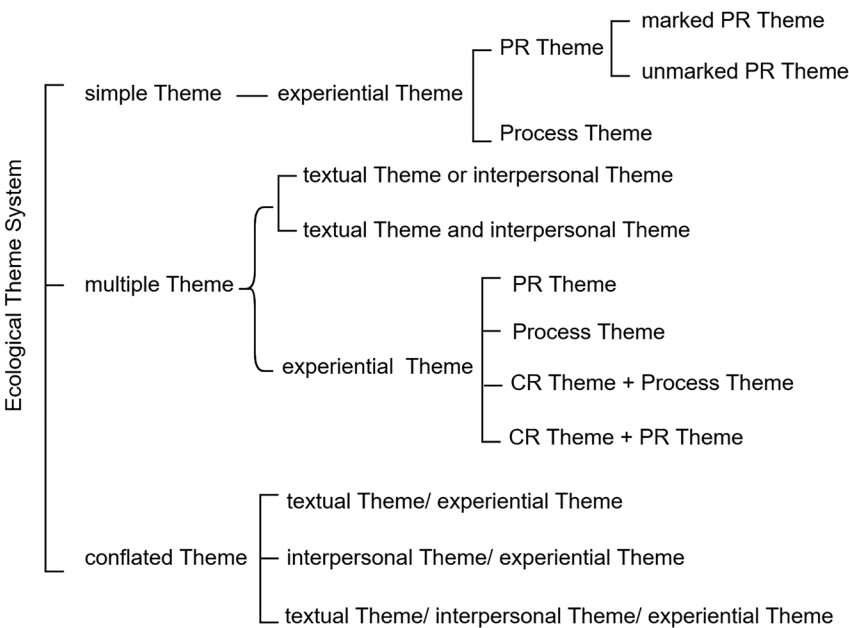


Figure 17: Ecological Theme system (He et al. 2021: 246).

textual and experiential Themes; the second is interpersonal and experiential Themes; the third is textual, interpersonal, and experiential Themes. As for conflated Theme, there are three types of combinations as well: (1) textual Theme/ experiential Theme; (2) interpersonal Theme/ experiential Theme; (3) textual Theme/ interpersonal Theme/ experiential Theme.

Looking through an ecological lens, the analysis of PR Theme can reveal the ecological property of the point of departure, focus, and stance of discourse, as shown in Figure 18 (He and Ma 2020a: 26). The PR Theme can be classified into

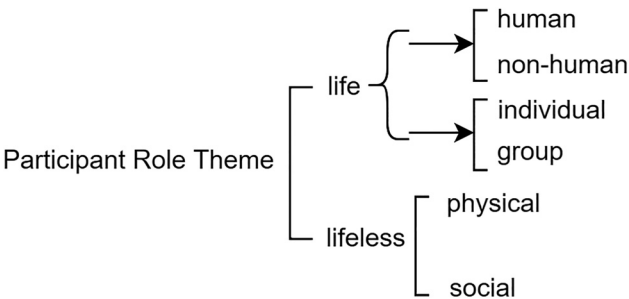


Figure 18: Ecological property of Participant Role Theme (He et al. 2021: 247).

two kinds: life and lifeless; the former specifies the human and non-human types in terms of the species category, and the individual and group types in terms of the PR number. It is worth mentioning that within the textual metafunction, “strong ecological property” means that the ecological element in the clause is foregrounded; “weak ecological property” means that it is backgrounded. That is to say, experiential and interpersonal meanings are the foundations of judging the ecological property of discourse: eco-beneficial, eco-ambivalent, or eco-destructive, while textual meaning plays the role of regulator in EDA.

In discourse concerning the natural ecosystem, non-human organisms or physical elements serving as PR Themes convey a stronger ecological sense than human beings or social elements, as displayed in Figure 19 (He and Ma 2020a: 27).

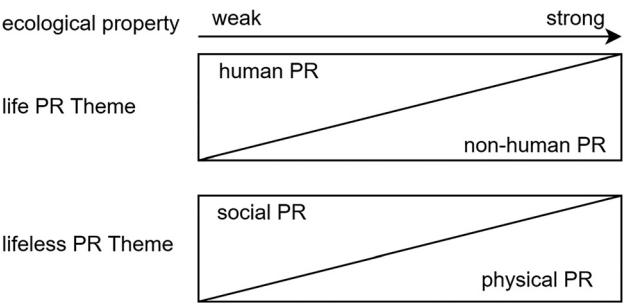


Figure 19: Ecological property of Participant Role Theme in natural ecosystem (He et al. 2021: 249).

