

Malaysian Dialect Geography in Sambas and Mempawah River Flow Areas

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Abstract

This research aimed to describe the geography of Malayan dialect in Sambas and Mempawah River Flow Areas. This study was descriptive quantitative in nature using dialectometry formulation measurement and descriptive qualitative using in-depth top-down reconstruction. The data of research was collected using in-depth interview. The data was analyzed using synchronic comparative method for language mapping, phonologically or lexically. The data reconstruction was analyzed using diachronic comparative method with top-down reconstruction technique to find retention and innovation. The diachronically data analysis was carried out utilizing Isodore Dyen's Proto Austronesia (PAN) (1970). The result of research was presented in a descriptive text about the geography of Malayan dialect in Sambas and Mempawah rivers' flow areas. Language mapping carried out phonologically found 5 dialects, while the one lexically found 7 dialects. Two lexicon reconstructions were found: (1) 'relict' retention and (2) retention. Prefix retention only found innovation. The highest retention distribution in Sambas and Mempawah River Flow Area was in TP 5 (Karangan), while the lowest one was in TP 4 (Sambas). The highest innovation distribution was in TP 1 (Seluas) and TP 6 (Menjalin), while the lowest one was in TP 4 (Sambas). The highest conservative area was in Sambas and Mempawah River Flow Area in TP 5 (Karangan) and the highest innovative area was in TP 1 (Seluas) and TP 6 (Menjalin).

INTRODUCTION

This research focused on the geography of Malayan dialect in Sambas and Mempawah river flow areas. Originally, Malayan language developed in coastal areas and the downstream of Sambas and Mempawah. As Sambas kingdom was established in Sambas coastal area and Mempawah kingdom in the downstream of Mempawah river, the number Malayan speaker increased. As the Sambas kingdom has developed since 1620s and Mempawah kingdom since 1600s, each kingdom expanded their areas to the upstream of river. Sambas kingdom expanded its area to the upstream of Sambas river and Mempawah to Mempawah river's upstream.

Those two kingdoms' area expansion took place by dispatching the tax collectors to the continents in the river upstream areas. The tribute collectors from Sambas kingdom went to the upstream areas of Sambas river through Kumba river (Seluas), Tanggi (Sanggo Ledo) and Sambas Kecil (Small Sambas) (Ledo). Some tax collectors finally stayed in that upstream area. The tax collectors from Mempawah kingdom went to Menjalin and Karangan areas; some of them finally lived and stayed there. As the time progressed, the upstream Sambas and Mempawah rivers became the center of subdistrict government. The Malayan speaker developed very rapidly. Eventually, Malayan language in both rivers' upstream became the sufficiently wide Malayan language use area.

This study was important, because the previous studies have not discussed this topic yet. Language Center (2008: 61-63) mapped the languages existing throughout the Republic of Indonesia's area using synchronic approach. Diachronic approach has not been used yet. The Language Center's synchronic research suggested that Malayan dialects were distributed in most areas of West Kalimantan province, categorized into 15 Malayan dialects. However, the Mempawah river upstream area in Karangan, Sambas Seluas river upstream, Sanggo Ledo, and Ledo areas were included into Dayak language mapping. Wurm and Hattori (1983: 42) explained the language condition in Kalimantan island, particularly Malayan language mapping in West Kalimantan. The distribution of Malayan language in West Kalimantan was only along the downstream through the middle of Kapuas river. The upstream of Sambas and Mempawah rivers was included into Dayak land². Sambas coastal area was included into Malayan-Dayak. Patriantoro (2007) studied "*Malayan Dialectology in Sambas Regency coastal area*" describing that the Malayan language in Sambas Regency coastal area is the same dialect, the difference is only limited to the difference, no difference and speech difference. In this area, retention, innovation and borrowing lexicons were found. Patriantoro (2008) studied "*Malayan Dialectology in Bengkayang Regency coastal area*" describing that there was no difference in Malayan language in the Bengkayang Regency coastal areas. In this area retention, innovation, and borrowing lexicons were found; Patriantoro (2009) studied: "*Malayan Dialectology in Pontianak Regency coastal area*" describing that the Malayan language in Pontianak Regency coastal area is the same dialect, the difference is only limited to speech

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² Dayak Land is the hinterland, the speaker of which speaks Dayak as the communication means or Dayak language user area.

difference, and no difference. In this area, retention, innovation, and borrowing lexicons were found.

