Research Paper

The Correlation of Angkola, Mandailing, and Nias Languages

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ABSTRACT

Historically and geographically, there is a correlation between the Nias ethnic and the Mandailing ethnic. On the other hand, the Angkola and Mandailing ethnic have been clearly correlated from a long time ago. That is the basic of this research, to measure the level of correlation of the Angkola, the Mandailing, and the Nias language. The data in this study were analyzed by referring to Crowley's formula, such as calculating the correlation vocabulary, calculating the percentage of correlation, and calculating the separation time. Based on this reference, the following results were obtained: First, The Angkola and Nias language correlation level is 39.5%. Second, languages are in one family or family with a separation time of about 500 - 2500 years. Second, the correlation level of Nias and Mandailing languages is 33%. The two languages are also in the same family or family with a separation time of about 500 - 2500 years. Third, the kinship level of the Mandailing and Angkola languages is 71.5. The two languages are also classified in one family or family with a separation time of about 500 - 2500 years.

Keywords: Angkola, Correlations, Language Mandailing, Nias,

INTRODUCTION

Indonesia as a multicultural nation has many cultures formed by several tribes. Each tribe has a different language from each other, including the Angkola language, the Mandailing language, and the Nias language. These three languages are a family of Austronesian languages spoken by the people of the northern part of Sumatra Island. Although geographically, Nias is not close to Angkola and Mandailing, historically, the languages of Nias and Mandailing are close.

In Mandailing Natal Regency, there are 15 recognized ethnicities, including the Batak, Minang, Bugis, Chinese, Indian and Nias people. The existence of Nias migrants has come sporadically since the 1980s and occupied a protected forest area across the Batang Gadis River in the Siabu District area. The Nias Community (Ono Niha) in Mandailing Natal Regency, precisely in the Tor Sihayo area and its surroundings, has existed for a long time. There is no definite data telling since when exactly there was a movement of the Ono Niha community from Nias Island and living permanently in the Tor Sihayo area and its surroundings. Mandailing Natal Regency as a country with many people, accommodates people from various regions and binds them in one culture, namely the Sumando culture. Regulations that must be obeyed by indigenous people and immigrants. The community obeys these regulations so there are very few conflicts that contain SARA in their social life. Ethnic Nias as an Ethnic Minority are able to adapt to the sumando culture and comply with all existing regulations so that they also live in peace with people of other ethnicities (Harahap,

2019). This illustrates the historical and geographical correlation of the Nias and Mandailing ethnic groups. However, based on initial observations it was found that there are significant differences between the two languages.

Indeed, in previous studies, it was found that the Batak language in general produced a number of related words, which was 65 vocabularies or 33% of the Nias language. Both languages are at the clump or stock level. Accordingly, Angkola and Mandailing languages produce 51 words or 36% related words (Juliana, 2013). Both were obtained using lexicostatistical calculations and Crowley and Keraf references so that it was concluded that the two languages were in one family. However, the problem is whether the level of correlation between the Batak language and the Nias language is the same as the level of correlation between the Angkola and Mandailing languages and the Nias language? Moreover, based on the previous historical description, the geographical proximity between the three has been stated. Nias language has its own uniqueness compared to Angkola and Mandailing languages. This can be seen from every word that always ends with a vowel or an open syllable. That's why the Nias language is quite different from other languages around it. It must be admitted, the Nias tribe is separated from its surroundings because they live on an island. This factor may play a very important role in the exclusivity of the Nias language. The indicator that will be used to see the genealogy or correlation of this language is the basic Swadesh vocabulary with the consideration that the Swadesh list is the list that is the most widely used as a reference for studying the correlation of languages in the world. The basic vocabulary of Swadesh which is used as a research reference is 200 vocabularies so that it is a universally used vocabulary in the world.

Research on the correlation of languages in the archipelago, especially in the western archipelago (Sumatra and the surrounding islands) has not been widely carried out. As languages that are already known to be part of the Autronesian family, which probably has the most complex area of use because it consists of thousands of large and small islands, the languages of the Western Archipelago must have a very close relationship.