In discourse concerning the social ecosystem, the more interactive and diversified PR Themes are, the stronger ecological sense is implied, as shown in Figure 20 (He and Ma 2020a: 28). On the contrary, if the experiential PR Theme in the discourse relies on a single element, then the ecological property is weaker.

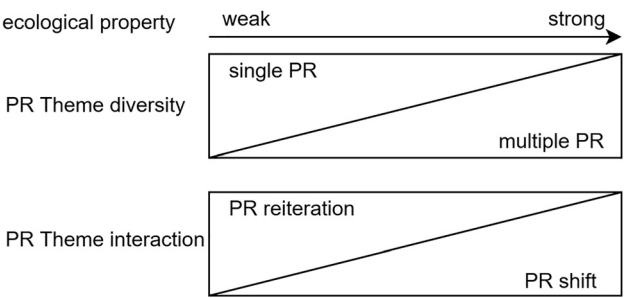


Figure 20: Ecological property of Participant Role Theme in social ecosystem (He et al. 2021: 251).

PR Theme can be distinguished into marked Theme and unmarked Theme in terms of the general clause order of the declarative, interrogative, and imperative mood types. According to the definition of PR mentioned above, the markedness is merely related to experiential Theme. Marked PR Theme means that the syntactic element filling experiential Theme is located at a particular place of the clause order; otherwise, the PR Theme is unmarked. The marked PR Theme can foreground the ecological element in discourse by distinguishing it from the background information, which helps to judge the ecological property of discourse. Therefore, when serving as marked Themes, PRs with stronger ecological attributes make discourse more eco-oriented. The following Figure 21 shows the ecological property of un/marked PR Theme (He and Ma 2020a: 30).

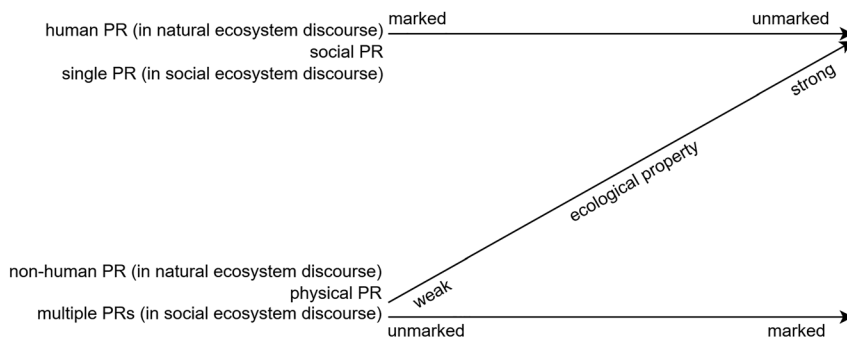


Figure 21: Ecological property of un/marked Participant Role Theme (He et al. 2021: 254).

In conclusion, the ecological Theme system is argued to be applicable for EDA from the dimension of textual metafunction. The following example demonstrates the ecological effect of marked PR Theme in the natural ecosystem discourse (He et al. 2021: 254).

- (9) So impotent our wisdom is. (Selected from Emily Dickinson’s “Nature is What We See”)⁹

The complete text-sentence of Example (9) is “So impotent our wisdom is to her simplicity”, in which “our” refers to human beings. The instance contends that people cannot express scrap of simplicity of the great nature. The lifeless social PR Theme “So impotent” is the Complement of the Rheme “our wisdom”. Rather than choosing an ordinary noun or noun group as the Theme, such as “Our wisdom is so

⁹ <https://verse.press/poem/nature-is-what-we-see-1439274853519476994> (accessed December 10, 2021).

impotent”, the speaker chooses the adjective group as the Theme to show the strong markedness in the clause, which helps to foreground the description. Combined with the poetry content, the previous stanzas select the noun groups of natural elements as the Themes to represent the feeling about the nature, and the last stanza uses the marked Theme “so impotent” to emphasize that human beings are weak and ignorant in front of the nature. Thus, the readers are encouraged to respect the nature and lives, instead of taming or transforming the nature at will. Therefore, the Theme in the clause has a strong eco-beneficial property, which is good for the harmonious development of the natural ecosystem.

