Language, Culture, and Ecology: An Exploration of Language Ecology in Pragmatics

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Abstract

This paper discussed the relationship between language, ecology, and culture, and claimed that the study of linguistic communication as pragmatics should not be confined to the traditional context, but should focus on a broader ecological environment. It analyzed the context of practical communication from the perspective of language ecology beginning with the discussion of the ecological crisis in communication and found that language, like plants and animals in nature, needed the support of the external environment with certain "soil fertility". This paper classified ecological context into two types: internal ecological context (psychological-cognitive context) and external ecological context (natural environment and social environment). Based on this classification, the ecological context of pragmatics was further divided into environment-friendly context, addressee-friendly context, and speaker-friendly ecological context. This paper was an exploratory analysis of language ecology in pragmatics, aiming at helping communicative participants find their ecological niche and adopt appropriate strategies to maintain the ecological balance in pragmatic communication.

Keywords: language ecology, pragmatics, ecological context, ecological niche, ecological balance

1. Introduction

Ecolinguistics originated from *The Ecology of Language* by Haugen (1972). It studied the interaction between language and environment (the social environment and cognitive environment), focusing on language status, language diversity, language survival, and language development, namely the language ontology. Haugen's theory was also known as the "metaphorical model" because he believed that the relationship between language and context was the same as the relationship between organisms and the natural environment. Corresponding to Haugen's model was Halliday's model (Halliday, 1990; Halliday, 2007), i.e., the "non-metaphorical model". It studied the impact of language on the environment (the natural environment), focusing on environmental issues, climate change, plant and animal growth, etc. Halliday initially proposed that the ecology of language was to study various "ecological" phenomena of grammar. For example, "*soil*" and "*water*" were regarded as uncountable nouns and they were infinite, i.e. inexhaustible, which was also the embodiment of growthism. In addition, the classification of pronouns into "*he*", "*she*" and "*it*" is a manifestation of classism and sexism. Ecolinguistics has been applied to analysis from many different perspectives since its birth, e.g. discourse analysis (Fill and Muhlhausler, 2001; Goatly, 2002; Steffensen and Fill, 2014; Stibbe, 2001; Stibbe, 2015), grammatical analysis (Goatly, 2018), language evolution (Mufwene, 2013), and linguistic diversity (Skutnab-Kangas and Harmon, 2018), among which the discourse analysis was the most widely applied. However, the application of language ecology in pragmatics was rare. This paper began with a discussion of the ecological crisis in linguistic communication and sorted out the relationship between language, culture, and ecology to find the strategies to solve the pragmatic ecological crisis. It analyzed the ecological context and niche of pragmatics and defined the content of ecological balance in pragmatics.

2. Ecological Crisis in Linguistic Communication

According to the Encyclopedia entry (baike.so.com), "Ecological Crisis" referred to the phenomenon that the ecological environment was seriously destroyed, which threatened the survival and development of human beings. It was the malignant development result of ecological imbalance and was mainly caused by human blindness and excessive production activities. Similarly, when the pragmatic ecological balance was broken, the

pragmatic ecological crisis would occur. According to pragmatics, communicative elements could be summarized as communication participants, context, communicative principles, etc. (Leech, 1983; Levinson, 1983; Thomas, 1995). Therefore, the pragmatic ecological crisis was generally reflected in three aspects:

1) Temporal-spatial environment crisis, i.e. pragmatic crisis in different time and space. Take the long-distance couples in China as an example, they were unable to communicate timely and effectively, which lead to an emotional breakdown.

2) Language ontology crisis, i.e. the ecological crisis in language use, including the decline of linguistic diversity, the disappearance of some language phenomena, and the emergence of various unecological language phenomena.