Previously, there had been several studies related to the languages of Angkola, Mandailing, and Nias. First, the research conducted by Gokma Mualita (2015) entitled "The correlation of the Toba Batak language and the Angkola Batak language is a comparative historical linguistic study that aims to determine the relationship between the Toba Batak language (BBT) and the Angkola Batak language (BBA) by comparing The two languages are based on 200 Morris Swadesh words. This study also examines how the use of language, language activities, and language attitudes by some people in the villages of origin of the two languages. The results show that BBT and BBA have a relationship. There are 114 related words from 200 Swadesh lists, 89 identical related words, 25 words that are related but undergo changes in vowel and consonant sounds. The level of correlation between the two languages is categorized as moderate, namely 57%. The year that the two languages separated from their mother tongue occurred in 681 AD. The results of the questionnaire showed that the informants highly respected their local language. Second, the research conducted by Tampubolon and Dwi (2018) entitled "The Correlation of the Toba Batak Language and the Mandailing Batak Language". The study found that the Toba Batak language and the Mandailing language have a correlation level of 85%. From the results of the glotochronological calculation, the separation period between the Toba Batak language and the Mandailing language is between 464 and 6-14 years or between 1554 and 1404 years. With reference to Crowley, conducted a study of 200 swadesh vocabularies and analyzed based on the calculation of related

vocabulary and the percentage of correlation level. There are still many studies that become a reference for this research in improving the results of the study. Thus, a research entitled "The Angkola, Mandailing, and Nias Language Relationships will be conducted".

METHODS

This study uses a comparative method to compile a set of corresponding features in Angkola, Nias, and Mandailing languages using a list of basic vocabulary from the three languages, which was compiled by Morris Swadesh. The vocabulary list is of benefit in research because it consists of non-cultural words and the retention of the root word has been tested in languages with written manuscripts.

In determining word correlation in Mandailing, Angkola, and Nias languages, the following procedures are followed. First, the list of basic vocabulary does not take into account empty words, loan words, and complex words. Second, the bound

Table 1. Correlation Level

Language Level	Time Split in Ages	Percentage of Relatives Language
Language (Language)	0 – 5	100 – 81
Family (Family)	5 – 25	81 – 36
Clump (Stock)	25 – 50	36 – 12
Microphilium	50 – 75	12 – 4
Mesophilium	75 – 100	4 – 1
macrophilium	100 – and above	1 – less than 1%

Source: (Keraf, 1996)

RESULT

Related languages show the following similarities: (1) similarity of sound system (phonetics) and sound arrangement (phonological); (2) morphological similarities, namely similarities in the form of words and similarities in grammatical forms; (3) syntactic similarity, namely the

morpheme is separated from the root word. Third, word pairs belonging to relatives fulfill one of the following conditions: the pair is identical, the pair corresponds phonemically, the pair is phonetically similar, the pair has a different phoneme due to the influence of the environment it enters. After the determination of kin words with the above procedure, the percentage of correlation in both languages is calculated using the formula.

Furthermore, to determine the level of correlation, the following steps are carried out. First, the calculation of related vocabulary. Then, the determination of the percentage of correlation level with the Crowley formula (Ermanto, 2002), as follows, Percentage of correlation level;

$$C = \frac{\text{Cognate Count}}{\text{Base Lexicon Count}} \times 100\%$$

After that, the results of the correlation level were adjusted by percentage to find the language level and separation time of the languages as shown in the table below. similarity of the relationship between words in a sentence (Dalimunthe, 2018).

The data taken is swadesh data, totaling 200 vocabularies. Then analyzed to determine the level of correlation and the percentage of relatives between BA, BM, and BN. Before calculating the percentage of correlation level, then first calculate the correlation vocabulary. In calculating related vocabulary, the researcher uses (+) and (-). If the pair of two languages are related, then it is marked with a code (+), otherwise if the pair of words between the two languages is not related, it is marked with a code (-). Calculation of the number of kin words can be done by looking at the similarity of the markers between the words of the language relatives (Hutabarat, Ermanto, and Novia 2013)

DISCUSSION

Percentage of Correlation Level BA, BM, and BN

Based on an analysis of 200 vocabularies in the Angkola language, the Mandailing language, and the Nias language, the following findings are known. a) there are 79 words that are related between the Angkola language and the Nias language, b) there are 66 words that are correlated between the Nias language and the Mandailing language, c) there are 143 words that are related between the Angkola language and the Mandailing language, and d) there are 19 words that have phonemic correspondence in Angkola, Nias and Mandailing languages.

