
Relationship of Batak Karo, Batak Toba, And Nias Comparative Historical Linguistic Study

Desy Lampita Rajagukguk¹⁾, Dwi Widayati²⁾
^{1,2)} Magister Linguistik, Universitas Sumatera Utara

*Corresponding Author
Email : lampita0927@gmail.com

Abstract

Batak language families such as Karo, Toba, Mandailing, Simalungun, and Angkola have dominant language users, especially Batak Karo and Batak Toba. In addition to the Batak language family, Nias language is also one of the languages whose users are quite a lot in North Sumatra, even though it is not the area of origin. Kinship Language is a comparative historical linguistic study. By using the quantitative method the kinship relations of the three languages are calculated lexicostatistically. The indicator used to determine related words is a basic vocabulary called the Swadesh basic vocabulary, which consists of two hundred vocabularies. The first result was obtained, namely the Batak Karo language (BBK) and the Batak Toba language (BBT) have a kinship relationship, where from 200 words there are 121 words that have a kinship relationship, namely 37 identical related words and 84 shifting related words with the same meaning. The level of kinship between the Batak Toba language and the Batak Karo language is fairly high because the percentage is 60.5%. The year of separation occurred in 703 AD. The second is that the Batak Karo language and the Nias language (BN) have a kinship relationship. From 200 words there are 49 words that have kinship relations, namely 13 identical related words and 36 shifted related words with the same meaning. The level of kinship is relatively low because the percentage is 24.5%. The year of separation occurred in 1036 BC. The third is that Batak Toba language and Nias language have a kinship relationship, seen from 200 basic words, there are 50 words that have kinship relationships, namely 12 identical related words and 38 shifted related words with the same meaning. The level of kinship between the Batak Toba language and the Nias language is relatively low because the percentage is 25%. The year of separation occurred in 1022 AD

Keywords: Kinship, Language, Batak Karo, Batak Toba, Nias.

INTRODUCTION

Basically, language change is a universal and universal phenomenon. Language change as a general phenomenon can be seen from sound changes at the phonological level which is a very basic and important linguistic level in the context of a study in the field of comparative historical linguistics (Fernandes, 1996). In Language Politics (Halim, 1980:21) it is stated that regional languages are part of Indonesian culture that is still alive and must be respected and preserved or preserved. One of the efforts to preserve regional languages is to conduct research that will add to our linguistic insight, especially about the regional languages studied.

In North Sumatra Province, there are several languages spoken by the local community. The Batak Language Family is divided into the Northern Clump which includes the Karo language, Dairi language, Alas language; and the Southern Clump which includes Toba, Angkola, and Mandailing languages. The Simalungun Batak language occupies a position between the North and South Clumps (Voorhoeve 1955:9 ; Tarigan 1975:3-4).

In this paper, we will examine the kinship between the Karo Batak language and The Batak Toba language because both languages have dominant speakers. In addition, the writer

chose Nias language because apart from the language that belongs to the Batak language family, Nias language is also one of the languages that have quite a lot of users in North Sumatra, even though it is not their place of origin.

RESEARCH METHODS

This study uses quantitative research methods to calculate the kinship of the Karo Batak language, with The Batak Toba language and with the Nias language and calculates the frequency of the year of separation between the three languages. In this study, researchers took samples from several informants to determine the kinship relationship between the two languages mentioned above.

Data collection techniques in this study were carried out in two stages, namely:

- 1) The researcher asked the informants which vocabulary would be compared according to the Morris Swadesh 200 Word Lexicostatistics List.
- 2) Researchers record the answers of the informants as carefully as possible. The recorded vocabulary uses words that are used daily and are usually correct.

In this study, the data analysis technique was carried out based on the following stages:

- 1) Transcribing the recorded data that has been obtained from the informants.
- 2) Determine the basic vocabulary that is estimated to be related according to the data that has been collected from the informants.
- 3) After the basic vocabulary in the two languages being compared is obtained, then the number of related vocabularies is calculated.
- 4) Make a percentage of related words by counting the total same sound plus the similarity of sound-same meaning.
- 5) Determine the year of separation between the two languages that have been compared.
- 6) Draw conclusions.