Scientifically, this research aimed to address Sambas and Mempawah river upstream areas that by Hattori and Wurm was included into 'Dayak language' Dayak land and by Language Center (2008) included into Dayak language, in fact it is Malayan user area. No previous studies addressed this topic. This dialect geographical research area covered 4 observation points (TP) in Sambas river flow area (DAS) including: Seluas, Sanggo Ledo, Ledo, and Sambas and 3 TPs in Mempawah DAS including: Karangan, Menjalin, and Mempawah. This study entitled "*Malayan Dialect Geography in Sambas and Mempawah River Flow Areas*" accomplishes the researches by Language Centre (2008) and Wurm and Hattori (1983: 42). This study is original.

The dialect geography is a synonym for dialectology. In further development, dialectology focuses more on the study on dialect in a language. Dialect geography studies language variation based on local (place) in language area (Nadra and Reniwati, 2009: 20). Other language variants may result because of geography difference (Ayatrohaedi: 1971-6). Language variation may be the difference of dialect, sub-dialect and accent. The certainly unknown language variation including language, dialect, sub-dialect, and speech is called *isolect* (Mahsun, 2010: 46). In geographical dialect study, in addition to synchronic study¹, it should be observed and explained why those differences result or how the differences occur (diachronic study)² as well (Kisyani Laksono, 2004: 10). Nadra (2009: 20) suggests similarly.

The regularly occurring sound change is called correspondence, while the sporadically occurring sound change is called variation (Mahsun, 1995: 28). The types of sound change (see in Kisyani and Agusniar Dian Savitri, 2009: 97-99; Mahsun, 1995: 33-39; Terry Crowley, 1992: 38-39 and 1997: 36-62) states that the types of sound change include: (1) assimilation; (2) dissimilation; (3) metathesis; (4) contraction; (5) *apheresis* (the loss of one or more sounds from the beginning of a word), *syncope* (the shortening of a word by omission of a sound, letter, or syllable from the middle of the word), *haplology* (the loss of one of two identical or similar adjacent syllables in a word); (6) *prothesis* (the addition of a phoneme or syllable at the beginning of a word), *epenthesis* (the addition of a sound in the middle of a word), *paragoge* (the addition of a sound in the end of a word); (7) lenition; (8) *sandhi*; (9) dissonance; (10) palatalization.

Isogloss is an imaginary line incorporating the area using the same language variation (Lauder and Lauder, 2009: 221). Isogloss is an imaginary line connecting each observation areas featuring the similar linguistic phenomenon, and then the concept developed into imaginary line incorporating the observation areas featuring the similar language phenomenon (Kisyani Laksono and Agusniar Dian Savitri, 2009: 91).

RESEARCH METHOD

In dialect geographic study, the method employed was comparative one, synchronic comparative method. Sudaryanto (1993: 53) used the term comparative method and equivalent method. The equivalent method is the procedure of analyzing language data by equaling or 'comparing' one datum with another. Terry Crowley (1997: 88) states that comparative method is the procedure of comparing two cognates or more from two languages or more to get proto-language. The comparative method can be used to reconstruct several aspects of original language from its parental language reflection, only linguistic data reconstructed from the related or cognate ones.

The dialect geographical research can be quantitative or qualitative. This research was carried out synchronically and diachronically. Particularly, for the language mapping, the method employed was synchronic comparative method as the beginning step to find out the phonological and lexical differences from the compared areas. The quantitative analysis was done using dialectometry formulation. Dialectometry is a statistical measure used to see the extent of difference existing in the sites studied by comparing a number of elements collected from certain sites (Nadra and Reniwati: 2009: 91). The next step is to count the number of inter-observation point lexicon differences using "Dialectometry Method". Dialectometry formulation (Güter in Mahsun, 1995: 118; Mahsun, 2010: 48-50).

This research was qualitative in nature used to reconstruct the language as well as its reflection. The method employed was Diachronic comparative method. The diachronic comparative method is the procedure of comparing the procedure of comparing linguistic data between observation points in different periods of time. The reconstruction technique used was top-down reconstruction.

