



The Dynamics of Knowledge of The Nyuh Lexicon in Balinese Society



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Abstract

This study examines the form and process of the formation of the *nyuh* lexicon, the use of the *nyuh* lexicon in the lives of Balinese people, analyzes the dynamics of knowledge of the *nyuh* lexicon among generations of Balinese people and formulates the factors causing the dynamics of understanding and use of the *nyuh* lexicon between generations of Balinese people. This study use qualitative descriptive method and quantitative statistics. Ecolinguistic theory is used as the main theory. Factors that influence the dynamics of the lexicon are analyzed using the theory of language change. The results of this study indicate that (1) There is a decline in the level of understanding and use of the *nyuh* lexicon between generations of Balinese people. Some lexicons are experiencing erosion and are threatened with extinction. (2) The dynamics are caused by two factors, namely, internal linguistic factors due to language contact and lexical borrowing and external factors, such as; ecological changes, social changes, modernization and invention, and government regulations.

1. Introduction

The influence of ecological changes, activities, and language contact causes lexicon shift. The phenomenon of lexicon shift is common in a language. Regional languages are often affected by language shift, one of which is Balinese. Language contact and ecological change are two factors that greatly influence the shift in Balinese. Haugen (1972) argues that language ecology is the study of the interaction between language and its environment. The environment in question is everything in a

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person's mind that is recorded visually or verbally. This recording takes the form of a composition of lexicon and grammatical patterns, which exist in the language's treasury, especially those related to the world and natural environment in which the language is used. In this case, ecolinguistic studies are needed to examine the reciprocal relationship between the surrounding environment and language. There are many lexicons that can be studied from an ecolinguistic perspective, for example, regarding lexicons found in biotic environments, such as plants in Balinese. The existence of a flora or plant lexicon in Balinese is very interesting to study. This is because there are parts of plants in Balinese that have specific terms, one of which is the coconut. Globally, the coconut is a multi-purpose plant because every part can be used. In fact, the coconut is nicknamed the "Tree of Life" because in several developing countries, many people depend on coconut plants for their livelihoods as a source of food, drink, building materials, medicines, handicrafts, fuel, cosmetics, soap, and so on.

Coconuts are one of the most popular fruit crops grown by the Balinese people due to their close ties to customs and culture. Within Balinese Hindu tradition, coconuts are a crucial element, arguably the most fundamental. The tools used are mostly derived from coconut parts. Coconuts are called nyuh in Balinese. Nyuh, for the leaves alone, has three terms. First, yellow leaves are called busung, green leaves are called palpalan/slépan, and dry leaves are called danyuh. Haugen (1972) also states that environmental concepts can be used in the formation of metaphorical expressions.

The results of this study are expected to be able to document the lexicons of flora, in an effort to maintain the Balinese language in the era of globalization. With this research, it is hoped that it will be possible to classify and analyze the form and process of the formation of the coconut lexicon treasure in Balinese, analyze the use and understanding of the coconut lexicon treasure in Balinese in the lives of the speaking community, and analyze the dynamics of knowledge of the coconut lexicon treasure between generations of the Balinese community.

2. Materials and Methods

This research uses several theories relevant to the problem at hand. Ecolinguistic theory is the primary theory, allowing for analysis of the relevance between language and the environment. Ecolinguistic studies address three key parameters: (1) the environment, (2) the interdependence of environment and language, and (3) diversity. The Balinese environment is changing rapidly. Therefore, the lexicon associated with the coconut lexicon is also undergoing change and is feared to be eroded. According to Haugen (1970) in Mbete (2009: 11-12), ecolinguistics is related to ten areas of linguistic study: 1) comparative historical linguistics, 2) demographic linguistics, 3) sociolinguistics, 4) dialinguistics, 5) dialectology, 6) philology, 7) prescriptive linguistics, 8) glotopolitics, 9) ethnolinguistics, anthropological linguistics, or cultural linguistics, and 10) the typology of languages within a given environment.