The ecological cohesion and coherence system (Figure 22) is extended by four conjunctive dimensions: discourse type, external cohesion, internal cohesion, and the ecosophy (He and Ma 2020b: 30). Similarly, the first step is to identify the discourse type, concerning either natural or social ecosystem. External cohesion refers to the register consistency, including three parameters of register – field, tenor, and mode; and internal cohesion includes the two dimensions of cohesive devices: lexico-grammar (transitivity, mood and modality, tense and voice, reference, substitution and ellipsis, conjunction, lexical cohesion, and rhetorical figure), and phonology (pronunciations and intonations), which play an important role in the organization and progression of discourse. The ecosophy of “Diversity and Harmony, Interaction and Coexistence” is the basis for judging ecological property of discourse. It should be noted that experiential and interpersonal

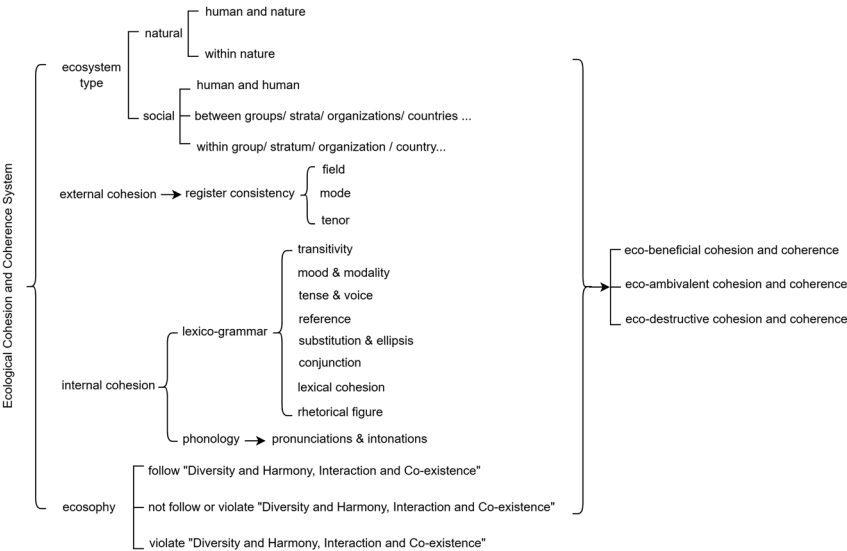


Figure 22: Ecological cohesion and coherence system (He et al. 2021: 263).

meanings are the prerequisites for the analysis of textual meaning. That is, the ecological cohesion and coherence system cannot be independent of the EDA of the transitivity, mood, modality, and appraisal systems.

The applying mechanism of ecological cohesion and coherence system is proposed in the following: based on the register consistency, the discourse analysts should first identify the field, mode, and tenor, and then judge the ecological property of semantic coherence through the EDA of both external and internal cohesive resources in discourse. When the cohesive chain and the register follow the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, it is eco-beneficial cohesion and coherence, which is advantageous for the harmonious development of the ecosystem. When the cohesive chain and the register violate this ecosophy, it is eco-destructive cohesion and coherence, which is harmful to the development of the ecosystem. When the cohesive chain and the register neither follow nor violate this ecosophy, it is eco-ambivalent cohesion and coherence.

To illustrate the applicability of this extended cohesion and coherence system, this book provides a few examples and explains how cohesive devices are employed to organize texts and to convey ecological property, as shown in Example 10 (He et al. 2021: 190).

- (10) Not even catastrophes like these seem to bring any political action. How is **this** possible? Because we still fail to make the connection between the climate crisis and increased extreme weather events and natural disasters like the Australia Fires. **That’s** what has to change. Now. (Selected from the Twitter of Greta Thunberg, December 21, 2019)¹⁰

The background of Example (10) is about the forest fire in Australia that spread to the neighboring town and threatened approximately 20,000 lives; however, at this time, Prime Minister of Australia Morrison traveled aboard with his family. Therefore, this example is concerned with both the relationship between the nature and human and that between the society and people, so it should be analyzed from the perspectives of the natural and social ecosystems. The mode is the private social media, Twitter; the field is that the speaker gives an online remark on that event; and the tenor is that the speaker is Greta Thunberg, a world-famous Swedish climate activist, and the speech target is the global Twitter users. Thus, this instance is in register consistency, since it is in accordance with the context of the forest fire. On the condition of following the ecological law, the natural ecosystem has a certain capability of self-recovery and self-regulation (Zou and Gao 2013).

¹⁰ <https://twitter.com/gretathunberg/status/1208682929855041538> (accessed December 10, 2021).

