The Kinship of Karo, Pakpak and Gayo Language

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ABSTRACT

Aims: To investigate and to know the kinship of Karo, Pakpak and Gayo language.

Study design: This research used quantitative research

Place and Duration of Study: Medan, North Sumatera, March 2022-June 2022

Methodology: In this case, the writers used a lexicostatistic approach to determine the level of kinship in Karo, Pakpak, and Gayo languages by comparing the vocabulary contained in these languages and then seeing and determining the similarity of the vocabulary of the three languages. In this case, the basic swadesh vocabulary of 200 words was used to determine the percentage of cognates.

Results: The result of the research shown that the kindship of Karo and Pakpak is at family level. The number of cognate words of Karo and Pakpak 140 word and non-cognate 60 words. Furthermore, the kinship of Pakpak and Gayo is at family level with the number of kindship of Pakpak and Gayo 82 words and non-cognate 118 words and the kinship of Pakpak and Gayo is at family level with the number of kindship of Pakpak and Gayo 76 words and non-cognate 124 words

Conclusion: Based on the findings, it was found that the level of kinship between Karo and Pakpak languages was 70% with a separation period about 500-2500 years ago. From this percentage, it can be stated that Karo and Pakpak languages have a close relationship. While the level of kinship between Pakpak and Gayo languages is 41% whereas Karo Gayo 38%, it means that the kinship relationship between Pakpak and Gayo languages and also Karo and Gayo Language are not close even though the relationship between the two languages belongs to the family. However, if it is seen from the percentage, both of them is not close. And the separation period of Pakpak and Gayo languages was around 500-2500 years ago. This means that the two languages have been separated for a long time.

Keywords: Kinship, Karo Language, Pakpak Language, Gayo Language

1. INTRODUCTION

Language is an equipment than can be used for all people in the world to do communication. One of the language that human used to communicate is local language. Every tribe certainly has different language and different culture. And it will differentiate one each other. In Indonesia, there are so many local language, they are Mandailiing language, Jawa language, Batak Toba language, Karo language, Pakpak language, Gayo language and etc. And it is used to interact both oral or written. Local language and its culture as food, religious system and etc. also refers to the identity. In other hand, Local language is used as the supporting for national language, namely Indonesia Language. Thus, regional languages need to be fostered and continuously developed in order to strengthen the resilience of national culture.

Local language development can be conducted through a research. In this case, research on language kinship is very interesting to be investigated. The science that studies language

kinship is called comparative historical linguistics. In this case, the language will be compared and classified [1, 2]. . Comparative historical linguistics was started by William Jones in 1792 on his speech to the Royal Asiatic Society. In addition, comparative historical linguistics also discusses language development [3, 4, 5]. . This means that through LHK, researchers can compare languages in the world, especially in Indonesia. Not only it, it also can classify language. In this case, it provides a very large contribution in tracing the nature of language development from time to time. So, this study is very important to be conducted. In this study the writers will discuss the kinship of language. The kinship is affected by language, culture, conceptualization and also the function of the cultural where they will develop on and on [6]. Beside that geographical location also affect to the language kinships [7]. In this research, the writers will discuss language kinship of Karo, Pakpak and Gayo languages. This language belongs to the Austronesian language family. And these languages have a kinship. The kinship relationship of the three languages can be seen from their geographical location. Geographically, the Karo, Pakpak and Gayo tribes lived nearly, namely North Sumatra and Aceh.

1.1 Karo Language

Karo language is the language used by Karo's Society and they use it to communicate to the other. Batak Karo consists of two, namely Karo Gugung and Karo Ginger. Karo Gugung are domiciled in Karo Regency and they are the original population of Batak Karo . Meanwhile, Karo Jahe is domiciled in the districts of Deli Serdang, Langkat, Dairi, Samosir, Simalungun and Nangroe Aceh Darrusalam districts. It can be concluded that The society of Batak Karo spreads in Karo, Deli Serdang, Langkat Dairi, Simalungun, Samosir dan Aceh Darrusalam District.

1.2 Pakpak Language

Pakpak language is the language used by the Pakpakk tribe. The Pakpak people originated from South India, namely Indika Tondal to Muara Tapus nearly Dairi, after that they developed in Tanah Pakpak and became the Pakpak Tribe [8].. Some Pakpak people live in Tanah Dairi and some are diaspora, leaving their country and settling in new areas.
Some of them live in Tanah Pakpak and become the Pakpak Tribe "Situkak Rube:,"Sipungkah Kuta" and "Ni Talun Tribe" in Tanah Pakpak. Others go to other places and form or create new communities. S/he knows that s/he is from Tanah Pakpak and admits that Pakpak is her/his tribe but changes the clan to another tribe. On the other hand, there are those who go abroad and change their identity by changing their name and surname [9].
According to the dialect and area of distribution, Pakpak is grouped into five parts, namely: Pakpak Simsim, Pakpak Keppas, Pakpak Pegagan, Pakpak Boang and Pakpak Kelasen. Each division is distinguished according to the ulayat rights of the clans which are administratively not only domiciled in the Dairi Regency area (before it was divided), but there are those in Aceh Singkil, Humbang Hasundutan (before the expansion from North Tapanuli) and Central Tapanuli.
Pakpak Simsim, Pakpak Keppas and Pegagan are administratively located in Dairi and Pakpak Bharat, while Pakpak Kelasen are located in Humbang Hasundutan district, Central Tapanuli district, especially in Parlilitan and Manduamas districts. It is different again with Pakpak Boang who is domiciled in Singkil district, especially in Simpang Kiri and Kanan sub-districts.