RESULTS AND DISCUSSION

1. List of Relatives Words (Cognates)

Table 1 The following are 121 cognates or related words between BBK and BBT:

NO	BI	BBK	BBT
1	Akar	[urat]	[urat]
2	Aku	[aku]	[au]
3	Alir	Malər	Maḡalir
4	Anak	[anak]	[anak]
5	Anjing	[bian]	[bian]
6	Api	[api]	[api]
7	Apung	[ombung]	[mumbang]
8	Awan	[embun]	[ombun]
9	Baik	[mehuli]	[uli]
10	Balik	[balik]	[balik]
11	Baru	[mbaru]	[naimbaru]
12	Batu	[batu]	[batu]
13	Benar	[tuhu]	[toho]

14	Benih	[benih]	[bunih]
15	Beberapa	[piga-piga]	[piga-piga]
16	Berenang	[erlangi]	[marlange]
17	Berjalan	[erdalan]	[mardalan]
18	Berat	[mberat]	[borat]
19	Bilamana	[ndigan]	[andigan]
20	Binatang	[rubia]	[dorbia]
21	Bintang	[bintaŋ]	[bintaŋ]
22	Buah	[buah]	[buah]
23	Bulu	[mbulu]	[imbulu]
24	Bunga	[buŋa]	[buŋa]
25	Bunuh	[munuh]	[bunuh]
26	Berburu	[erburu]	[marburu]
27	Dating	[reh]	[ro]
28	Daun	[bulung]	[bulung]
29	Debu	[abu]	[abu]
30	Busuk	[busuk]	[busuk]
31	Di dalam	[bas]	[i bagas]
32	Di, pada	[i]	[i]
33	Dengar	[begi]	[bege]

34	Dua	[dua]	[dua]
35	Duduk	[kundul]	[hundul]
36	Ekor	[ikur]	[ihur]
37	Empat	[empat]	[opat]
38	Garam	[sira]	[sira]
39	garuk (meng-)	[garuk]	[garuk]
40	Gelembung	[buih]	[buih]
41	Gigi	[ipən]	[ipon]
42	Gigit	[karat]	[harat]
43	Gunung	[deleng]	[dolok]
44	Hati	[ate]	[ate]
45	Hidung	[igu]	[igun]
46	Hidup	[geluh]	[ngolu]
47	Hitam	[biring]	[birong]
48	Hisap	[cepcep]	[ocop]
49	Hitung	[erkira]	[markera]
50	Hujan	[udan]	[udan]
51	Hutan	[keranjen]	[haranjen]
52	Ia	[ia]	[ibana]
53	Jantung	[pusuh]	[pusuh]
54	Jatuh	[ndabuh]	[madabu]
55	Jauh	[dau]	[dao]
56	Jalan	[dalan]	[dalan]
57	Jahit	[njarum]	[manjarum]
58	Kami	[kami]	[hami]
59	Kamu	[kam]	[hamu]

60	Kanan	[kemuhen]	[siamun]
61	Katakana	[ataken]	[dokkon]
62	Kering	[kerah]	[korin]
63	Kecil	[citik]	[etek]
64	Kulit	[kulit]	[kulit]
65	kulit pohon	[laklak]	[laklak]
66	Kutu	[kutu]	[hutu]
67	Langit	[langit]	[langit]
68	Laut	[lawit]	[laut]
69	Lebar	[lambas]	[lambas]
70	Lidah	[dilah]	[dilah]
71	Lima	[lima]	[lima]
72	Licin	[medalit]	[landit]
73	Ludah	[cidur]	[ijur]
74	Makan	[man]	Mañan]
75	Malam	[berñi]	[borñin]
76	Mata	[mata]	[mata]
77	Matahari	[matawari]	[mataniari]
78	Mati	[mate]	[mate]
79	Merah	[megarah]	[rarah]
80	Mereka	[kalak]	[halaki]
81	Minum	[minem]	[minum]
82	Mulut	[baba]	[baba]
83	Muntah	[mutah]	[mutauta]
84	Nafas	[kesah]	[hosa]
85	Nama	[gelar]	[goar]
86	Nyala	[gara]	[galak]
87	Nyanyi	[rende]	[ende]
88	Orang	[jelma]	[jolma]
89	Panas	[melas]	[las]
90	Panjang	[geda]	[ganjañ]
91	Pendek	[gendek]	[jempek]
92	Peras	[pəɾə]	[poro]
93	Perempuan	[beru]	[boru]
94	Punggung	[gurung]	[tanggurung]
95	Putih	[mbentar]	[bontar]
96	Rambut	[buk]	[obuk]
97	Sayap	[kabeñ]	[haboñ]
98	Satu	[sada]	[sada]
99	Sedikit	[seitik]	[saotik]
100	Siapa	[ise]	[ise]
101	Tahun	[tahun]	[taon]
102	Takut	[mbiar]	[mabiar]
103	Tali	[nali]	[tali]
104	Tanah	[tanəh]	[tano]
105	Tangan	[tangan]	[tangan]
106	Terbang	[kabañ]	[habañ]