That means, as long as the natural fire does not cause severe damage, it can be left alone, which can maintain the balance of the forest. However, the Australian fire not only endangered the safety of people’s lives and properties, but more importantly, was caused by global warming that is closely related to human activities. Hence, the inaction of the Australian government leads to the deterioration of the natural ecosystem, which further becomes a catastrophe for human society, so it is an eco-destructive proposition. The speaker adopts the anaphoric references “this” and “that” to refer to the failure of connecting the natural disaster to political action and climate crisis, showing her disagreement on the government’s reaction. Hence, this instance is in line with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, and belongs to eco-beneficial cohesion and coherence.

3.5 The theoretical framework for EDA: Logical metafunction

Chapter 7 introduces the logical metafunction from the perspective of ecolinguistics. The logical system within SFL theory is concerned with the ontological meanings of logical resources in the language system, including two subsystems, namely, taxis system and logico-semantic relation system (Halliday and Matthiessen 2014). To be applied to EDA, it needs to be extended from an ecolinguistic perspective, and integrated with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”.

This book adds two new dimensions to the ecological taxis system (Figure 23): taxis order and representation manner (He and Cheng 2021: 54). Different languages have habitual preferences of embedding and coordinating interdependency, taxis order, and representation manner, which are unmarked logical relations, so the marked ones have an important effect on the ecological property

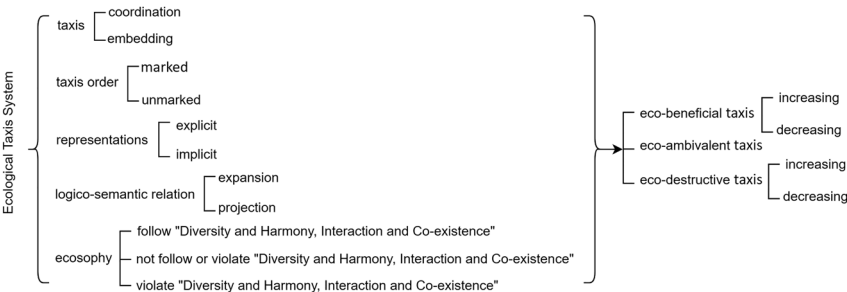


Figure 23: Ecological taxis system (He et al. 2021: 287).

in discourse. Based on this ecosophy, the ecological taxis system also needs to be extended with the two logico-semantic relation subsystems.

From the dimension of expansion relation (He and Cheng 2021: 54): in the case of expressing the same meaning, when clauses are in embedding taxis, the elaboration embedding clause often explains the dominant clause; the extension one mainly bears supplementary information, and the enhancement one usually shows the ways of limitation. Hence, from the grammatical perspective, all embedding clauses cannot exist independently, so the semantic importance of primary clause is stronger than the embedding one. When clauses are in coordination taxis, starting clause and continuing clause are in the equal grammatical status. Since the location of semantic focus varies with language (i.e. English with front focus, Chinese with post focus) and context, the semantic importance of clause requires specific linguistic analysis. When the speaker employs marked taxis order, some particular meanings are typically delivered, such as complement and emphasis, under which circumstances the potential of ecological properties could be increased. Explicit representation, such as logical markers, tends to clearly reveal the logical relations in discourse, thus raising the degree of the original ecological properties as well. However, implicit representation, like semantic meanings, needs the inference of the addressee, so many possible results could be deduced, thus reducing the degree of the ecological property.

From the dimension of projection relation (He and Cheng 2021: 54): both English and Chinese projection relations are conditioned to implicit representation, yet there is more salient preference in Chinese; the two languages also share the same taxis order (the projecting clause can be posed before or after the projected clause) (He and Liu 2019: 14). As for the marked taxis order, such as free indirect speech, can enhance the degree of the original ecological property in discourse.

Based on this ecosophy, the ecological expansion system should take expansion content into consideration, which is realized by two dimensions: expansion orientation and origination, as shown in Figure 24 (He and Cheng 2021: 55). Expansion orientation refers to the positive or negative stance of the speaker on ecological elements; expansion origination is the benchmark of discourse analyst and categorized into two types: nature-based or human-based in natural ecosystem discourse, and interest-based or righteousness-based in social ecosystem discourse.

The judging criteria of ecological expansion system are concluded as follows: eco-beneficial expansion can disclose positive orientation towards nature-based or righteousness-based content that is consistent with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, or can indicate negative orientation towards human-based or interest-based content that is opposed to this ecosophy.