3) Participants ecological crisis. Speakers of foreign languages, dialects, or minority languages could only communicate with speakers of the same language. In China's minority areas, people spoke more than three languages. Imagine a scenario where both speakers A and B may speak Mandarin, and A thought B did not speak Mongolian, and thus, he said something unfavorable to B in Mongolian. But at this moment, B indicated that he had heard and understood what A said, which was the embodiment of a pragmatic ecological crisis. Another example was when several friends gathered, three of the four were Mongolian and one was Han, who did not speak Mongolian. When the other three chat in Mongolian, the fourth one would feel excluded.

How do we understand and resolve the crisis of language ecology? Answering the above question should start with clarifying the relationship between language, culture, and ecology.

3. Language, Culture, and Ecology

3.1 Language and Culture

National language was the totem of national culture, and also the soul and the symbol of the existence of a nation. At the same time, national language could enhance cohesion, and strengthen the national identity of the compatriots. Since language was the carrier of culture (Su, 2006: 51), the protection of national language should start with national ecological culture. On the contrary, the protection of national ecological culture should also start with the protection of the national language. Scholars of cultural linguistics had discussed the relationship between language and culture:

1) Language is the mode and symbol system of national culture. It aims to reveal the cultural connotations hidden in language form, structure, use, and change. (Dai, 1996: 24)

2) Language is a unique cultural behavior of human beings, and it is an important form of culture. (Guo, 2015: 4)

3) Language is the carrier of culture. (Su, 2006: 51)

4) National language is the most basic and core part of national culture. A nation's cultural achievements can only be accumulated through its language, and its cultural innovation is mainly accomplished by its language. (Zhang and Ding, 2004: 10)

To sum up, we have got that language was the carrier of culture, and language embodied culture. The relationship between the two was extremely close, and even the death of a language would lead to the death of a culture. Sina News, quoting a UNESCO communique, reported an article titled "Nearly half of the world's languages have disappeared or are on the verge of disappearing" (http://news.sina.com.cn/w/2002-02-22/1127482048.html): "In Australia, hundreds of indigenous languages had disappeared by the 1970s. In the United States, more than 150 Native American languages no longer exist. Of the 1,400 indigenous languages in Africa, only 850 remain, and more than 250 are in crisis". The disappearance of the languages of different countries was an indication of the disappearance of these indigenous cultures, which was why countries called for the protection of endangered languages, as they were part of the cultural heritage of mankind.

3.2 Language and Ecology

Language symbols and language functions were ecological. In the book *Water Knows the Answer*, when the researchers said different words to water, it looked completely different under a microscope. For example, saying a compliment to water (e.g. thank you; I love you), the crystal of water was neat and beautiful (Figure 1a); but saying nasty things (e.g. annoying), it crumbled under the microscope (Figure 1b). Through this experiment, we knew that although the language was invisible, it was powerful and has a visible impact on the ecology.
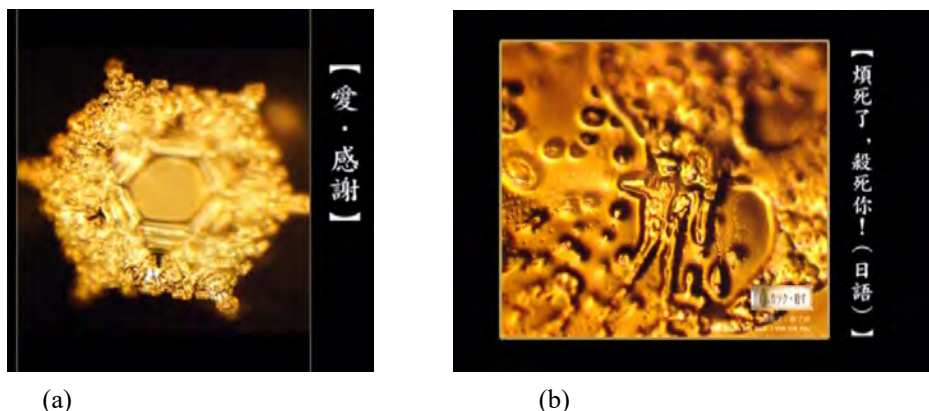
<div align="center">(a)   (b)</div>