1.3 Gayo Language
Gayo language is the language used by the Gayo tribe. The Gayo tribe is one of the tribes who live in the Gayo highlands, precisely in Aceh in the central part of Aceh province.

81 Administratively, the Gayo tribe is domiciled in the districts of Central Aceh, Bener Meriah
82 and Gayo Lues. The Gayo tribe has characteristics, namely being Muslim, having curly hair,
83 black skin, wearing a surname, having a small body, and having Karo and Alas ethnicities.
84 Looking at the distribution of the Karo, Pakpak and Gayo tribes, they live close to each other,
85 So it caused the spread of the mother languages. And it will affect to the language. If the
86 language is changed, the kinship of language is also affected. Mother languages certainly
87 have kinship in the past.
88 Beside from geographical location, the kinship relationship of Karo, Pakpak, and Gayo
89 languages can be seen from the sound and the same phonemes. Language kinship can be
90 investigated through the analysis of meaning components in determining the meaning
91 relationship between a set of lexemes in a meaning field [10]. The kinship of Karo, Pakpak,
92 and Gayo languages can be seen in the following data.

Glos	Karo	Pakpak	Gayo	
Hati (heart)	ate	Ate	ate	93
Bagi (share)	bagi	Bagi	**bagi**	94
Lidah (tongue)	dilah	Dilah	dilah	95
Tiga (three)	telu	Telu	tulu	96
Tali (rope)	nali	Tali	tali	97
				98
				99

100 The data above shows that the Karo, Pakpak, and Gayo languages have a kinship. This is
101 indicated by the presence of several similar sounds and phonemes (see data 1 and 3).
102 Different things occur in data 2, 4 and 5 of the Karo, Pakpak, and Gayo kinship languages,
103 which can be seen from the change in sound and the same meaning. In this case there has
104 been a retention in the speech. So, this is very interesting to be investigated because the
105 changes of language are also depending to the history in the past. Besides that, research on
106 the kinship of Karo, Pakpak and Gayo language do not discussed yet as far the writers know
107 and read.
108 There have been many researches on kinship, including Hale [11]. discussed 'Kinship
109 Reflection in Syntax: Some Australian Language'. In this research, he stated that the
110 kindship system was reflected in pronominal**.** Furthermore, research on language kinship is
111 discussed by Ernawati. She discusses the kinship of Karo, Minang and Malay languages. In
112 her research, she said that the kinship between Karo and Minang languages is a different
113 language. This is indicated by the percentage of kinship of 31%. This means that the
114 language kinship relationship is only a family relationship (stock). Furthermore, the
115 relationship between Karo and Malay is 26% and is a clump relationship (stock). Meanwhile,
116 the Malay and Minang languages have a family relationship with a percentage of 66% [12]..
117 The next previous researcher discussed 'Kinship of Batak Toba language and Batak
118 Angkola language: a comparative historical linguistic study. The results showed that the
119 Toba Batak language and the Angkola Batak language had a kinship relationship. This is
120 indicated by finding of the cognate set 114 words, neither identic or not. Based on the results
121 of the study, it was found that 95 words had kinship identically and 25 words had kinship but
122 there were sound changes, both vowels and consonants [13].. Then, the Kinship System in
123 Karo Jahe Language in Bangun Purba Village. In her research,[14] said that the kinship
124 system in Bangun Purba Village was based on heredity, marriage and generational order. In
125 this case, Nurmala does not compare the Karo Jahe language with other languages [14].
126 Suparno also discussed the Kinship of Kitchen Furniture Vocabulary Forms in Sudanese and
127 Syrian Arabic. The results of his research showed that the vocabulary in Arabic and
128 Sudanese has a kinship which is indicated by the discovery of a number of words that have
129 identical relationships, have phonemic correspondence, have phonetic similarities and have
130 one phoneme difference [15].
131 Based on the explanation above, the kinship of Karo, Pakpak and Gayo language does not
132 discuss yet. Therefore, the writer wants to investigate and know about the kinship of Karo,

133 Pakpak, and Gayo languages. In this case, the writers will investigate the kinship between
134 Karo and Pakpak language. Next, the kinship Pakpak and Gayo language.
135
136 **2. METHODOLOGY**
137
138 The writers used quantitative methods in this research. In this case, the writers used a
139 lexicostatistic approach to determine the level of kinship in Karo, Pakpak, and Gayo
140 languages by comparing the vocabulary contained in these languages and then seeing and
141 determining the similarity of the vocabulary of the three languages. In this case, the basic
142 swadesh vocabulary of 200 words was used to determine the percentage of cognates. After
143 that, the percentage of cognates of the compared words was calculated by using the
144 following formula:

$$C = \frac{k}{n} \; x100\%$$

145 Where:
146 K : number of cognates
147 N : number of words compared
148 The languages used to define kinship must be from the same proto [1, 2, 4, 5, 16]. To
149 determine that the language has a kinship relationship, here are the steps to be conducted:
150   1) Empty words or empty slots do not count. In this case empty words or empty slots
151   such as loan words and invented words (not basic words)
152   2) Isolation of bound morphemes. In this case, the invented word consisting of free and
153   bound morphemes must be separated first. So, only the basic words are compared.
154   3) Define the words of relatives. Relative words if they have identical pairs, have
155   phonemic correspondence, have phonetic similarities, and there is only one different
156   phoneme.
157   To determine the kinship of Karo, Pakpak and Gayo languages, a table classification
158 of language kinship is used based on the percentage of language kinship.
159 Table 1. **Classification of language kinship**