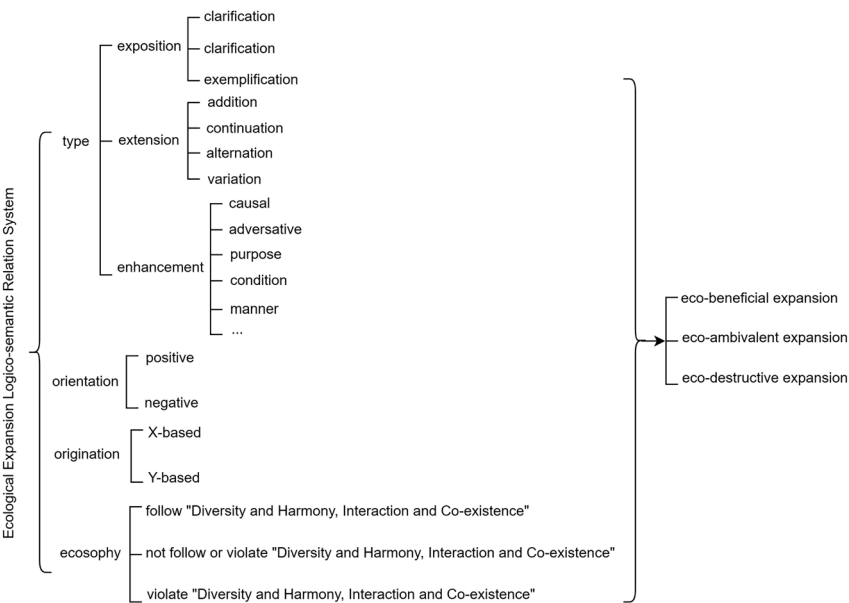


Figure 24: Ecological expansion logico-semantic relation system (He et al. 2021: 289).

In such condition, if the expansion relation is realized by explicit representation or marked taxis order, the degree of the eco-beneficial property is increased; on the contrary, if the expansion relation is realized by implicit representation or unmarked taxis order, that is decreased. Similarly, eco-destructive expansion can either display negative orientation towards nature-based or righteousness-based content or present positive orientation towards human-based or interest-based content by disobeying this ecosophy. On this basis, if the expansion relation is realized by explicit representation or marked taxis order, the degree of eco-destructive property is stronger; otherwise, weaker. Eco-ambivalent expansion is neutral or irrelevant to this ecosophy.

This book adds three new dimensions to the ecological projection system: projector roles, projecting marker, and projecting origination, as seen in Figure 25 (He and Cheng 2021: 57).

In the projecting clause, the analysis should take both projector and projecting marker into consideration. First, the ecological categorization of projectors is similar to that of PRs, as elaborated before. The degree of ecological property differs with the choice of projector roles: generally, non-human and physical projectors are encouraged in natural ecosystem discourse, while human groups and social projectors in social ecosystem discourse. Additionally, there are five types of projecting markers according to the ecological engagement system (He

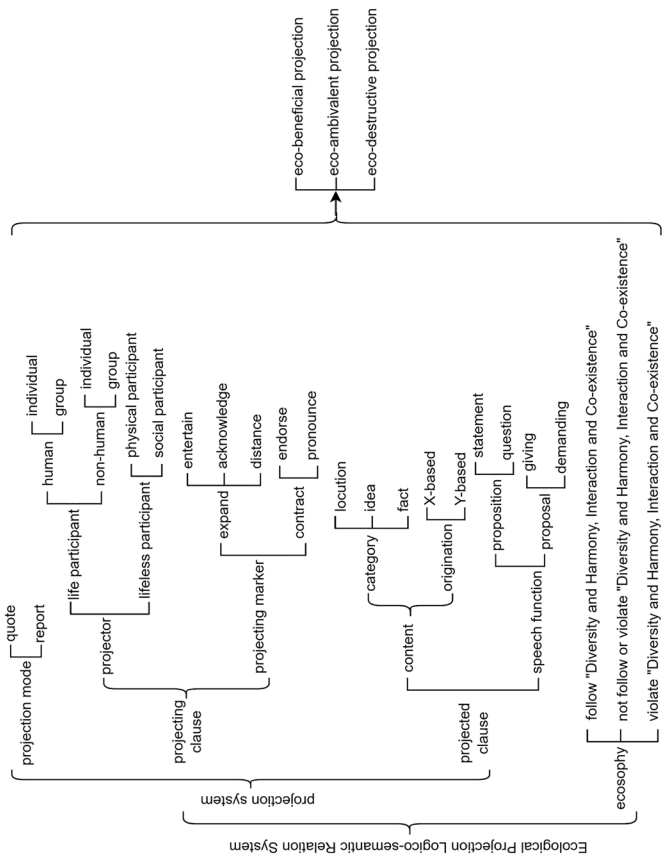


Figure 25: Ecological projection logico-semantic relation system (He et al. 2021: 295).

and Ma 2020; Wei 2021): the three are expansion (entertain, acknowledge, and distance), and the other two are contraction (pronounce and endorse). The different projecting markers can mirror the individual stance of the speaker, which can further expose his/her hidden ecological value. In the projected clause, the content is distinguished into locution, idea, and fact; speech function is divided into proposition, and proposal. The ecological property should be judged from the projection origination: nature-based or human-based in natural ecosystem discourse, and interest-based or righteousness-based in social ecosystem discourse.