Figure 1. The mirror image of *Water Knows the Answer* (from https://baike.so.com/doc/3589882-3774774.html)

In addition, the characters (words) themselves and their functions were ecological. If "ecology" was given color, we would immediately think of the word "green". We saw this word just like witnessing nature. That is why we could always see green environmental protection signs everywhere in China. In the northern part of China, well-manicured lawns were not easily available due to the climate, so both the government and people cherished them. At the same time, China is also a country advocating environmental protection, and therefore, signs were often posted on park lawns: *"Watch your hand for flowers, watch your foot for grass"*. When we see such signs, we felt as if the grass were crying when stepping on it. We will immediately feel self-restraint. Hence, characters and their functions were also ecological.

3.3 Language, Culture, and Ecology

This study considers the relationship between language, culture, and ecology as follows:

1) Language, as a form of cultural content, must be placed in an ecological environment;

2) The ecological environment could be divided into the internal ecological environment (psychological-cognitive ecological environment) and external ecological environment (natural ecological environment and social-ecological environment);

3) Many factors influenced the language ecology, e.g. the power status, affection, personality of the speaker, the mood at the time, the surrounding environment, etc., and all of which have a certain degree of influence on the language ecology. As the "fertile soil" of language, the ecological environment played the role of "fertility", which either nourishes the development of language in a positive direction, i.e. harmonious discourse, or is destructive to the development of communication, i.e. language violence. The relationship between language, culture, and ecology is shown in Figure 2:
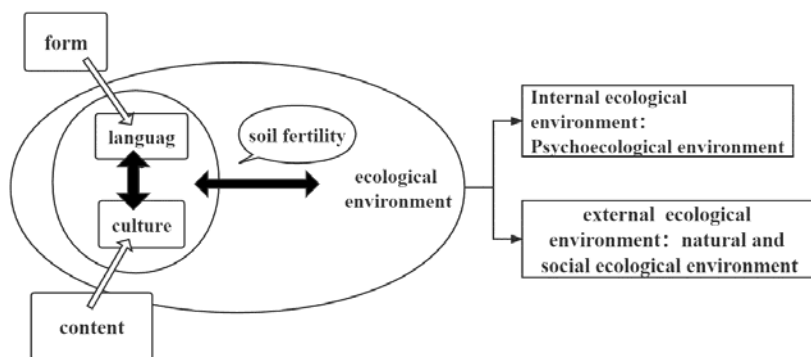

Figure 2. The relationship between language, culture, and ecology

4. The Ecological Context of Pragmatics

Context has always been the focus of linguistic research, and different branches have different criteria for the classification of context. Systemic Functional Linguistics (SFL) divided context into co-text context, situational context, and cultural context. The situational context was first proposed by Firth (1950) and developed by Hymes (1962). Huang (2002) believed that context embodied situational context, while situational context embodied the text (phonetic level/lexical grammar level). Halliday (1994/2000) put forward the concept of the

register under the theoretical framework of situational context in SFL and divided it into the field, tenor and mode. The field refers to the topic, scope, or domain involved in the communication between the two parties, corresponding to the ideational function of the three meta-functions. Tenor refers to the relationship between two communicative parties, corresponding to the interpersonal function. Mode refers to the language style of communication, whether written or oral, corresponding to the textual function. Context from the perspective of SFL can be represented by the following Figure 3.
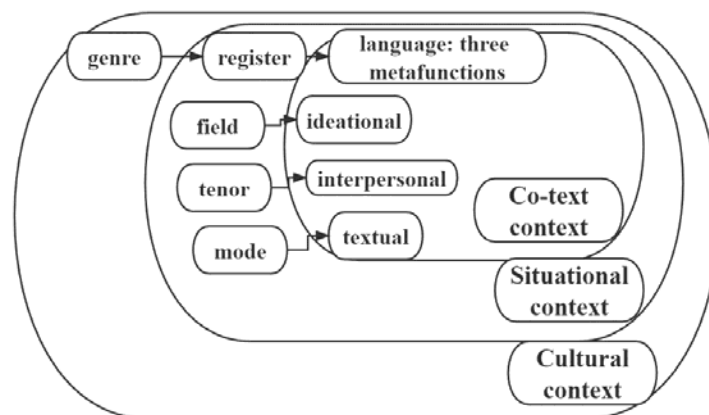