The proto-language etymon employed for lexicon reconstruction with top-down reconstruction of Proto-Austronesia (PAN) etymon was the one resulting from reconstruction edited by S.A. Wurm and B. Wilson (1978) entitled "*English Finderlish Reconstruction in Austronesian Language*" and "*PAN Etyma*" by Isodore Dyen (1970). The proto-Malayan etymon used for prefix reconstruction was the one resulting from K. Alexander

¹ Synchronic study is the comparison of the same language on the basis of the same period of time from several places or observation points.

² Diachronic is the comparison of the same language on the basis of the different periods of time. For example the present Malayan language and the one 200 years ago.

Adelaar (1992)'s reconstruction "Proto Malayic: The reconstruction of Its Phonology and Parts of Its Lexicon and Morphology".

RESULT AND DISCUSSION

1. The Calculation of Phonological Difference

The data grouping of 82 glosses by zero, phonological and lexical differences can be categorized as follows: zero difference of 158, phonological difference of 321, lexical difference of 350; each difference can be seen in table 34 below. Considering data investigation on 321 phonological differences, 53 correspondences and variations were found. Here is the detail of 53 correspondences and variations from 321 phonological data.

Table 1: The Detail of Correspondence and Variation

| No | Elaboration | Example | Number |
|----|---------------|------------------------------------|--------|
| 1 | a- ≈ ə- | ampat ≈ əmpat | 40 |
| 2 | -a ≈ -e | pəria ≈ pərie | 2 |
| 3 | -a ≈ -e ≈ -ə | kəbaya ≈ kəbaye ≈ kəbayə | 9 |
| 4 | -e ≈ -i | kame ≈ kami | 3 |
| 5 | -e ≈ -ə | tige ≈ tigə | 17 |
| 6 | -ə ≈ -i- | səpuloh ≈ sipuloh | 10 |
| 7 | -u- ≈ -o- | təŋkə? ≈ tənəkə? | 7 |
| 8 | b- ~ g- | buyon ~ gayon | 1 |
| 9 | b- ~ m- | belə? ~ melə? | 1 |
| 10 | d- ~ j- | dagu ~ jagu | 1 |
| 11 | -g- ~ -j- | bigi asam ~ biji asam | 1 |
| 12 | -g- ~ -R- | paggi ~ pərgi | 1 |
| 13 | -θ- ≈ -a- | kərbau ≈ kərabau | 4 |
| 14 | θ- ≈ b- | iso? ≈ beso? | 3 |
| 14 | -θ- ≈ -d- | padas ≈ paddas | 2 |
| 15 | -θ- ≈ -ə- | mlempar ≈ məlempar | 39 |
| 16 | -θ- ~ -g- | pagi ~ paggi | 1 |
| 17 | θ- ≈ h- | aŋat ≈ haŋat | 23 |
| 18 | -θ- ~ -j- | səjə? ~ səjjo? | 1 |
| 19 | θ ~ k | utare ~ kusara | 1 |
| 20 | θ- ≈ l- | əŋkuas ≈ ləŋkuas | 3 |
| 21 | -θ- ≈ -m- | lima ≈ limma | 9 |
| 22 | -θ- ≈ -n- | bisul ≈ binsol | 4 |
| 23 | -θ- ~ η | taŋan ~ laŋŋan | 1 |
| 24 | θ ~ ʔ | kəʔaŋ ~ kəʔaŋ | 1 |
| 24 | -θ- ~ -p- | kapa? ~ kappa? | 1 |
| 25 | -θ- ≈ -r- | barat ≈ barrat | 2 |
| 26 | -θ- ≈ -R- | bətaʔa ≈ bətaʔə | 14 |
| 27 | -θ ~ -t | ləsəŋ pipi ~ ləsəŋ pipit | 1 |
| 28 | k- ~ g- | kutu ~ gutu | 1 |
| 29 | k- ~ t- | kətombar ~ tətombər | 1 |
| 30 | -ʔ ≈ -h | basa? ≈ basah | 2 |
| 31 | -ʔ ~ -l | kəci? ~ kəcil | 1 |
| 32 | -ʔ ≈ -R | ekə? ≈ ekər | 4 |
| 33 | -ʔ ≈ -R ~ -r | tələ? ≈ tələR ≈ tələr | 5 |
| 34 | -ʔ ≈ -t | kuŋi? ≈ kuŋit | 2 |
| 35 | -n ≈ -ŋ | cicin ≈ cincin | 3 |
| 36 | -R- ~ -r- | darah ≈ darah | 59 |
| 37 | t- ~ l- | taŋan ~ laŋan | 1 |
| 38 | -t- ~ -R- | kəmmintin ~ kəmmiri | 1 |
| 39 | -t ~ -R ~ -r | pusat ~ pusar ~ pusar | 1 |
| 40 | 2 sil ~ 1 sil | tida? ~ nda? | 1 |
| 41 | 3 sil ≈ 2 sil | dələpan ≈ lapan | 14 |
| 42 | 4 sil ≈ 2 sil | bakul kəci? ≈ bakkul | 9 |
| 43 | 4 sil ≈ 3 sil | kələlawar ≈ kəlawar | 4 |
| 44 | 5 sil ≈ 2 sil | mabə? ~ mabokan ≈ mabə? | 2 |
| 45 | 6 sil ~ 4 sil | oraŋ pərəmpuan ~ pərəmpuan | 1 |
| 46 | 6 sil ~ 5 sil | məməjamkan mate ~ məjamkan mate | 1 |
| 47 | sandi | kətia? ≈ ketə? | 2 |
| 50 | epenthesis | tapa? ~ təlapa? | 1 |
| 51 | paragoge | parot ~ parutan | 1 |
| 52 | apheresis | hiton ~ iton | 1 |
| 53 | dissimilation | rəmpot ~ rəmpət | 1 |
| | Total | | 321 |