Level of Language	Time of Separation (in century)	Percentage
Language	0-5	81-100%
Family	5-25	36-81%
Stock	25-50	12-36%
Microphilium	50-75	4-12%
Mesophilium	75-100	1-4%
Macrophilium	100-ke atas	Kurang dari 1-1%

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162 **3. RESULTS AND DISCUSSION**
163
164 Based on the results of the analysis by using a lexicostatistical approach, it was found that
165 the level of language kinship was found. In this case, the level of kinship was studied is the
166 level of kinship of Karo and Pakpak languages. Next, examine the level of kindship between
167 Pakpak and Gayo languages.
168
169 **3.1 Level of Kinship of Karo and Pakpak Language**
170
171 Based on the results of data analysis, it shows that the level of kinship in Karo and Pakpak
172 languages is at the family level. In this case the languages have a close kinship. This is
173 indicated by the number of cognate words as many as 140 words of 200 words from the

174 swadesh list. Meanwhile, the number of non-cognates words are 60 words. The level of
175 kinship of Karo and Pakpak language can be seen through the calculations below.

176 $$C = \frac{k}{n} \, x100\%$$

177 $$C = \frac{140}{200} \, x100\%$$

178 C = 70%

179 From the calculation above, the percentage level of kinship of Karo and Pakpak languages is
180 70%. The kinship level at 70% indicates that the language has a family kinship level. This
181 means that their level of kinship is close. And it can be seen that the time of separation of
182 the Karo and Pakpak languages was around 500-2500 years ago. The cognate words of the
183 two languages listed in the 200 swadesh words are listed in the following table.
184
185 **Table 2. The List of Cognate Word of Karo and Pakpak Language**

Glos	Karo	Pakpak
Air (water)	lau	lae
*Aka*r (root)	urat	urat
Angin (wind)	aŋin	aŋin
Anjing (dog)	biaŋ	biaŋ
Api (fire)	api	api
Atap (roof)	tarum	tarup
Awan (cloud)	əmbun	əmbun
Ayam (hen/cock)	manuk	manuk
Bagi (share)	bagi	bagi
*Bisu*l (ulcer)	barəh	baroh
Bapak (father)	bapa	bapa
Baru (new)	mbaru	rimbaru
Batang (stem)	bataŋ	bataŋ
Batu (stone)	batu	batu
Benar (true)	tuhu	tuhu
Bengkak (swollen)	bəsar	bəsar
Berat (heavy)	mbərat	berat
Buru (hunt)	ərburu	buru
Berdiri (stand)	cindər	cendər
Renang (swim)	laŋi	laŋe
Jalan (walk)	dalan	dalan
Mimpi (dream)	nipik	nipi
Napas (breath)	kəsah	kəsah
Bintang (star)	bintaŋ	bintaŋ
Buah (fruit)	buah	buah
Bulan (moon)	bulan	bulʌn
Bunga (flower)	buŋa	buŋa
Busuk (rotten)	macik	macik
Cacing (worm)	gaya	goya
Daging (meat)	jukut	jukut
Darah (blood)	darəh	daroh
Datang (come)	rəh	rɔh
Daun (leaf)	buluŋ	buluŋ
Debu (dust)	abu	abu
Di (in)	i	i
Bawah (under)	təruh	təruh
Dia (she/he)	ia	ia
Dingin (cold)	mbərgəh	mbərgɔh
Dua (two)	dua	dua

Duduk (sit)	kundul	kundul
Ekor (tail)	ikur	ekur
Empat (four)	əmpat	empat
Engkau (you)	əŋko	kɔ
Garam (salt)	sira	sira
Gigi (tooth)	ipən	epen
Guntur (thunder)	ləŋgur	renggur
Hari (day)	wari	ari
Hati (liver)	ate	ate
Hidung (nose)	iguŋ	iguŋ
Hidup (life)	ŋeluh	ngeluh
Hijau (green)	məratah	meratah
Hitam (black)	mbiriŋ	nbereŋ
Hujan (rain)	udan	udan
Ikan (fish)	ikan	ikan
Ini (this)	ənda	ənda
Jantung (heart)	jantong	jantung
Jarum (needle)	jarum	jarum
Jatuh (fall down)	ndabuh	ndabuh
Jahit (sew)	jait	jait
Jauh (far)	ndauh	ndaoh
Kambing (goat)	kambing	kambing
Kabut (fog)	rəmaŋ	rəmaŋ
Kaki (leg)	nahe	nehe
Kanan (right)	kemuhən	kamuhən
Kayu (wood)	kayu	kayu
Kelambu (mosquito net)	kelambu	kelambu
Kepala (head)	takah	takal
Kering (dry)	kərah	kərah
Kilat (lightning)	kilap	kilap
Kita (we)	ita	kita
Kuning (yellow)	məgərsiŋ	gərsiŋ
Kutu (lice)	kutu	kutu
Laba-laba (spider)	lawah-lawah	labah-labah
Langit (sky)	laɲit	laɲit
Laut (sea)	lawit	laut
Lebar (wlarge)	mbəlaŋ	mbəlaŋ
Leher (neck)	kərahuŋ	kərahoŋ
Lima (neck)	lima	lima
Lidah (tongue)	dilah	dilah
Malam (night)	berŋi	berŋin
Malu (shame)	mela	mela
Mata (eye)	mata	mata
Mati (dead)	mate	mate
Lipat (fold)	lipat	lipat
Miring (crooked)	mereng	mereng
Bakar (burn)	tutuŋ	tutuŋ
Beli (buy)	tukur	tokor
Bunuh (kill)	mbunuh	bunuh
Pegang (hold)	cikəp	cekep
Peras (squeeze)	pərəh	pəroh
Pilih (choose)	pilih	pilih
Potong (cut)	kərət	kərət

