Ecological Change and Language Change

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ABSTRACT
The current article discuss short description of language and ecology, or ecolinguisitics in regard to the language and social change. The article discuss the concept of ecolinguistics and some approach to the study. Then, we discuss how the change of ecology and ecosystem affect the language, especially regarding language vitality. The paper also provide some examples of agricultural lexicon that rarely used due to the change of agricultural system. There some aspect that affect the language change, including language contact, environment change, language standardization, and the attitude of the speaker.

INTRODUCTION
Recently, linguistic studies have undergone a very rapid development. Many researchers no longer focus on grammatical structure (phonology, morphology, syntax, and semantic). They seek to associate linguistic forms with non-linguistic aspects, such as anthropology, sociology, politics, and psychology. One of the studies that began to be of great interest to linguists is the relationship between language and ecology (ecolinguistics). Haugen (1972) firstly mentioned the relation of language and its environment. Since then, many researchers began to focus their attention to ecological aspect of language (Makai, 1993; Fill, 1993; Mühlhäusler, 2003; Couto, 2007).

Language ecology can be defined as the study of the relationship between language and its environment (Alwin & Miihlhausler, 2001). The language environment is the community in which the language is spoken. Instead of focusing on the structure of language, the study of language and environment focuses on the relationship of the speaker and other natural entities, including human, animal, plant, and other living and non-living entities. As Van Lier (2004) highlighted that “the environment includes all physical, social and symbolic affordances that provide grounds for activity”. Moreover, ecology involves psychological aspects (including the relationship of language with other languages and multi-lingual speakers) (Haugen, 2001) and sociocultural aspects (including the relationship of language and society in which the language serves as a medium of communication) (van Lier, 2002). Therefore, the ecology of language is determined by the people who learn, use, and distribute the language to others.
Steffensen and Fill (2014), mentioned some main approach concern on the study of language and its environment, among others:

- **Language as symbolic ecology**, this focuses on the use of language as a symbolic system of the given society. This approach depicts how multiple language co-exist in the certain geographical area or social institution.

- **Language and natural ecology**, this approach focuses on the relation of physical entities, including biological aspect, such as flora, fauna, climate, and topography. The approach can be traced back to Sapir-Whorf hypotheses about the linguistics relativity.

- **Language and sociocultural ecology**, this focuses on investigation on how language relates to the social and cultural of speakers and speech communities.

- **Language and cognitive ecology**: this approach focuses on the relationship of the dynamic relationship of biological organism and the environments, how they can adapt to the environment and change. Among the topic discuss in this approach is the complexity of metaphor and the cognitive process.

### ECOLOGY OF LANGUAGE AND LANGUAGE CHANGE

As with living beings, language is born and dies. A language survive of extinct is determined by the speaker. It will will survive and develop if its speakers maintain the language and will die and extinct if no one uses the language. Language as a tool or instrument of communication helps human beings to achieve their goals. By using these tools, human beings can lives and interact with other human beings to meet their needs. As human, language is not a static and absolute form, it is dynamic and change overtime. Therefore, the ecology of language also studies how it can be more "good", more "rich", more "green" for humans.

Example:

1. **Bersih itu indah** (Clean is good)
2. **Dilarang membuang sampah disini.** (No littering)

Both utterances have the same meaning and purpose, but the first utterance feels more "cool" than the second utterance because there is no element of coercion. The first sentence is declarative sentence which in pragmatic has a neutral force. It is quite different to the second form which is the imperative form. This form force the participant to do a certain action which of course will violate a politeness strategy and threaten the face of the participant. The variety of functions and purposes of language use then give rise to unlimited variations of lingual forms (performance).

Haugen (in Fill & Mühlhäusler, 2001) studies linguistic variation in relation to ecology. He argues that among the common factors of language variation are status and intimacy. Status refers to the power (power) and influence (influence) in a group of people. Intimacy (intimacy) is related to solidarity, shared values, friendship, love, and values that arise in the life of a family or community group). These variables are usually represented by [+ status], [-status], [+ intimacy] and [-intimacy]. For most language speakers, these variables are mutually exclusive. In addition there are several other variables such as location, and formality.