The number of correspondence and variation above is the result of investigation on the phonology differences of 321 data. For example, the correspondence of [-a] ≈ [-ə] that is 40 in number above is the one that can increase, if it involves other difference still having correspondence [-a] ≈ [-ə], another difference was the example of correspondence [-r-] ≈ [-r-], [-e] ≈ [-ə], [ø-] ≈ h-]. The correspondence number of 40 suggests that there is a correspondence of [-a] ≈ [-ə], but it likely contains other correspondence such as [-r-] ≈ [-r-], [-e] ≈ [-ə], [ø-] ≈ h-] correspondences.

The calculation of phonological dialectometry was carried out completely. In calculating the phonological dialectometry, the data indicating the same correspondence, whatever the number, was counted only 1 difference, for example the [-a] ≈ [-ə] correspondence that is 40 in number was counted one difference. The calculation of vocabulary space in percentage, particularly for phonology difference, was conducted using dialectometry triangle and dialectometry polygon. Both of them were used to complement each other. There were 7 observation points, including: TPs 1, 2, 3, 4, 5, 6, 7; then they were compared 1 - 2, 1 - 3, 1 - 4, 2 - 3, 2 - 5, 3 - 4, 3 - 5, 3 - 6, 3 - 7, 4 - 7, 5 - 6, 6 - 7. Phonology difference between observation points could be seen in the table below.