Pukul (hit)	pəkpək	pakpak
Tanam (plant)	tanəm	tanəm
Curi (steal)	taŋko	taŋko
Dengar (listen)	mbəgi	mbəge
Tembak (shoot)	tembak	tembak
Ketuk (knock)	tuktuk	toktok
Garuk (scratch)	gərgo	gorgor
Gigit (bite)	karat	karut
Ikat (tie)	ikət	ekət
Isap (sunction)	cəpcəp	cəpcəp
Menguap (evaporate)	payamən	pohamən
Kunyah (chew)	ŋatŋat	ŋatŋat
Tiup (blow)	əmbus	əmbus
Timur (east)	timur	timur
Mereka (they)	Kalak	kalak
Minum (drink)	minəm	mənum
Mulut (mouth)	babah	babah
Muntah (vomit)	mutah	mutah
Naik (go up)	Na?kih	na?kih
Nama (name)	gəlar	gərar
Orang (people)	jəlma	jəlma
Panjang (long)	gədaŋ	gədaŋ
Pasir (sand)	kərsik	kərsik
Perempuan (woman)	dibəru	dabəru
Perut (stomach)	bəltək	bəltək
Tujuh (seven)	pitu	pitu
Putih (white)	məntar	bəntar
Rambut (hair)	buk	buk
Rumput (grass)	dukut	dukut
Satu (one)	sada	sada
Saya (I)	aku	aku
Sayap (wing)	kabən	kabən
Sembunyi (hide)	cəbuni	ciboni
Semua (all)	kərina	karina
Siapa (who)	ise	ise
Tahu (know)	ətəh	itoh
Takut (afraid)	mbiar	mbiar
Tali (rope)	nali	tali
Tanah (soil)	tanəh	tanoh
Tebal (thick)	məkapal	kapal
Terbang (fly)	kabaŋ	kabaŋ
Janji (promise)	janji	janji
Tidur (sleep)	mədəm	mədəm
Tiga (three)	təlu	təlu
Tikus (mouse)	mənci	mənci
Tua (old)	mətua	tua
Tulang (bone)	tulan	tulan
Usus (intestines)	tuka	bituka

186　Table 2 shows that the number of cognate words found in Karo and Pakpak languages was
187　140 words and 60 words are noncognate. The list of noncognate words can be seen in the
188　following table.
189
190
191　**Table 3. The List of Non-cognate Word of Karo and Pakpak Language**

Glos	Karo	Pakpak
Abu (ash)	Abu	sirʌbun
Anak (child)	Anak	duka
Apa (what)	kai	kade
Asap (smoke)	gəbuk	asap
Bagaimana (how)	uga	bakunə
Basah (wet)	bəncah	taptap
Bekerja (work)	ərdahin	karejo
Belok (turn)	belok	tekong
Baring (lay down)	taya	pedəm
Kata (word)	ŋərana	kata
Pikir (think)	rukur	piker
Tumbuh (grow)	turah	tubuh
Besar (big)	galaŋ	mbelga
Bulu (fur)	mbulu	bukbuk
Burung (bird)	perik	manukmanuk
Dan, dengan (and, with)	ras	deket
Danau (lake)	lau	danau/pea
Atas (above)	das	babo
Dalam (deep)	bas	bagas
Dimana (in)	I ja	idike
Hitung (count)	kira	etong
Hutan (forest)	kəraŋən	rambah
Ibu (mother)	nande	inaŋ
I*steri* (wife)	ndəhara	ndaberu
Itu (that)	ah	i
Jahat (wicked)	gutul	jahat
Kapan (when)	ndigan	dahari
Kiri (left)	kawəs	kambirang
Kotor (dirty)	məlkət	durun
Kulit (skin)	kulit	koling
Lain (other)	sidəban	laen
Laki-laki (man)	dilaki	daholi
Makan (eat)	man	mangan
Lihat (see)	nəhən	təŋən
Ludah (saliva)	cidur	edur
Belah (split)	naka	bəlah
Buka (open)	nalaŋi	buka
Tangis (cry)	ŋanduŋ	tangis
Cium (kiss)	ŋəma	cium
Alir (flow)	malər	jarir
Gali (dig)	ukal	kurak
Tikam (stab)	nəbak	tikam
Merah (red)	məgara	mbara
Nyamuk (mosquito)	reŋit	namuk
Panas (hot)	melas	ngara
Payudara (breast)	tetek	susu

Pendek (short)	gəndək	joppok
Rumah (house)	rumah	sapo
Sakit (ill)	sakit	cio
Sempit (narrow)	picət	sempit
Suami (husband)	perbulaŋən	daholi
Tahun (year)	tahun	tahun
Tajam (sharp)	ntəlap	tajəm
Tangan (hand)	tan	tangan
Telinga (ear)	cupiŋ	penggəl
Telur (egg)	təlor	naruh
Tertawa (laugh)	tawa	tertaba
Tipis (thin)	məlipes	nipis
Tumpul (blunt)	mantul	tompəl
Ular (snake)	nipe	ulok

192
193   **3.2 The level of kinship of Pakpak and Gayo Language**
194
195   Based on the results of data analysis showed that the level of kinship of Pakpak and Gayo
196   language is at the level of family kinship. The list of cognate words of the two languages is
197   81 words of 200 Swadesh words. While non cognate words are 119 words. In this case,
198   these languages are still classified as very far for language kinship if it is seen from the
199   percentage even though they have a family relationship level. The level of kinship of the two
200   languages can be seen through the following calculation.