In addition, the spread of language through population migration in areas dominated by speakers of a particular language can also be variable in language variation that separates between dominant (dominant) and dominated (dominated) known by the term autonomy.
(autonomy). Language autonomy can give rise to new language variants or even the loss of inferior languages. As is the case in Jamaica which is influenced by English, and produces its own language.

\[
\begin{align*}
\text{di woman dem} &= \text{the women} \\
\text{Mi ron} &= \text{I run (habitually); I ran} \\
\text{Mi a ron} &= \text{I am running} \\
\text{Mi ena (en+a) ron} &= \text{I was running} \\
\text{Mi en ron} &= \text{I have run; I had run}
\end{align*}
\]

Other cases also occurred in Singapore where Malay language as a native language mixed with English and Mandarin.

\[
\begin{align*}
\text{Don’t kacho me when I want to work! (Malaysia)} \\
\text{When we get home, we ask daddy to changkol the garden (Singapore)} \\
\text{You didn’t come by car? (India)} \\
\text{Yes, I didn’t.}
\end{align*}
\]

On the other hand, political and economic factors demand the unity of language (unity of language) that allows speakers of different languages to communicate and interact. Political factors, for example, with the reason that Indonesian nationalism emerged as enshrined in the Youth Oath 1928 “Kami putera dan puteri Indonesia menjunjung bahasa persatuan, Bahasa Indonesia. (As a nation we use a language of unity, Bahasa Indonesia). The emergence of this national language threatens the existence of regional languages, especially languages with a small number speakers. In Indonesia, some language already extinct, including Tandia, Mawes, Kajeli, Piru, Moksela, Palumata, Ternaten, Hukumina, Hot, Serua, Nila, and some others are in danger, including Reta, Bahasa Saponi, Bahasa Ibo, and Bahasa Meher.

Table 1. Local Language Vitality in Indonesia

<table>
<thead>
<tr>
<th>Status</th>
<th>Local Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawback</td>
<td>Bahasa Hitu, Bahasa Tobati</td>
</tr>
<tr>
<td>Critical language</td>
<td>Reta, Bahasa Sopani, Bahasa Ibo, Bahasa Meher</td>
</tr>
<tr>
<td>Extinct</td>
<td>Tandia, Mawes, Kajeli, Piru, Moksela, Palumata, Ternaten, Hukumina, Hot, Serua, Nila</td>
</tr>
</tbody>
</table>

Source: Statistik Kebahasaan, 2019
In addition, the unity of language can also lead to the breaking of the cultural chain (cultural discontinuity) because language is not only a lingual form, but also a cultural product. Table 1 shows the speaker of local languages in Indonesia based on statistic report of Badan Pusat Statistik (2015).

<table>
<thead>
<tr>
<th>Language</th>
<th>Speaker</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jawa</td>
<td>30,000,000</td>
</tr>
<tr>
<td>Sundan</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Malayu</td>
<td>10,000,000</td>
</tr>
<tr>
<td>Betak</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Madura</td>
<td>3,000,000</td>
</tr>
<tr>
<td>Minangkabau</td>
<td>2,000,000</td>
</tr>
<tr>
<td>Betawi</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Bugis</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Aceh</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Bali</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Makassar</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Sasak</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Lampung</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Gorontalo</td>
<td>1,000,000</td>
</tr>
</tbody>
</table>

Figure 1. Local Languages Speaker in Indonesia

Cases of language standardization can also be found in English, namely with the existence of a standard language (Receive Pronunciation) which results in even the death of English dialects. Crystal (2000) uses the term "death" to describe the extinction of the world's languages. In addition to political factors, other factors such as migration, invasion, domination, religion, and other factors also influence the preservation of language. According to Crystal, at least about 6,000 languages still survive today.

Language contact also allows for language changes (Language Shift). The contact of speakers with other speakers of other language will also affects the sustainability of a language. Therefore, language speakers in isolated areas are able to maintain the authenticity of their language. Language contact can be physical contact, such as inter-ethnic marriage, religion, social class, or economic class, and economic transactions. In addition, non-physical contact such as the influence of print media or electronic media (radio, television, internet) can also affect language change. The younger generation is the most vulnerable age to language change. This is because the intensity of their interaction with other speakers is higher than that of the older generation.