Figure 3. The relationship between the three contexts in SFL

In addition, Verschueren (2000) divided context into communicative context and linguistic context and proposed the dynamic generation view of context. Kecskes (2014: 129) divided context into immediate context and prior context. Hall (1976: 105-116) proposed high-context and low-context from the perspective of law. High-context took into account the cultural background of the legal system, while low-context was reflected by the actual operation mode of a country's legal system.

The above context emphasizes the importance of situational factors in text understanding, but the correlation, hierarchy, and clarity of the synergy between situational representation and language representation in its model are not strong (Xiao, 2021). Compared with previous studies, the scope of ecological context should be considered more broadly. It not only referred to the speech environment but also involved external factors such as nationality, society, and culture as well as internal psychological factors of communicators, as shown in Figure 2. The ecological content of pragmatics was how to use language ecologically to achieve the effect of being friendly to the environment, the speaker, and the receiver. Time, space, hearer, speaker, situation, language ecology (code-switching, language conversion) and topic were the elements of the ecological context of pragmatics. The ecological context should also consider the limitations of register, e.g. field, tenor, and mode (Halliday, 1994/2000). The ecological context of pragmatics can be divided into three modes. The first one is an environment-friendly ecological context, a discourse environment of low carbon, sustainable, renewable, moderate, equal, and harmless to the environment. It is the reflection of the external ecological environment represented by the natural ecological environment. For example, at a business dinner, the invited was vegetarian, but the table was full of meat and raw seafood, and then the following conversation atmosphere would be awkward, no matter what the purpose of the invitation (to achieve cooperation, gratitude, politeness). It is not conducive to the achievement of the purpose of communication.

The social-ecological environment and internal ecological environment were often integrated and inseparable in the process of communication, which could be divided into two categories, the addressee-friendly ecological context, and the speaker-friendly ecological context. The former context was a kind of reciprocal, comfortable, and free in time and space, on the premise that the speaker complied with the principle of cooperation and politeness, and maintains the addressee's positive face. The speaker-friendly ecological context, a context where the discourse was not disturbed and was free to express, with clear communicative purposes to make the speaker actively cooperate with the speaker, and the premise was that the addressee complied with the principle of cooperation and politeness, and maintained the speaker's positive face.

A very important concept in pragmatic ecology was "soil fertility", a newborn term. The "soil" from ecological areas, was a concept of soil science. Following the Encyclopedia (https://baike.so.com), soil fertility was the basic properties of the soil and nature, which was the supply for plant growth and coordination of nutrients, water, air, and heat capacity, and was a combination of soil's physical, chemical, and biological properties. The

four major fertility factors are nutrients, water, air, and heat. From the perspective of metaphor, the ecological environment, as the "fertile soil" of language, also played the role of "fertility", which either nourished the development of language in a positive direction, e.g. harmonious language, or negative direction, e.g. language violence. From the point of view of ecology, if it is the latter, it is not conducive to the construction of a harmonious society. This paper held that two ecological fertility factors affect language: emotion factor and power factor (as shown in Table 1).

Table 1. "Soil fertility" factors of pragmatics

fertility factors / discourse	affection		power
	rational	emotional	
destructive discourse	-	+	+
harmonious discourse	+	-	-
neutral discourse	+	-	+
	-	+	-

In Table 1, we can see that:

1) Among the fertility factors, affection was an important factor leading to the harmony of discourse ecology under a certain topic. In general, when the relationship was good and the topic was easily accepted, the ecological trend of discourse was harmonious discourse or neutral discourse. However, the relationship was not necessarily decisive in discourse but was affection (rational or emotional). That is why we feel that words hurt the most to those we are closest to, such as children to parents, or lovers, but we always say lots of hurtful things to our beloved ones.