201    $$C = \frac{k}{n} \, x100\%$$

202    $$C = \frac{82}{200} \, x100\%$$

203    $$C = 41\%$$

204   From calculation above, the percentage level of kinship of the two languages is 41%. Based
205   on the concept stated by Crowley that the kinship level of 41% indicates that the language
206   has a level of family kinship. In this case, the level of kinship between Pakpak and Gayo is
207   still very far if it is seen from the percentage level. The cognate words found from the two
208   languages when comparing the languages can be seen in the following table.

209
210   **Table 4. The List of Cognate Words of Pakpak and Gayo Language**

Glos	Pakpak	Gayo
Akar (root)	urat	uyət
Asap (smoke)	asap	asap
Awan (cloud)	əmbun	əmun
Bagaimana (how)	bakunə	kunə
Bagi (share)	bagi	bagi
Bisul (ulcer)	baroh	barah
Batang (stem)	bataŋ	bataŋ
Batu (stone)	batu	atu
Berat (heavy)	berat	bərət
Jalan (walk)	dalan	ralan
Mimpi (dream)	nipi	nipi
Napas (breath)	kəsah	kəsah
Pikir (think)	pikir	Piker
Bintang (star)	bintaŋ	bintaŋ
Buah (fruit)	buah	uah
Bulan (moon)	bulʌn	ulən
Bunga (flower)	buŋa	buŋə
Burung (bird)	manukmanuk	manuk

Darah (blood)	daroh	rayoh
Daun (leaf)	buluŋ	uluŋ
Debu (dust)	abu	Awuh/dul
Di (in)	i	i
Bawah (under)	təruh	tuyoh
Duduk(sit)	kundul	kunul
Engkau (you)	kɔ	ko
Garam (salt)	sira	sira
Gigi (tooth)	epen	ipon
Guntur (thunder)	renggur	gəgur
Hati (liver)	ate	ate
Hidung (nose)	iguŋ	iyuŋ
Isteri (wife)	ndaberu	bəbəru
Jahat (wicked)	jahat	jahat
Jantung (heart)	jantung	jantu
Jarum (needle)	jarum	jarum
Jahit (sew)	jait	jit
Kambing (goat)	Kambing	Kambi
Kayu (wood)	kayu	Kayu
Kelambu (mosquito net)	kelambu	kelmu
Kilat (lightning)	kilap	Kilət
Kita (we)	kita	Kitə
Kutu (lice)	kutu	Kutu
Lain (other)	laen	Len
Langit (sky)	laŋit	Laŋit
Laut (sea)	laut	Lut
Lidah (tongue)	dilah	delah
Makan (eat)	mangan	maŋan
Mata (eye)	mata	mata
Mati (dead)	mate	mate
Lipat (fold)	lipat	lipət
Miring (crooked)	mereng	Mere
Bakar (burn)	tutuŋ	Tutu
Belah (split)	bəlah	bəlah
Bunuh (kill)	bunuh	unuh
Pilih (choose)	pilih	pilih
Potong (cut)	kərət	kərat
Tanam (plant)	tanəm	tanom
Cium (kiss)	cium	cum
Alir (flow)	jarir	jaril
Ketuk (knock)	toktok	tətok
Gali (dig)	kurak	kuruk
Ikat (fold)	ekət	ikot
Timur (east)	timur	timur
Minum (drink)	mənum	minum
Nama (name)	gərar	gərəl
Nyamuk (mosquito)	namuk	namuk
Orang (people)	jəlma	jəlma
Payudara (chest)	susu	susu
Perempuan (woman)	dabəru	bəbəru
Tujuh (seven)	pitu	pitu
Rambut (hair)	buk	wok
Satu (one)	sada	sara

Saya (I)	aku	aku
Sayap (wing)	kabəŋ	kəpek
Tajam (sharp)	tajəm	təjəm
Tali (rope)	tali	tali
Tanah (soil)	tanoh	tanoh
Telur (egg)	naruh	tənaroh
Janji (promise)	janji	janji
Tiga (three)	təlu	tulu
Tipis (thin)	nipis	nipis
Tua (old)	tua	tuə
Tulang (bone)	tulan	tulən

Table 4 shown that the number of cognate words found in Pakpak and Gayo is 82 words and the non-cognate words 118 words. The list of non-cognate words can be shown in the following table.