Within the scope of ecolinguistic studies, living and used language depicts, represents, and depicts (symbolically verbally) the reality of the environment, both the physical environment and the man-made environment (the socio-cultural environment). In addition to the umbrella theory, this study also utilizes four supporting theories: morphological theory, semantic theory, and language change theory. The three theories are used to help solve problems related to lexicon and its formation process, analysis of its grammatical function, analysis of the meaning of expressions, and analysis of factors causing the dynamics of understanding and use of coconut lexicon. The morphological theory of Kridalaksana (2007) is used to analyze the form and formation of coconut lexicon, because the principle of word formation in Balinese is in accordance with word formation in Indonesian. To dissect ecogrammarics, the syntactic theory by Alwi, et al., (1998) is used in relation to the grammatical function of coconut lexicon at the sentence level. The semantic theory by Ogden and Richards (1923) is used to dissect the lexical meaning of coconut lexicon, which is assisted by applying the theory of grammatical meaning by

Chaer (2009) to analyze the meaning of expressions formed from coconut lexicon, factors that influence the dynamics of understanding and use of lexicon are analyzed using the theory of language change by Aitchison (1991).

This research is a descriptive qualitative field study. The data used in this study consist of two types: qualitative and quantitative. Qualitative data consists of verbal data, namely the coconut lexicon, sentences, and metaphorical expressions from the coconut lexicon, while quantitative data consists of nonverbal data, namely the percentage of speakers' comprehension levels. The data sources in this study are: primary data obtained from interviews with Balinese speakers and reference sources such as Balinese dictionaries, Balinese language books, and reliable digital information media.

The data collection methods and techniques in this study used observation/observation and interviews. According to Sudaryanto (1993:203), observation and interviews are methods used to obtain data by observing language use. The observation/observation method in this study employed free listening and note-taking techniques. The researcher collected data on the coconut lexicon and its use through listening through the process of searching for and reading reading sources. In addition to observation/observation, this study also used interviews. The techniques used in the interview method include recording and note-taking.

After data collection, the next step is data analysis. Several steps are taken before data analysis, including examining and classifying the data in detail according to the lexicon classification. Miles and Huberman, as cited in Sugiyono (2013: 246-253), state that qualitative data analysis is interactive and continuous until complete, resulting in data saturation. Data analysis involves data reduction, data display, and conclusion drawing/verification. Linguistic data in the form of coconut lexicons were analyzed using the matching method and the distribution method. The matching method uses external determinants, separate from, and not part of the language in question (Sudaryanto, 1993: 13). The technique used in the matching method is the basic technique of separating determining elements (PUP). The matching method used in this study is a matching method with advanced techniques, namely the PUP (Public-Level Comparative Analysis) with referential discrimination, also known as the referential matching method. This method is associated with the lexicon categories used in the coconut lexicon, and the references must also be observed.

The method for presenting the data analysis results uses a combination of formal and informal methods (Sudaryanto, 1993: 145). The data analysis results are presented using descriptive techniques. The formal method uses tables and graphs. Tables are used to list all coconut lexicon resources, while graphs are used to present the level of understanding of informants according to their age. The informal method in this study is presented in the form of descriptive analysis through the use of well-structured sentences for easy understanding, using inductive and deductive techniques.

3. Results and Discussions

Based on the research results, the lexicon of the Balinese coconut lexicon consists of words and phrases. Words are linguistic elements that convey meaning and consist of one or more morphemes. Based on their form, words can be either single morphemes or combinations of morphemes (Kridalaksana, 1984; Ramlan, 1985). In this case, the researcher analyzed by classifying the lexicon, which consists of words, according to the parts of the coconut, naming, activity, growth, derived objects, properties, and size. Below are shown some forms of coconut lexicon.