107	Terik	[melas]	[las]
108	Tidak	[laŋ]	[daŋ]
109	Tiga	[telu]	[tolu]
110	Tidur	[medem]	[modom]
111	Tipis	[menipes]	[manipis]
112	Tiup	[embus]	[ombus]
113	Tua	[metua]	[matua]
114	Tulang	[tulaŋ]	[tulaŋ]
115	Tebal	[mekapal]	[hapal]
116	Tumpul	[tultul]	[tultul]
117	Usap	[usap]	[usap]
118	Cacing	[gaya]	[geya]
119	Cium aroma	[anggeh]	[anggo]
120	Musim kemarau	[perlego]	[ari logo]
121	Musim hujan	[udan]	[ari udan]

2. Calculating Separation Years

From the 200 words according to the table above, it was found that there are 121 words that are cognates or related which represent:

- a. Same sounds total : 37 words
- b. Similar sound-meaning: 84 words

Number of Kinship = 121, then converted into a percentage using the formula:

$$C = \frac{121}{200} \times 100\% = 60,5\%$$

To calculate the separation year, the following formula is used:

$$t = \frac{\log c}{2 \log r}$$

t = length of time apart

c = percentage of relatives

r = constant / Morris Swadesh index

With the data that has been obtained from the results of the comparison of the two languages (BBK and BBT), the calculation of the year of separation according to the above formula is as follows:

$$\begin{aligned} T &= \frac{\log c}{2 \log r} \\ &= \frac{\log 60.5\%}{2 \log 121\%} \\ &= \frac{-0.2182}{2 (0.0827)} \\ &= \frac{-0.2182}{0.1654} \\ &= -1.319 \end{aligned}$$

The year of separation is = 2.022 – 1.319 = 703 M

So, The Batak Karo language separated from The Batak Toba language in 703M.

Table 2 The following are 49 cognates or related words between BBK and BN:

NO	BI	BBK	BN
1	Alir	[malər]	[mangelə]
2	Anak	[anak]	[ono]
3	Angin	[aŋin]	[aŋi]
4	Asap	[cimbər]	[simbo]
5	Balik	[muli]	[mangawuli]
6	Baru	[mbaru]	[baru]
7	Batu	[batu]	[batu]
8	Beberapa	[piga]	[hauga]
9	Berenang	[erlaŋi]	[molaŋi]
10	Bintang	[bintaŋ]	[bintaŋ]
11	Buah	[bua]	[bua]
12	Bulu	[mbulu]	[bulu]
13	Bunga	[buŋa]	[buŋa]
14	Bunuh	[munuh]	[bunu]
15	Danau	[danau]	[danau]
16	Debu	[abu]	[gawu]
17	Di	[i]	[i]
18	Jalan	[dalan]	[lala]
19	Jatuh	[ndabuh]	[alabu]
20	Jauh	[dau]	[arəu]
21	Dua	[dua]	[dua]
22	Ekor	[ikur]	[i'o]
23	Empat	[empat]	[əfa]
24	Gigi	[ipən]	[ifə]
25	Mati	[mate]	[mate]
26	Hidung	[igu]	[ikhu]
27	Hitung	[kira]	[ərai]
28	Ia	[ia]	[ia]
29	Istri	[dehara]	[dona ira'alawei]
30	Kaki	[nahe]	[ahe]
31	Kutu	[kutu]	[utu]
32	Lebar	[mbela]	[ebololo]
33	Lidah	[dila]	[lela]
34	Lima	[lima]	[lima]
35	Makan	[man]	[maŋa]
36	Malam	[bərŋi]	[boŋi]
37	Mati	[mate]	[mate]
38	Minum	[minəm]	[inu]
39	Muntah	[mutah]	[mouta]
40	Rambut	[buk]	[bu]
41	Satu	[sada]	[sada]
42	Tali	[nali]	[tali]
43	Tanah	[tanəh]	[tanə]
44	Tangan	[taŋan]	[tanə]
45	Tidur	[mədəm]	[mərə]