Furthermore, referring to the correlation percentage formula, the following provisions are obtained. a) the Angkola and Nias language correlation level is 39.5%. Both languages are in one family or family. b) Nias and Mandailing language correlation level is 33%. Both languages are also in the same family or family. c) The level of correlation between the Mandailing and Angkola languages is 71.5. The two languages are also included in the same family or family.

The calculation of the percentage above refers to the opinion of Crowley (Crowley, 1987) which uses the lexicostatistical method based on two basic assumptions. The first assumption is that some parts of the vocabulary of a language are more difficult to change than others. The second assumption is that the basic vocabulary changes in all languages are the same. This assumption has been tested in 13 languages, including languages that have written manuscripts. The results show that in every 1,000 years, the basic vocabulary of a language persists between 86.4-74.4%, or with an average rate of 80.5%. That means, change will be difficult to occur even in a period of 1000 years though.

Identical Vocabulary Pairs

Then, this study also found that there were 19 identical pairs in Angkola and Mandailing and also phonemic correspondence with Nias, as shown in the following table.

Table 2. List of Identical Pairs

No.	Glos	Bahasa Angkola	Bahasa Mandailing	Bahasa Nias
1.	abu	'abu	'abu	gawu.avu
2.	anak	'anak	'anak	'ana?
3.	angin	'angin	'angin	aGi.ani
4.	ayam	'manuk	'manuk	Manu
5.	bunga	'bunga	'bunga	buGa
6.	empat	'opat	'opat	Ifa
7.	gigi	'ipon	'ipon	If
8.	hari	'ari	'hari	(h) ari
9.	hati	'atE	'atE	atE
10.	ikan	'ikan	'ikan	i?a
11.	hidung	'igung	'igung	Ikhu
12.	jatuh	da'bu	da'bu	Alabu
13.	malam	'borngin	'borngin	bOGi
14.	malu	ma'ila	ma'ila	Aila
15.	mati	'matE	'matE	matE
16.	muntah	'muta	'muta	Muta
17.	rambut	'obuk	'obuk	Bu
18.	satu	'sada	'sada	sara
19.	tali	'tali	'tali	tali

Identical word pairs are words that have pairs and all phonemes are the same (Keraf, 1996). Table 1 shows that there are 19 identical pairs in Angkola and Mandailing, but only phonemic correspondence with Nias. Phonemic correspondence pairs can be considered related. The pair occurs when the phonemic changes are reciprocal and regular, have a high frequency, and a balanced form between the two languages (Keraf, 1996). That's why, it doesn't matter if the number of relatives is different from

the number of identical pairs. For this reason, the following is an explanation of 19 identical pairs and their correspondence above.

1. The Nias language appears as a longer form than the Angkola and Mandailing languages. In these three languages, it can be seen that the sound [a] and [u] correspond to the three languages, the sound [v] in the Nias language varies with the Angkola and Mandailing languages.

2. Basically, these three languages are identical pairs, only that the endings of the three words are formed by different phonemes even though they are classified as glottal sounds.

3. These three languages are related. The sounds [a] and [G] correspond identically to each word, but as is well known, the Nias language does not end with a consonant [n] as in Angkola and Mandailing languages. This is also a trend in the Nias language, where every word always ends with an open syllable.

4. These two words in the Angkola language and the Mandailing language are related with the exact same sounds, but are slightly different from the Nias language. In Nias language, the word ends with an open syllable so that the end of the word is marked with [ø], while in Angkola and Mandailing it is marked with a consonant [k].

5. The three words are related with sounds that are exactly the same in form and number and correspond phonemically, both at the beginning, middle, and end.

6. The three words are related to the understanding that the Nias language appears as the shortest form. The [O] sound at the beginning of Angkola and Mandailing appears as [|] in Nias. The sound [m] in the middle of a word. Furthermore, the sound [p] in the Angkola and Mandailing languages appears as [f] in the Nias language, the sound [a] in the last syllable is exactly the same in the three languages. Then, in Nias language it ends as an open

syllable, while in Angkola and Mandailing it is a closed syllable with a consonant [t] at the end of the word.

7. The two words 'gigi' appear to be identical pairs in the Angkola language with the Mandailing language, but are only related in the Nias language. The sound [i] at the beginning is exactly the same, the sound [p] in Angkola and Mandailing appears as [f] in Nias language and [O] in Angkola and MAndailing appears as [| on the Nias language which appears in many cases. If the Angkola and Mandailing languages end with a consonant [n], as usual in the Nias language it doesn't end with a consonant.