Table 1
Table of Lexicon Forms of Coconut Parts

Ecolexicon	Gloss	Lexicon Forms
<i>busung</i>	young leaf of coconut	basic form
<i>tlengis</i>	sediment in the coconut oil manufacturing process	basic form
<i>tombong</i>	coconut shoot buds	basic form
<i>slépan</i>	green coconut leaves	basic form
<i>punyan nyuh</i>	coconut trunk	
<i>séséh</i>	coconut tree logs	basic form
<i>pangan</i>	main fruit stalk	basic form
<i>toktokan nyuh</i>	coconut flowers	phrase
<i>bungsil</i>	a coconut that is still small and does not contain water in its shell	basic form
<i>klungah</i>	coconut fruit that contains water but does not yet have flesh in the shell	basic form
<i>ngirisin</i>	coconut wine production activities	derived form
<i>anggasan</i>	a tool used to deter thieves and squirrels from climbing	derived form
<i>nyuh bulan</i>	coconut with yellowish white skin and rather small size	derived form
<i>roroban</i>	liquid residue during traditional coconut oil production	basic form

The data presented in Table 1 represents a small portion of the data presented to illustrate the word forms in the Balinese lexicon. The lexicon table above demonstrates the diversity of lexicon forms, which can be words (basic and derived) or phrases. For example, *busung* (young coconut leaf), *slépan* (green coconut leaf), *sambuk* (coconut fiber), *séséh* (coconut tree log), *pangan* (food), *bungsil* (fruit), and *toktokan* (stem) are basic lexicons because they consist of a single free morpheme. Other lexicons containing free morphemes are also categorized as basic. Derivatives include words such as *pangiris* (fruit), *anggasan* (fruit), and *bakang-bakang* (fruit).

It also occurs in the form of noun phrases, such as the phrases *bungkil nyuh* (the base of the coconut stem), *punyan nyuh* (the coconut stem), and *toktokan nyuh* (the coconut flower bud still wrapped in its sheath). It is called a phrase because it is a combination of two or more words that form a single meaning but does not have a predicate. The entire lexicon of coconut parts is a biotic category.

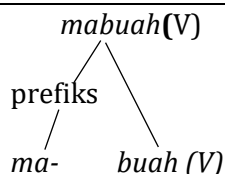
Formation of the Nyuh Lexicon

The Nyuh lexicon in the form of derived forms can be divided into three groups based on their formation process: affixation and composition/compounding.

1. Affixation process

a. Use of prefixes *ma-*, and *N-*

The prefix *ma-* in Balinese is used to form verbs. The *ma-* form remains unchanged when added to a base form that begins with a consonant. Examples of the use of the prefix *ma-* in the nyuh lexicon include the words *mabuah* and *mabunga*. The process of adding the prefix *ma-* to the base form of the nyuh lexicon can be seen in the following diagram.



The prefix *ma-* is added to the lexicon *buah* (fruit) to form *mabuah* (fruit). The resulting verb is an intransitive verb.

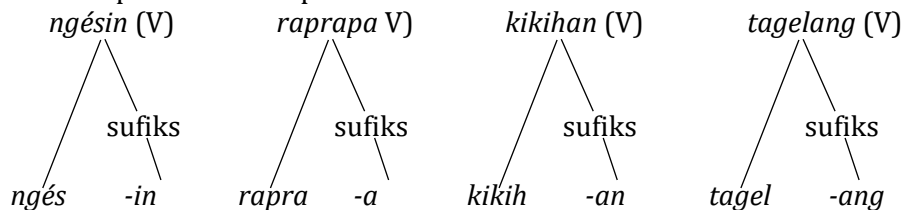
The prefix *N-* is one of the prefixes frequently used in Balinese verb formation. The prefix *N-* has several allomorphic forms, such as *n-*, *ng-*, *nge-*, *ny-*, and *m-*. The allomorphic form is influenced by the sound environment of the base form to which the prefix *N-* is added. Verbs in the *nyuh* lexicon demonstrate the morphological process of adding the prefix *N-* with various variations. Here are two examples of this formation process.