2) Under the influence of the power factor, the party with strong power will usually use destructive discourse or neutral discourse, which is determined by the power status of both sides of the discourse. At this time, the discourse usually has a commanding tone. The harmonious discourse will also be shown in the party with strong power when it is necessary, e.g. the concern or sympathy of the superior to the subordinate. The party with weak power will generally use harmonious discourse and neutral discourse because of social class differences. Due to China's ritual system since the Zhou Dynasty, as well as the influence of thousands of years of imperial culture, Chinese people pay attention to the priority of rank, as can be seen from China's complex appellation system. Yet in equal cooperation, due to their equal social class and pursuit of the same goal, both parties of discourse will adopt harmonious discourse or neutral discourse.

   a) But language is complex, and sometimes both factors of affection and power work at the same time:

3) When the rational factor is negative and the power factor positive, the discourse will be destructive; when the rational factor is positive and the power factor is negative, the discourse is harmonious; when both the rational and power factors of the discourse are positive or negative, the discourse is neutral.

5. Appropriate Pragmatic Niche

Niche was a concept of ecology, and it was the sum of all the interactions between an organism and its abiotic and biological environment (Hutchinson, 1957). For a biological individual and its population, a niche refers to the set of ecological factors or relations that are necessary for its survival or can be used by it. On the one hand, the difference between an ideal niche and a real niche forces organisms to seek, occupy and compete for good niches. On the other hand, it also forces organisms to constantly adapt to the environment, adjust their niche and achieve the balance between organisms and the environment through natural selection.

As language researchers, we should have social responsibility. As individuals, our ecological responsibility is to self-awake, self educate, and advocate ecological life. Thus, the pragmatic niche mentioned in this paper mainly refers to identity construction, and we should firstly distinguish between social identity construction, pragmatic identity construction, and pragmatic niche identity construction. In recent years, research on identity construction and interpersonal pragmatics has attracted much attention (Locher, 2011: 187; Haugh et al., 2015: 73). Social identity construction focused on social behaviors related to identity than psychological construction, emphasizing that identity was a process always embedded in social practice. Identity was constructed through discourse, which was the result of interaction between two parties in communication in a specific context to serve a specific communicative purpose. Verschueren (1999: 92) pointed out that pragmatics should pay more attention to speakers' cultural belonging, social class, identity background, ethnicity, and education level, which were closely related to the construction of social identity. Thus, identity construction from a pragmatic

perspective (Joseph, 2004: 77; Norris, 2011:179-80) focused on: 1) exploring the contextual constraints, goals, or motives of identity construction; 2) exploring how identity construction could be used as a resource to advance the realization of communicative goals; 3) exploring a theoretical approach to promote the existing pragmatic theories.

This paper argues that the identity construction of a pragmatic niche should not be limited to the current context of communication, but should consider the broader ecological environment. The pragmatic niche can be considered from the people-oriented niche, government-oriented niche, and nation-oriented niche. No matter what kind of niche, pragmatic subjects should find their ideal niche according to the ecological environment of language, to achieve the balance between pragmatic subjects and other participants and the language environment.

The people-oriented niche mainly refers to the inter-lingual niche, i.e. language shift or code-switching. If a nation is compared to an ecological system, as a member of a nation, everyone should find his or her niche in the ecological system. Language shift is common in many countries, which refers to the phenomenon of the people of a nation giving up their mother tongue and switching to another language (Gao, 1963), also known as "language replacement". The main reason for this phenomenon is cultural contact, which eventually leads to language contact. In addition to the reasons for the convenient communication, from the ecological point of view, it is the members of the group who fail to find their ecological niche or even lose their ecological niche within the ecosystem.