8. The three languages are related with the explanation that the Mandailing language comes as a longer form starting with a consonant [h], while Angkola and Nias languages do not start with a consonant. The sound that appears in these three words is exactly the same.

9. The three words are identical pairs that have exactly the same as each other, both the first sound [a], the second sound [t], and the third sound [E].

10. The Angkola and Mandailing languages are identical pairs, but are

11. related to the Nias language. The details are [i] appears exactly the same, [?] in Nias language appears as [k] in Angkola and Mandailing, [a] in the last syllable is exactly the same, and Angkola and Mandailing ends with a consonant [n], while in Bahasa Nias doesn't exist.

12. This word in Angkola and Mandailing is an identical pair, but is related to Nias based on [ɤ]. In addition, the Nias language does not end in a consonant, while the Angkola and Mandailing languages have consonants.

13. Angkola and MAndailing are identical pairs of this word. However, as usual, only related to the Nias language. In addition, the sound variation that occurs is [d] appears as [l] in the second syllable. Furthermore, the sounds that

appear later are exactly the same in the two languages being compared.

14. This word in the Angkola and Mandailing languages is an identical pair, but is related to the Nias language. Marked by: the sound [b] and [O] appear exactly at the beginning of the word. Furthermore, the sound [r] in the Angkola and Mandailing languages does not appear in the Nias language. The sound [G] and [i] in the last syllable is also exactly the same. The Angkola and Mandailing languages are closed by a consonant [n], while the Nias language is not.

15. The three words are related. The sound [m] in Angkola and Mandailing at the beginning of a word is not present in Nias. First, the sound [m] is only present in Angkola and Mandailing languages. Second, the sound [a] is present in all three languages. Third, the sound [i] is also present in all three languages. Fourth, the sound that appears in the next syllable which is the last syllable is [l] which is present in all three languages. Finally, all three words end by a vowel [a].

16. These words are identical pairs in Angkola, Mandailing, and Nias languages.

17. These words are identical pairs in Angkola, Mandailing, and Nias languages.

18. In this word, the two words are identical pairs in the Angkola and Mandailing languages, while in the Nias language, the sound [o] is not found at the beginning of the word and the consonant [k] is also absent. This is one of the characteristics of the Nias language, which does not have a consonant at the end of a word.

19. The three words are related because of the exact same penultimate [sa] and the same number of sounds, considering that the words present are quite short. The identical form is seen in Angkola and Mandailing languages, but differs by one sound, namely [d] in Angkola and Mandailing which appears as [r] in Nias language.

20. These words are identical pairs in Angkola, Mandailing, and Nias languages.

In addition to this research, several phonemic correspondences in the three languages are shown

Table 3. Consonant Correspondence List

Angkola Language	Mandailing Language	Nias Language	Proto Austronesian
b	b	v	*v
n	n	n	*n
k	k	?	*?
k	k	Ø	*k
p	p	f	*p
ŋ	ŋ	G	*ŋ
Ø	h	(h)	*h
g	g	kh	*g
d	d	l	*d
b	b	b	*b
m	m	m	*m
n	n	Ø	*n
r	r	Ø	*r
m	m	Ø	*m
l	l	l	*l
t	t	t	*t
k	k	Ø	*k
d	d	r	*d
l	l	?	*l
l	l	l	*l

Phonemic correspondence is phonemes that are in the same position in word pairs that have the same or similar form and meaning. Phonemic correspondence is a sound change that occurs regularly in the language being compared. Phonemic correspondence, apart

from being used to determine regular phonemic changes in the languages of the relatives being compared, is also used to determine the kinship relationship between the languages being compared.

CONCLUSION

Based on the research conducted, the following results were found. First, the Angkola and Nias language correlation level is 39.5%. Both languages are in one family or family. Second, the correlation level of Nias and Mandailing languages is 33%. Both languages are also in the same family or family. Third, the correlation level of the Mandailing and Angkola languages is 71.5. The two languages are also included in the same family or family. In addition, there are 19 identical pairs in the Angkola language with the Mandailing language, but only phonemic correspondence with the Nias language. Phonemic correspondence pairs can also be considered related.

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