Table 5. The List of Non-Cognate Words of Pakpak and Gayo Language

Glos	Pakpak	Gayo
Abu (ash)	sirʌbun	wau
Air (water)	lae	waəh
Anak (child)	duka	anak
Angin (wind)	Aŋin	kuyu
Anjing (dog)	biaŋ	asu
Apa (what)	kade	hana
Api (fire)	api	rara
Atap (roof)	tarup	supu
Ayam (hen/cock)	manuk	kurek
Bapak (father)	bapa	ama
Baru (new)	rimbaru	ayu
Basah (wet)	taptap	basah
Bekerja (work)	karejo	buət
Belok (turn)	tekong	kisər
Benar (true)	tuhu	bətul
Bengkak (swollen)	bəsar	kəmuŋ
Baring (lay down)	pedəm	gulaŋ
Buru (hunt)	buru	muŋaro
Berdiri (stand)	cendər	səsuk
Renang (swim)	laŋe	nawe
Kata (word)	kata	cərak
Tumbuh (grow)	tubuh	murip
Besar (big)	mbelga	kul
Bulu (fur)	bukbuk	jaŋut
Busuk (rotten)	macik	borok
Cacing (worm)	goya	kətol
Daging (meat)	jukut	dəngke
Dan, dengan (and, with)	deket	rum
Danau (lake)	danau/pea	dano
Datang (come)	rɔh	geh
Debu (dust)	abu	Awuh/dul
Atas (above)	babo	atas
Dalam (in)	bagas	was
Dimana (where)	idike	I si
Dia (she/he)	ia	we
Dingin (cold)	mbərgɔh	səjuk

Dua (two)	dua	roa
Ekor (tail)	ekur	uki
Empat (four)	empat	opat
Hari (day)	ari	lo
Hidup (life)	ngeluh	murip
Hijau (green)	meratah	ijo
Hitam (black)	nbereŋ	itəm
Hitung (count)	etong	kirə
Hujan (rain)	udan	urən
Hutan (forest)	rambah	utən
Ibu (mother)	inaŋ	inə
Ikan (fish)	ikan	gulə
Ini (this)	Ənda/en	ini
Itu (that)	**i**	oya
Jatuh (fall down)	ndabuh	mətuh
Jauh (far)	ndaoh	gip
Kabut (fog)	rəmaŋ	kabut
Kaki (leg)	nehe	kidinŋ
Kanan (right)	kamuhən	kuən
Kapan (when)	dahari	səlo
Kepala (head)	takal	ulu
Kering (dry)	kərah	kəriŋ
Kiri (left)	kambirang	kiri
Kotor (dirty)	durun	kotek
Kulit (skin)	Koling	kulit
Kuning (yellow)	gərsiŋ	kuniŋ
Laba-laba (spider)	Labah-labah	ləlawah
Laki-laki (man)	daholi	rawan
Lebar (large)	mbəlaŋ	kolak
Leher (neck)	kərahoŋ	roŋok
Lima (five)	lima	limə
Malam (night)	berŋin	kələm
Malu (shame)	mela	kəmel
Lihat (see)	təŋən	eŋon
Ludah (saliva)	edur	eleh
Beli (buy)	tokor	bəli
Buka (open)	buka	ukə
Pegang (hold)	cekep	amat
Peras (squeeze)	pəroh	muliə
Pukul (hit)	pakpak	pəpok
Tangis (cry)	tangis	moŋot
Curi (steal)	taŋko	osoh
Dengar (listen)	mbəge	pəŋe
Tembak (shut)	tembak	bədil
Garuk (cratch)	gorgor	kəkor
Gigit (bite)	karut	ket
Isap (suction)	cəpcəp	isəp
Menguap (evaporate)	pohamən	map
Kunyah (chew)	ŋatŋat	ŋəŋal
Tikam (stab)	tikam	tənik
Tiup (blow)	əmbus	yup
Merah (red)	mbara	ilaŋ
Mereka (they)	kalak	pakəa

Mulut (mouth)	babah	awah
Muntah (vomit)	mutah	loah
Naik (go up)	na?kih	nik
Panas (hot)	ngara	porak
Panjang (long)	gədaŋ	naru
Pasir (sand)	kərsik	one
Pendek (short)	joppok	konot
Perut (stomach)	bəltək	tukə
Putih (white)	bəntar	putih
Rumah (house)	sapo	umah
Rumput (grass)	dukut	kərpe
Sakit (ill)	cio	sakit
Sembunyi (hide)	ciboni	təmuni
Sempit (narrow)	Sempit	empət
Semua (all)	karina	bewene
Siapa (who)	ise	sa
Suami (husband)	daholi	rawan
Tahu (know)	itoh	bətih
Tahun (year)	tahun	tun
Takut (afraid)	mbiar	tərih
Tangan (hand)	tangan	pumu
Tebal (thick)	kapal	təbəl
Telinga (ear)	penggəl	kəmiriŋ
Terbang (fly)	kabaŋ	tərbaŋ
Tertawa (laugh)	tertaba	kədik
Tidur (sleep)	mədəm	nome
Tikus (mouse)	mənci	tikus
Tumpul (blunt)	tompəl	tumpul
Ular (snake)	ulok	lipe
Usus (intestines)	bituka	tetuke

216

217 **3.3The level of kinship of Karo and Gayo Language**

218

219 Based on the results of data analysis showed that the level of kinship of Karo and Gayo
220 language is at the level of family kinship. The list of cognate words of the two languages is
221 76 words of 200 Swadesh words. While non cognate words are 124 words. In this case,
222 these languages are still classified as very far for language kinship if it is seen from the
223 percentage even though they have a family relationship level. The level of kinship of the two
224 languages can be seen through the following calculation.