The judging criteria of the ecological projection system are concluded as follows: eco-beneficial projection is the logical relation with supportive projection markers for nature-based or righteousness-based projection content that agrees with the ecosophy of “Diversity and Harmony, Interaction and Co-existence”, or the one with adverse projection markers for human-based or interest-based projection content that goes against this ecosophy. Eco-destructive projection is the logical relation with disapproving projection markers for nature-based or righteousness-based projection content that is in accordance with this ecosophy or the one with assenting projection markers for human-based or interest-based projection content that runs counter to this ecosophy. Furthermore, eco-ambivalent projection is the logical relation with neutral projection markers for projection content that is unconcerned with this ecosophy.

Hence, the three extended subsystems form the ecological logical system, which is argued to be applicable to EDA (Cheng and He 2021), as demonstrated in the following (He et al. 2021: 296).

- (11) ||The proponents of the Paris agreement want to pretend ||[that doing with less is costless]] ||[because the value of forgone energy consumption does not show up in the national income accounts]]. || The rest of us need not be so silly: Expensive energy means more poverty. ... There is no evidence – none – in support of the “crisis” view of anthropogenic climate change. (“Pro-con: Did the U.S. Make a Wise Decision in Withdrawing from the Paris Climate Agreement?”, *Columbia Daily Tribune*, November 15, 2019)¹¹

Example (11) is concerned with the discussion on the Paris climate agreement, which is a natural ecosystem discourse. The embedded simple clause embeds an idea projection relation and a causal enhancement relation. In the projecting clause, the projector is the human group participant, “proponents of the Paris agreement”. From an ecolinguistic perspective, the projecting marker “pretend” is

¹¹ <https://www.columbiatribune.com/story/opinion/columns/2019/11/15/did-u-s-make-wise/2282719007/> (accessed December 10, 2021).

a distancing expansion that works to transfer the responsibility of the proposition to the projection source; and the projected clause reports that it costs little money to reduce the energy consumption in production and people's livelihood. The causal embedding clause explains that the measures of energy conservation fail to lead to the growth of the state economy. From the context, it can be deduced that the authorial voice stands in contrast with the agreement, and denies the benefits of renewable energy after comparing its price with the income. It is believed by the speaker that there is no connection between the excessive emission of greenhouse gas and global warming, which is in opposition to the current mainstream knowledge of global environmental protection. Furthermore, the speaker measures the value of clean energy against the economic cost and "national income accounts", in which the reflected anthropocentrism value shows the human-based projection origination. Hence, this instance presents an eco-destructive logico-semantic relation, which goes against the ecosophy of "Diversity and Harmony, Interaction and Co-existence". On this basis, the selection of human group participant as the projector increases the degree of the eco-destructive property.

4 Conclusion

The book *New Developments of Ecological Discourse Analysis* provides a workable theoretical framework and an analytical approach for ecolinguistic researchers who explore ecological property of discourse. Based on the ecology principles and the ecosophy of "Diversity and Harmony, Interaction and Co-existence", this book extends the three metafunctions in SFL, namely, ideational metafunction (including experiential and logical), interpersonal metafunction, and textual metafunction. It constructs the transitivity system, mood system, appraisal system, Theme system, cohesion and coherence system, and logical system from the perspective of ecolinguistics. The following Figure 26 is a systemic and comprehensive analytical framework of EDA based on the theories mentioned above (He et al. 2021: 306).