Other factors that influence the preservation language are changes in the environment and the attitudes speakers towards the changes. Changes in lifestyle, work patterns, and human activities certainly affect the intensity of human and environmental relationships that of course affect the language. For example, the change in agrarian lifestyle to industry has resulted in the loss of many agrarian-related lexicons. For example, some agrarian lexicons that are no longer used in society, here some example of agriculture lexicon that no longer used:
Tuai

*Tuai or ani-ani* (small knives used to separate ripe rice and raw rice) are no longer known to the community, although some derivative form of the word *tuai* still exist in the daily conversation, such as *menuai* (harvest). This is due to the change in agricultural behavior by using traditional equipment to modern agriculture by using machines.

![Tuai or ani-ani](https://1001indonesia.net/mengenal-alat-pertanian-tradisonal-jawa/)

**Figure 2. Tuai or ani-ani**
(Source: https://1001indonesia.net/mengenal-alat-pertanian-tradisional-jawa/)

*Tuai or ani-ani* is a traditional tools used by local farmer to harvest the rice. It made of wood or bamboo. The name is and the form is vary and can be found almost in the agricultural society in Indonesia. However, only the word *tuai* used in Bahasa Indonesia which then become a lexicon. By the change of agriculture technology, local farmer no longer use this tool and tend to use modern machine.

![Modern tools for harvesting](https://rimbakita.com/alat-pertanian-modern/)

**Figure 3. Modern tools for harvesting**
(Source: https://rimbakita.com/alat-pertanian-modern/)

Bajak

Similarly, the word *bajak* is rarely used because the farmer nowadays use machine (tractor) to cultivate the land. In fact, some derivations of the work *bajak* still exist, such as *pembajakan* (piracy).
Bajak is a traditional wooden plough which is used to cultivate the soil. It usually pulled by an ox or buffalo. In certain area in Indonesia, people have a specific time for cultivate the land and they held ceremony for the event. Today, cultivating the land is much more easier, the farmer use tractor plough to cultivate the soil.

Lesung and Alu

Lesung is a tool used to get separate the rice and the bran. It is usually made of wood and has containers to store the rice. Then the rice will be meshed and milled by using a long wooden stick which is called Alu. Nowadays, the farmer no longer use these tools to get the rice ready to cook, they use a modern milling machine instead. However, the word lesung is still used, but with different collocation, lesung pipi (dimple).

Nyiru

Nyiru is a traditional tray uses to separate the rice with the bran. It is made of bamboo and has different shape. Since the modern agriculture use machine, this tray is no longer used.
There many other lexicon no longer use in the daily communication, and off course if we cannot documented the word, someday those lexicons will be extinct. What the most important thing regarding to the ecological change and the language change is how to preserve the language. This is very important because language is the identity of the speakers. Language is not an independent entity which separate with the speaker. In term of agriculture lexicon, for example, in Indonesia processing the rice is not only about how to get a rice ready, but it includes a series of process which reflect the local wisdom. In the traditional agriculture, every steps of rice processing has a specific value. Some activities were done in the community and they hold certain ceremonies. By the advance of agriculture technology, the farmer can do the process by themselves, it is more simple, fast, and time efficiency. However, this will diminish the role of ecological system and the language used by the speaker. People no longer aware about the ecological system around them because they get the final product for they daily needs.

CONCLUSION

The extinct languages are generally do not have a writing system and are the smallest part of a community of speakers of a particular language. In the absence of a writing system resulting in the only way of language acquisition is through the oral system which is highly dependent on the number of speakers of the language. The fewer speakers of a language, the greater the likelihood that the language will become extinct. Language change is usually also followed by the death of the previous language. In some cases there are languages that change and die, such as Kornish into English, languages that change but do not die, such as Welsh and Norwegian into English, languages that die unchanged, such as Tasmanian.

Therefore, codification and documentation in the form of dictionaries, grammatical texts or other forms are very important for the preservation of language. In addition, the attitude (attitude) of the speaker towards his language is also very important for the preservation of his language. Language is not only a "tool" but also the identity of its speakers which includes historical, social, and cultural aspects.

REFERENCES

Thesaurus, Brasília.