46	Tiga	[telu]	[telu]
47	Cium bau	[ageh]	[ago]
48	Tua	[metua]	[acua]
49	Tulang	[tulan]	[tələ]

From the 200 words according to the table above, 49 words are cognates or related:

a. Same sounds in total: 13 words

b. Similar sound-meaning: 36 words

Number of Kinship = 49, then converted into a percentage using the formula:

t = length of time apart

c = percentage of relatives

r = constant / Morris Swadesh index

With the data that has been obtained from the comparison of two languages (BBK and BN), the calculation of the year of separation according to the above formula is as follows:

$$C = \frac{49}{200} \times 100\% = 24,5\%$$

To calculate the separation year, the following formula is used:

$$\begin{aligned}
 t &= \frac{\log c}{2 \log r} \\
 &= \frac{\log 4,5\%}{2 \log 49\%} \\
 &= \frac{-0.6108}{2(-0.3098)} \\
 &= \frac{-0.6108}{-0.6196} \\
 &= 0.9857
 \end{aligned}$$

The year of separation is = $2.022 - 0.9857 = 1.0363$

So, The Batak Karo languages separated from The Batak Toba language from a parent language in 1036 BC.

Table 3 The following are 121 cognates or related words between BBT and BN:

NO	BI	BBT	BN
1	Abu	[orbuk]	[avu]
2	Aku	[au]	[aku]
3	Anak	[anak]	[ono]
4	Api	[api]	[alitə]
5	Balik	[mulak]	[wuli]
6	Baru	[naimbaru]	[baru]
7	Batu	[batu]	[batu]
8	Berenang	[marlaŋe]	[molaŋi]
9	Berjalan	[mowawae]	[mardalan]
10	Berat	[borat]	[ebua]
11	Bintang	[bintaŋ]	[binta]
12	Buah	[bua]	[bua]

13	Bulu	[imbulu]	[bulu]
14	Bunga	[buŋa]	[buŋa]
15	Daun	[bulu]	[bulu]
16	Debu	[abu]	[gawu]
17	Dating	[ro]	[tohare]
18	Di dalam	[bagas]	[bakha]
19	Jalan	[dalan]	[lala]
20	Jatuh	[madabu]	[alabu]
21	Jauh	[arau]	[dao]
22	Dua	[dua]	[dua]
23	Duduk	[hundul]	[duma]
24	Ekor	[ihur]	[l'o]
25	Empat	[opat]	[ɔfa]
26	Hati	[ate]	[ate]
27	Hidung	[igung]	[ikhu]
28	Ia	[ibana]	[ia]
29	Kutu	[hutu]	[utu]
30	Langit	[banua]	[banua]
31	Lidah	[dila]	[lela]
32	Lima	[lima]	[lima]
33	Makan	[maŋan]	[maŋa]
34	Malam	[borŋin]	[boŋi]
35	Mati	[mate]	[mate]
36	Minum	[inum]	[inu]
37	Mulut	[baba]	[bawa]
38	Muntah	[mutauta]	[mouta]
39	Perut	[butuha]	[becu'a]
40	Punggung	[taŋgurun]	[tela hulu]
41	Rambut	[obuk]	[bu]
42	Satu	[sada]	[sara]
43	Tali	[tali]	[tali]
44	Tanah	[tano]	[tano]
45	Tangan	[taŋan]	[tanə]
46	Tiga	[tolu]	[telu]
47	Cacing	[gea]	[gea]
48	Cium bau	[anggo]	[ago]
49	Tua	[matua]	[acua]
50	Ular	[ulok]	[ulə]

From the 200 words according to the table above, it was found that there are 50 words that are cognates or related:

- a. Same sounds in total: 12 words
- b. Similar sound-meaning: 38 words

Number of Kinship = 50, then converted into a percentage using the formula:

$$C = \frac{50}{200} \times 100\% = 25\%$$

To calculate the separation year, the following formula is used:

t = length of time apart

c = percentage of relatives

r = constant / Morris Swadesh index

With the data that has been obtained from the comparison of two languages (BBK and BN), the calculation of the year of separation according to the above formula is as follows:

$$\begin{aligned}t &= \frac{\log c}{2 \log r} \\&= \frac{\log 25\%}{2 \log 50\%} \\&= \frac{-0.6020}{2 (-0.3010)} \\&= \frac{-0.6020}{-0.6020} \\&= 1,000\end{aligned}$$

The year of separation is = 2.022 – 1,000 = 1.022

So The Batak Toba language separated from the Nias language from the mother tongue in 1022 BC.

CONCLUSION

The kinship between The Batak Karo language and The Batak Toba language is quite close because both languages come from the same language family, namely the Batak Language Family (Tarigan 1991:1). In addition, based on the research in this paper, it was found that the kinship percentage was 60.5%. The author chose Nias language because apart from the language that belongs to the Batak language family, Nias language is also one of the languages that have quite a lot of users in North Sumatra even though it is not their native area.

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