This book contributes to extending the application of the SFL theory, which helps to provide a general and applicable "ecological grammar" for the paradigm of EDA. It is inspiring not only in establishing the independent paradigm of EDA and constructing the systemic theoretical framework, but also in making full use of exemplification to illustrate the working mechanism. Admittedly, this book mostly takes qualitative approach to analyze various types of texts though there are some statistical analyses (e.g. He et al. 2021: 312, 321, 322). However, it somehow neglects the emerging corpus-assisted ecolinguistic analysis. Meanwhile, this book does not cover multimodal discourse (e.g. images, videos). Although it has not been a long time since the paradigm of EDA was proposed and developed, its application

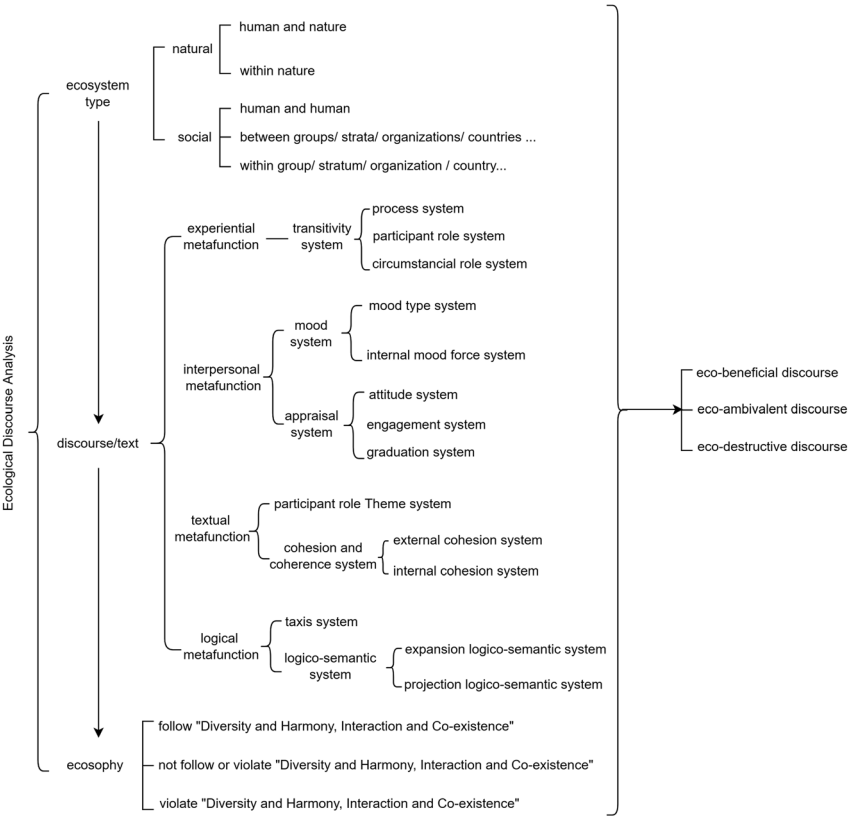


Figure 26: Theoretical framework for Ecological Discourse Analysis (He et al. 2021: 306).

is widely explored. For example, it can be employed for the analysis of emergency language, media discourse, loan words, linguistic landscape promotion, and enterprise ecological responsibility, etc. People (e.g. scholars, researchers, post-graduate students) who are interested in the domain of ecolinguistics and EDA are suggested to read this book thoroughly and carefully. This book can be helpful for prospective readers to find unecological language use through EDA, and further raise people's ecological awareness and improve the ecological behaviors, thus ultimately promoting the process of the ecological civilization.

References

Carson, Rachel. 1962. *Silent spring*. Boston: Houghton Mifflin.