The diagram above shows the morphological process of adding the prefix *N-* to *ng-* and *m-* when added to basic words that begin with the consonants /k/ and /p/, namely; in the word *kasturi* 'hole a bungsil or klungah in the shape of a padma' becomes *ngasturi* 'hole a bungsil or klungah in the shape of a padma' and *pénék* 'climb' becomes *ménék* 'climb'. In addition to showing the emergence of the allomorph *ng-*, the diagram above also shows the disappearance of the consonants /k/ and /p/ in the basic words *kaput* and *pénék*.

b. Use of suffix *-in*, *-a*, *-an*, and *-ang*

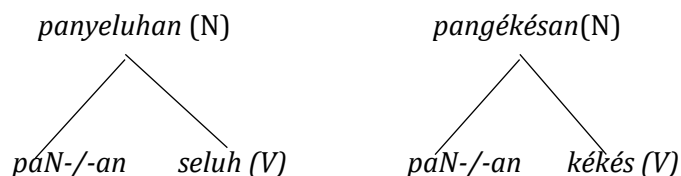
Derived verbs are formed not only with prefixes but also with suffixes. The types of suffixes found in derived verbs are *-in*, *-a*, and *-ang*. The use of these three suffixes in the formation of the verb *paon* can be explained as follows.



From the diagram above, it can be explained that the suffix *-in* is added to the bound base form, *ngés*, to form the word *ngésin*, meaning 'peel coconut husk'. The suffix *-a* is added to the base form *raprap*, meaning 'cut pinnate leaves'. The function of the suffix *-a* in the *raprapa* form is to form passive verbs. The suffix *-an* in the form *kikihan*, meaning 'coconut grater', is added to the base word *kiki*, meaning 'grated'. The presence of the suffix *-an* forms derived words in the noun category. The suffix *-ang* is added to the base form, namely *tagel*. The presence of the suffix *-ang* forms derived words in the verb category.

c. Use of the *paN-/-an* confix

In addition to the use of suffixes, the process of forming nouns in the form of a confix also uses a type of affix in the form of a confix, namely a combination of prefixes and suffixes added simultaneously in the morphological process. The type of confix used in forming nouns in Balinese is the confix paN- / -an. Data showing the use of the confix paN- / -an in the lexicon; panyeluhan, pangésan, and panyaipan. The confix paN- / -an is added to the basic form of the verb category to form a new lexicon in the noun category. The following is a diagram of the addition of the confix paN- / -an in the lexicon of the Balinese paon community.



The diagram above shows the morphological process of the confix paN-/-an in the root word seluh (v) 'gouge' to become panyeluhan (n) 'tool for gouging'. When the confix paN-/-an is added to a base word that begins with the consonant /s/, the allomorph form pany-/-an appears. This process also shows the process of adding the confix paN-/-an to the basic word kékés (v) 'grate with a tool made from coconut shell' to become pangékésan (n) 'tool for grating'. This pattern shows the emergence of the allomorph form pang-/-an in basic words that begin with the consonant /g/.

Use of Nyuh's Lexicon Treasures at the Sentence Level

The use of the vocabulary of nyuh at the sentence level will emphasize their grammatical functions. Alwi et al. (1998) state that syntactic functions can include predicate, subject, object, complement, and adverbial functions. The following data demonstrates the vocabulary of nyuh that can function as subjects.

Data 2.1 sambuk -é suba tuh.

S

P

Coconut fiber -def is dry

'The coconut fiber is dry.'

Data 2.2 Luh Nami mulang tuak di paon.

S

P

O

adverb

name

pref- distillation

coconut wine

prep-dapur

'Luh Nami distills coconut wine in the kitchen.'