The second is the government-oriented niche. Most researchers shared the same opinion that if language research was conducted using a field survey method, there were many difficulties, such as communicating with local government and relevant departments in advance and getting cooperation from residents. In addition to demographic statistics, there were few special statistics on language use. Therefore, in language research, works led by the government and other authorities were crucial. In the government-oriented ecological niche, relevant departments should find their position and strengthen the linguistic statistics in minority areas, to provide data support for the next strategy of ethnic language protection. At the opening ceremony of the 19th National Congress of the Communist Party of China (CPC), President Xi Jinping called for promoting the development of cultural programs and industries, enhancing people-to-people exchanges with other countries, promoting international communication capacity building, telling China's stories well, presenting a true, three-dimensional and comprehensive China, and enhancing the country's cultural soft power. As a totem of national culture, national language plays a very important role in promoting national culture. Thus, the government should strengthen the training of translation talents. Under the ecological background of the Belt and Road initiative, attention should be paid to the integrity of translators' living and working status in their surroundings.

The third is the national niche. The national language is the cohesion of a nation. If we meet fellow countrymen in a foreign country, we will be extremely cordial and have a sense of identity and belonging. However, in a multi-ethnic area, the problem of multi-language coexistence should be dealt with carefully, otherwise, it will cause language conflict, cultural conflict, and even political conflict, which will do great harm to the construction of a harmonious society. National language should keep their niche purity, but reject non-ecological ideas such as "classism".

6. Ecological Balance in Pragmatics

Ecological balance refers to the dynamic balance in which the structure and function of each part of the ecosystem are in mutual adaptation and coordination under a certain time and relatively stable conditions. When the external disturbance exceeds the self-regulation ability of the ecosystem and cannot restore the original state, the imbalance or destruction of the ecology will occur. There are two reasons for this: 1) unreasonable exploitation and utilization of natural resources; 2) environmental pollution caused by human beings. Accordingly, pragmatic ecological balance refers to that in a certain language environment, both parties should adjust their discourse strategies according to the communicative purpose, communication objects, temporal-spatial environment, and other factors to maintain communicative balance.

There are similar concepts in pragmatics to maintain such kind of "balance", such as the cooperation principle (Grice, 1975), politeness principle (Leech, 1983), face theory (Brown and Levinson, 1978), etc. In an ecosystem, there are three main factors in the biological chain: producer, consumer, and decomposer. These three factors maintain a certain balance with the biological environment through material circulation and energy flow. From the discussion in the previous section, when in the people-oriented niche, "producers" in linguistic communication refer to speakers or addressers of utterance; "consumers" refer to hearers or addressees; "decomposers" refer to linguists. In the language ecosystem, the three functional groups are all creating value by

themselves. The energy flow, material flow, and information flow are related and influenced each other, ultimately enabling the smooth progress of communication and promoting the evolution and development of language. Similarly, if the ecological environment of language fails to enable the communicative parties to adjust their communicative strategies, or exceeds the range that the communicative parties can bear, then the pragmatic ecosystem will be destroyed, which is called pragmatic ecological imbalance. For example, children constantly interrupt their parents' conversation at the dinner table, or during important international business negotiations, the translator leads to the failure of the negotiation because of his unprofessional conduct, etc.

7. Conclusion

The social responsibility of language researchers was to find a balance between people, society, and nature, aiming to truly benefit mankind, rather than regard language as a tool. This study reexamined the study of pragmatics from the perspective of language ecology and argued that the use of language should not be limited to traditional contextual studies, but should be considered from a broader ecological context, including internal ecological context (psychological cognitive context) and external ecological context (natural environment and social environment). Based on this statement, the ecological context of pragmatic ecology was further defined as environment-friendly, addressee-friendly, and speaker-friendly context. In practical communication, we should find the correct pragmatic niche, such as the people-oriented niche, government-oriented niche, and nation-oriented niche. If we keep the pragmatic ecological balance by making strategic adjustments according to the linguistic ecological environment, our communication will be in an ecological and sustainable state. There is no empirical support for this study, which is also the limitation of this paper. This exploratory study hopes to provide a new perspective and inspiration for the future study of pragmatics.

Acknowledgments

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