- Cheng, Ming & Wei He. 2021. News reports about the Sino-US trade war: An ecolinguistic approach. *Journal of World Languages* 7(3). 428–460.
- Fill, Alwin. 2001. Ecolinguistics: States of the art 1998. In Alwin Fill & Peter Mühlhäusler (eds.), *The Ecolinguistics reader: Language, ecology and environment*, 43–53. London: Continuum.
- Halliday, Michael A. K. 1990. New ways of meaning: The challenge to applied linguistics. *Journal of Applied Linguistics* 6. 7–36.
- Halliday, Michael A. K. & Christian M. I. M. Matthiessen. 2014. *Halliday's introduction to functional grammar*, 4th edn. London: Routledge.
- Haugen, Einar. 1972. The ecology of language. In Anwar S. Dil (ed.), *The ecology of language: Essays by Einar Haugen*, 344–366. Stanford: Stanford University Press.
- He, Wei. 2017. “Subject-predicate predicate sentences” in modern Mandarin Chinese: A Cardiff grammar approach. *Linguistics* 55(4). 935–977.
- He, Wei. 2021. “Shengtai huayu fenxi”: Hanlide moshi de zaifazhan [“Ecological discourse analysis”: Further development of the Hallidayan model]. *Waiyu Jiaoxue [Foreign Language Education]* 42(1). 20–27.
- He, Wei. Forthcoming. Categorization of experience of the world and construction of transitivity system of Chinese. *Word*.
- He, Wei & Ming Cheng. 2021. Shengtai yuyanxue shijiao xia de luoji guanxi xitong [Logical system from an ecolinguistic perspective]. *Jiefangjun Waiguoyu Xueyuan Xuebao [Journal of PLA University of Foreign Languages]* 44(3). 51–59.
- He, Wei, Ran Gao & Jiahuan Liu. 2021. *Shengtai huayu fenxi xinfazhan yanjiu [New developments of ecological discourse analysis]*. Beijing: Tsinghua University Press.
- He, Wei, & Jiahuan Liu. 2019. Yinghanyu xiaojujian luoji yuyi guanxi ji biaozheng fangshi duibi yanjiu [A contrastive study of the logico-semantic relations and their representations between English and Chinese clauses]. *Beijing Keji Daxue Xuebao (Shehui Kexue Ban) [Journal of University of Science and Technology Beijing (Social Sciences Edition)]* 35(2). 1–17.
- He, Wei & Jiahuan Liu. 2020. Duoyuan hexie, jiaohu gongsheng – shengtai zhaxue guan de jiangou yu fazhan [Diversity and harmony, interaction and co-existence: Construction and development of ecosophy]. *Shandong Waiyu Jiaoxue [Shandong Foreign Language Teaching]* 41(1). 12–24.
- He, Wei & Zijie Ma. 2020. Shengtai yuyanxue shijiao xia de pingjia xitong [Appraisal system from an ecolinguistic perspective]. *Waiguoyu [Journal of Foreign Languages]* 43(1). 48–58.
- He, Wei & Chen Ma. 2020a. Shengtai yuyanxue shijiao xia de zhuwei xitong [Theme system from an ecolinguistic perspective]. *Zhongguo Waiyu [Foreign Languages in China]* 17(4). 23–32.
- He, Wei & Chen Ma. 2020b. Shengtai yuyanxue shijiao xia de xianjie yu lianguan [Cohesion and coherence system from an ecolinguistic perspective]. *Beijing Di'er Waiguoyu Xueyuan Xuebao [Journal of Beijing International Studies University]* 42(2). 26–45.
- He, Wei & Minchen Wang. 2019. Yinghanyu xiaoju jiegou duibi yanjiu [A contrastive study of English and Chinese clause structures]. *Shanghai Jiao Tong Daxue Xuebao (Zhaxue Shehui Kexue Ban) [Journal of Shanghai Jiao Tong University (Philosophy and Social Sciences)]* 27(3). 116–137.
- He, Wei, Lianzhu Wang, Fang Geng & Xiaotian Guo. Forthcoming. *Yinghan gongneng duibi fenxi [Contrastive study of English and Chinese from functional perspective]*. Beijing: China Social Sciences Press.
- He, Wei & Rong Wei. 2018a. Duoyuan hexie, jiaohu gongsheng – guoji shengtai huayu fenxi zhi shengtai zhaxueguan jiangou [Diversity and harmony, interaction and co-existence –

- ecosophy for international ecological discourse analysis]. *Waiyu Xuekan [Foreign Language Research]* 41(6). 28–35.
- He, Wei & Rong Wei. 2018b. Huayu fenxi fanshi yu shengtai huayu fenxi de lilun jichu [The paradigm of discourse analyses and the theoretical foundation of ecological discourse analysis]. *Dangdai Xiucixue [Contemporary Rhetoric]* 37(5). 63–73.
- Henry, Olivier. 1920. *Strictly business: More stories of the four million*. Garden City, NY: Doubleday, Page & Company.
- Kress, Gunther & Theo van Leeuwen. 1996. *Reading images: The grammar of visual design*. London: Routledge.
- Martin, James R. & Peter R. R. White. 2005. *The language of evaluation: Appraisal in English*. London: Palgrave Macmillan.
- Stibbe, Arran. 2015. *Ecolinguistics: Language, ecology and the stories we live by*. London: Routledge.
- Thompson, Geoff. 2014. *Introducing functional grammar*, 3rd edn. London: Routledge.
- Wei, Ruby Rong. 2021. An interpersonal framework of international ecological discourse. *Journal of World Languages* 7(2). 1–29.
- Zhang, Ruijie & Wei He. 2020. Human-nature relationships in experiential meaning: Transitivity system of Chinese from an ecolinguistic perspective. *Journal of World Languages* 6(3). 217–235.
- Zou, Dongsheng & Zhiqiang Gao. 2013. *Dangdai shengtaixue gailun [An introduction to contemporary ecology]*. Beijing: China Agriculture Press.