225 $$C = \frac{k}{n} \, x100\%$$

226 $$C = \frac{76}{200} \, x100\%$$

227 $$C = 38\%$$

228 From calculation above, the percentage level of kinship of the two languages is 38%. Based
229 on the concept stated by Crowley that the kinship level of 38% indicates that the language
230 has a level of family kinship. In this case, the level of kinship between Pakpak and Gayo is
231 still very far if it is seen from the percentage level. The cognate words found from the two
232 languages when comparing the languages can be seen in the following table.

233

234 **Table 6. The List of Cognate Words of Karo and Gayo Language**

Glos	Karo	Gayo
Akar (root)	Urat	uyət
Anak (child)	Anak	anak

Awan (cloud)	əmbun	əmun
Bagi (share)	bagi	bagi
Bisul (ulcer)	barəh	barah
Batang (stem)	bataŋ	bataŋ
Batu (stone)	batu	atu
Berat (heavy)	mbərat	bərət
Jalan (walk)	dalan	ralan
Mimpi (dream)	nipik	nipi
Napas (breath)	kəsah	kəsah
Bintang (star)	bintaŋ	bintaŋ
Buah (fruit)	buah	uah
Bulan (month)	bulan	ulən
Darah (blood)	darəh	rayoh
Datang (come)	rəh	geh
Daun (leaf)	buluŋ	uluŋ
Di (in)	i	i
Atas (above)	das	atas
Bawah (under)	təruh	tuyoh
Dalam (in)	bas	was
Duduk (sit)	kundul	kunul
Engkau (you)	əŋko	ko
Garam (salt)	sira	sira
Gigi (tooth)	ipən	ipon
Gunturl(thunder)	ləŋgur	gəgur
Hati (liver)	ate	ate
Hidung (nose)	iguŋ	iyuŋ
Hitung (count)	kira	kirə
Hujan (rain)	udan	urən
Jantung (heart)	janto	jantu
Jarum (needle)	jarum	jarum
Jahit (sew)	jait	jit
Kambing (goat)	Kambi*	Kami*
Kayu (wood)	kayu	kayu
Kilat (lightning)	kilap	kilət
Kita (we)	ita	kitə
Kulit (skin)	kulit	kulit
Kutu (lice)	kutu	kutu
Laba-laba (spider)	Lawah-lawah	ləlawah
Langit (sky)	laŋit	laŋit
*Lima (*five)	lima	limə
Lidah (tongue)	dilah	delah
Mata (eye)	mata	mata
Mati (dead)	mate	mate
Lipat (fold)	lipat	lipət
*Miring (*crooked)	mereng	Mere*
Bakar (burn)	tutuŋ	Tutu*
Bunuh (kill)	mbunuh	unuh
Pilih (choose)	pilih	pilih
Potong (cut)	kərət	kərat
Tanam (plant)	tanəm	tanom
Ikat (tie)	ikət	ikot
Kunyah (chew)	ŋatŋat	ŋəŋal
Timur (east)	timur	timur

Minum (drink)	minəm	minum
Nama (name)	gəlar	gərəl
Orang (people)	jəlma	jəlma
Payudara (chest)	tetek	susu
Perempuan (woman)	dibəru	bəbəru
Tujuh (seven)	pitu	pitu
Rambut (hair)	buk	wok
Rumah (house)	rumah	umah
Sakit (sick)	sakit	sakit
Satu (one	sada	sara
Saya (I)	Aku	aku
Sayap (wing)	kabən	kəpek
Tali (rope)	nali	tali
Tanah (soil)	tanəh	tanoh
Janji (promise)	janji	janji
Tiga (tiga)	təlu	tulu
Tua (old)	mətua	tuə
Tulang (bone)	tulan	tulən
Ular (snake)	nipe	lipe
Usus (istestines)	tuka	tetuke

235 Table 6 shown that the number of cognate words found in Karo and Gayo language is 76
236 words and the non-cognate words 124 words. The list of non-cognate words can be shown
237 in the following table.
238
239 **Table 7. The List of Non-Cognate Words of Karo and Gayo Language**

Glos	Karo	Gayo
Abu (ast)	Abu	wau
Air (water)	Lau	waəh
Angin (wind)	Aŋin	kuyu
Anjing (dog)	biaŋ	asu
Apa (what)	kai	hana
Api (fire)	api	rara
Asap (smoke)	gəbuk	asap
Atap (roof)	tarum	supu
Ayam (hen/ turn)cock)	manuk	kurek
Bagaimana (how)	uga	kunə
Bapak (father)	bapa	ama
Baru (new)	mbaru	ayu
Basah (wet)	bəncah	basah
Bekerja (work)	ərdahin	buət
Belok (turn)	belok	kisər
Benar (true)	tuhu	bətul
Bengkak (swollen)	bəsar	kəmuŋ
Baring (lay down)	taya	gulaŋ