Metaphorical Use of the Nyuh lexicon

The Balinese language is rich in metaphorical utterances. For Balinese people, metaphorical utterances serve to indirectly convey ideas or concepts with life values or moral values. Metaphorical utterances are grammatical forms of lexicon that cannot be interpreted literally. In constructing metaphorical utterances, Balinese people use lexicons that are close to their lives and understood by

most Balinese. The nyuh lexicon is one such lexicon used metaphorically. The following data demonstrates the use of lexicons within a grammatical unit with metaphorical meaning. For example, a frequently used expression by Balinese people using the coconut lexicon is as follows.

Data 3.1 *Liep-liep baleman sambuk, yan upin ngrépét*

'The dim embers of coconut fiber, if blown on, will definitely glow'

The above statement cannot be taken literally because it contains a deep meaning related to the ideology of the Balinese people. Coconut husk embers, called "baleman sambuk," when burning do not appear to glow, but when blown on the embers, they become very visible. The harder you blow on the embers, the bigger the flames, and there will even be explosions of fire. So, contextually, the meaning contained in the metaphor above is about someone who is very quiet, but when he is intentionally harmed, then that person can also become angry and even retaliate with even more cruelty. If the context is about intelligence, the meaning is someone who appears quiet but has a lot of knowledge. Therefore, it is considered important to conduct a more in-depth study of the lexicon of coconut plants, in order to obtain a deeper lexicon treasure and be able to decipher the metaphorical expressions that can be formed.

Dynamics of Understanding the Lexicon of Nyuh between Generations of Balinese Society

Based on the questionnaire data, it was found that there was a dynamic understanding of the nyuh lexicon with a percentage value of $90.75\% > 89.25\% > 75.20\%$; older generation > adult generation > teenage generation. From these figures, it was found that the decline in the level of understanding of the nyuh lexicon was very significant among the teenage generation. The difference in the percentage of understanding between the older generation and the adult generation was only 1.50%, while the difference between the adult generation and the teenage generation was 14.05%.

The dynamics of understanding and use of the Paon lexicon are driven predominantly by external linguistic factors. Specifically, external linguistic factors impact the dynamics of understanding and use of the Paon lexicon across generations of Balinese people. These changes originate from the Balinese social environment.

The Nyuh plant is still very common among Balinese people. However, it appears that the Balinese social environment is undergoing significant changes. This is evident in certain lexicons, such as the nandusin process. Nandusin is the traditional process of making coconut oil. This process produces residues such as tlengis and roroban. Tlengis is a sedimentary residue, while roroban is a liquid residue. The knowledge of the tlengis and roroban lexicons, obtained through questionnaires, is very low among Balinese people, especially among adults and young people.

Another example is the growth process of a coconut. It begins with the formation of a tombong (coconut shoot) as a mature coconut fruit. This shoot then develops into a pijer, marked by the emergence of a shoot emerging from the coconut shell. The process of "pijer" (planting) begins with the emergence of a shoot from the coconut shell, then roots and leaves. The term "pijer" (planting) changes to "tubuh" (planting) when the coconut tree fully reveals its trunk. The term "pijer" (planting) then changes when the coconut flower is produced, at which point it is called "nyuh" (planting).

The lexicon of knowledge mentioned above has eroded due to the lack of supportive social activities. The process of "nandusin" (planting) is now very rare in Balinese, due to the vast amount of oil palm produced by entrepreneurs. Palm oil is also cheaper than coconut oil. The coconut growth process is also no longer a priority, as the younger generation rarely grows coconuts. Previously, coconuts were a mandatory crop for every plot of land owned by the predominantly Hindu Balinese people.

4. Conclusion

In ecolinguistics, the existence of a lexicon refers to the presence, use, and persistence of environmental vocabulary within a community. The understanding and use of the Balinese nyuh lexicon by the Balinese people illustrates that language can undergo shifts. This language shift is caused by several factors, such as environmental, social, and cultural changes that influence the use of ecological lexicons, as seen in the decline in lexicon use. In this case, the most significant factor is the change in the Balinese social environment. Documentation is needed to prevent the erosion of the understanding of the nyuh lexicon by the Balinese people, as well as to prevent the extinction of these lexicons.

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