Buru (hunt)	ərburu	muŋaro
Berdiri (stand)	cindər	səsuk
Renang (swim)	laŋi	nawe
Kata (word)	ŋərana	cərak
Pikir (think)	rukur	Piker
Tumbuh (think)	turah	murip
Besar (big)	galaŋ	kul
Bulu (fur)	mbulu	jaŋut
Burung (bird)	perik	manuk
Busuk (rotten)	macik	borok
Cacing (worm)	gaya	kətol
Daging (meat)	jukut	dəngke
Dan, dengan (and, with)	ras	rum
Danau (lake)	lau	dano
Debu (dust)	abu	Awuh/dul
Dimana (where)	I ja	I si
Dia (she/he)	ia	we
Dingin (cold)	mbərgəh	səjuk
Dua (two)	dua	roa
Ekor (tail)	ikur	uki
Empat (four)	əmpat	opat
Hari (day)	wari	lo
Hidup (life)	ŋgeluh	murip
Hijau (green)	məratah	ijo
Hitam (black)	mbiriŋ	itəm
Hutan (forest)	kəraŋən	utən
Ibu (mother)	nande	inə
Ikan (fish)	ikan	gulə
Ini (this)	ənda	ini
Isteri (wife)	ndəhara	bəbəru
Itu (that)	ah	oya
Jahat (wicked)	gutul	jahat
Jatuh (fall down)	ndabuh	mətuh
Jauh (far)	ndauh	gip
Kabut (fog)	rəmaŋ	kabut

Kaki (leg)	nahe	kidinŋ
Kanan (right)	kemuhən	kuən
Kapan (when)	ndigan	səlo
Kelambu (mosquito net)	kelambu	kelmu
Kepala (head)	takah	ulu
Kering (dry)	kərah	kəriŋ
Kiri (left)	kawəs	kiri
Kotor (dirty)	məlkət	kotek
Kuning (yellow)	məgərsiŋ	kuniŋ
Lain (other)	sidəban	len
Laki-laki (man)	dilaki	rawan
Laut (sea)	lawit	lut
Lebar (wide)	mbəlaŋ	kolak
Leher (neck)	kərahuŋ	roŋok
Makan (eat)	man	maŋan
Malam (night)	berŋi	kələm
Malu (shamed)	mela	kəmel
Lihat (see)	nəhən	eŋon
Ludah (saliva)	cidur	eleh
Belah (split)	naka	bəlah
Beli (buy)	tukur	bəli
Buka (open)	nalaŋi	ukə
Pegang (hold)	cikəp	amat
Peras (squeeze)	pərəh	muliə
Pukul (hit)	pəkpək	pəpok
Tangis (cry)	ŋanduŋ	moŋot
Cium (kiss)	ŋəma	cum
Curi (stole)	taŋko	osoh
Dengar (listen)	mbəgi	pəŋe
Tembak (shoot)	tembak	bədil
Alir (flow)	malər	jaril
Ketuk (knock)	tuktuk	tətok
Gali (dig)	ukal	kuruk
Garuk (scratch)	gərgo	kəkor
Gigit (bite)	karat	ket

Isap (taste)	cəpcəp	isəp
Menguap (evavorate)	payamən	map
Tikam (stab)	nəbak	tənik
Tiup (blow)	əmbus	yup
Merah (red)	məgara	ilaŋ
Mereka (they)	Kalak	pakəa
Mulut (mouth)	babah	awah
Muntah (vomit)	mutah	loah
Naik (go up)	Na?kih	nik
Nyamuk (mosquito)	reŋit	namuk
Panas (hot)	melas	porak
Panjang (long)	gədaŋ	naru
Pasir (sand)	kərsik	one
Pendek (short)	gəndək	konot
Perut (stomach)	bəltək	tukə
Putih (white)	məntar	putih
Rumput (grass)	dukut	kərpe
Sembunyi (hide)	cəbuni	təmuni
Sempit (narrow)	picət	empət
Semua (all)	kərina	bewene
Siapa (who)	ise	sa
Suami (husband)	perbulaŋən	rawan
Tahu (know)	ətəh	bətih
Tahun (year)	tahun	tun
Tajam (sharp)	ntəlap	təjəm
Takut (afraid)	mbiar	tərih
Tangan (hand)	tan	pumu
Tebal (thick)	məkapal	təbəl
Telinga (ear)	cupiŋ	kəmiriŋ
Telur (egg)	təlor	tənaroh
Terbang (fly)	kabaŋ	tərbaŋ
Tertawa (laught)	tawa	kədik
Tidur (sleep)	mədəm	nome
Tikus (mouse)	mənci	tikus
Tipis (thin)	məlipes	nipis

Tumpul (blunt)	mantul	tumpul

4. CONCLUSION

Based on the findings, it was found that the level of kinship between Karo and Pakpak languages was 70% with a separation period about 500-2500 years ago. From this percentage, it can be stated that Karo and Pakpak languages have a close relationship. While the level of kinship between Pakpak and Gayo languages is 41%, it means that the kinship between Pakpak and Gayo languages is not close even though the relationship between the two languages belongs to the family. Same with the kindship of Karo dan Gayo has family relationship but the percentage of the kindship at 38%. And the separation period of Pakpak and Gayo languages and also Karo and Gayo language were around 500-2500 years ago. This means that the two languages have been separated for a long time, both Pakpak languange and Gayo language or Karo language and gayo language.

COMPETING INTEREST

I am joining to the ELTA organization. It is a group of lecturers and teachers in Sumatera Utara. By joining in it, it can help me to find out new idea to be investigated.

AUTHOR'S CONTRIBUTION

The contribution includes (1) Conceptualization. In this case, the authors gave the idea, formulation the problem and the goal of the research. (2) Data curation, (3) Investigation. In this case, collecting the data. (4) Methodology, (5) Administration, (6) Supervision, (7) Visualization, and (8) Writing. In this case writing draft until final writing and it was done by the first author.

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