Table 2: The phonological difference between observation points

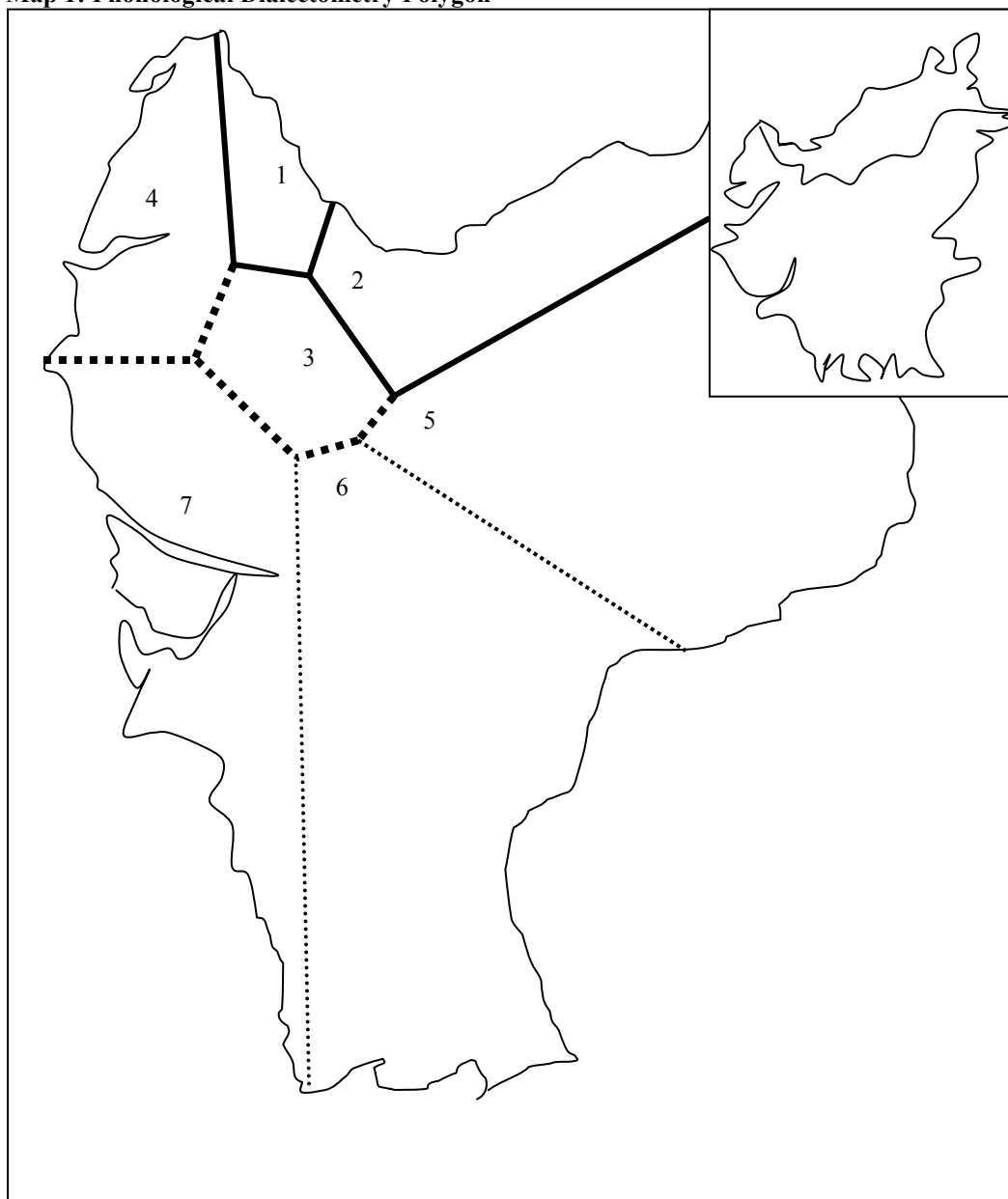
| No | Observation Points | Difference | Percentage % |
|----|--------------------|------------|--------------|
| 1 | 1 - 2 | 29 | 9 % |
| 2 | 1 - 3 | 35 | 10.9 % |
| 3 | 1 - 4 | 35 | 10.9 % |
| 4 | 2 - 3 | 28 | 8.7 % |
| 5 | 2 - 5 | 34 | 10.5 % |
| 6 | 3 - 4 | 36 | 11.2 % |
| 7 | 3 - 5 | 36 | 11.2 % |
| 8 | 3 - 6 | 36 | 11.2 % |
| 9 | 3 - 7 | 36 | 11.2 % |
| 10 | 4 - 7 | 43 | 13.3 % |
| 11 | 5 - 6 | 16 | 4.9 % |
| 12 | 6 - 7 | 17 | 5.2 % |

Considering the calculation of phonological dialectometry between TPs above, the following isolects were found: TPs 5 - 6 and 6 - 7 as speech difference, TPs 1 - 2, 1 - 3, 1 - 4, 2 - 3, 2 - 5 belonging to sub-dialect difference, TPs 3 - 4, 3 - 5, 3 - 6, 3 - 7, and 4 - 7 as dialect difference. The lowest TP was at TP 5 - 6 with 4.9% while the highest one was in TP 4-7 with 13.3%. Here is the polygonal map of dialectometry¹ and isogloss band².

¹ This dialectometry polygon substitutes for polygoness de thiessen. It is analogous to dialectometry.

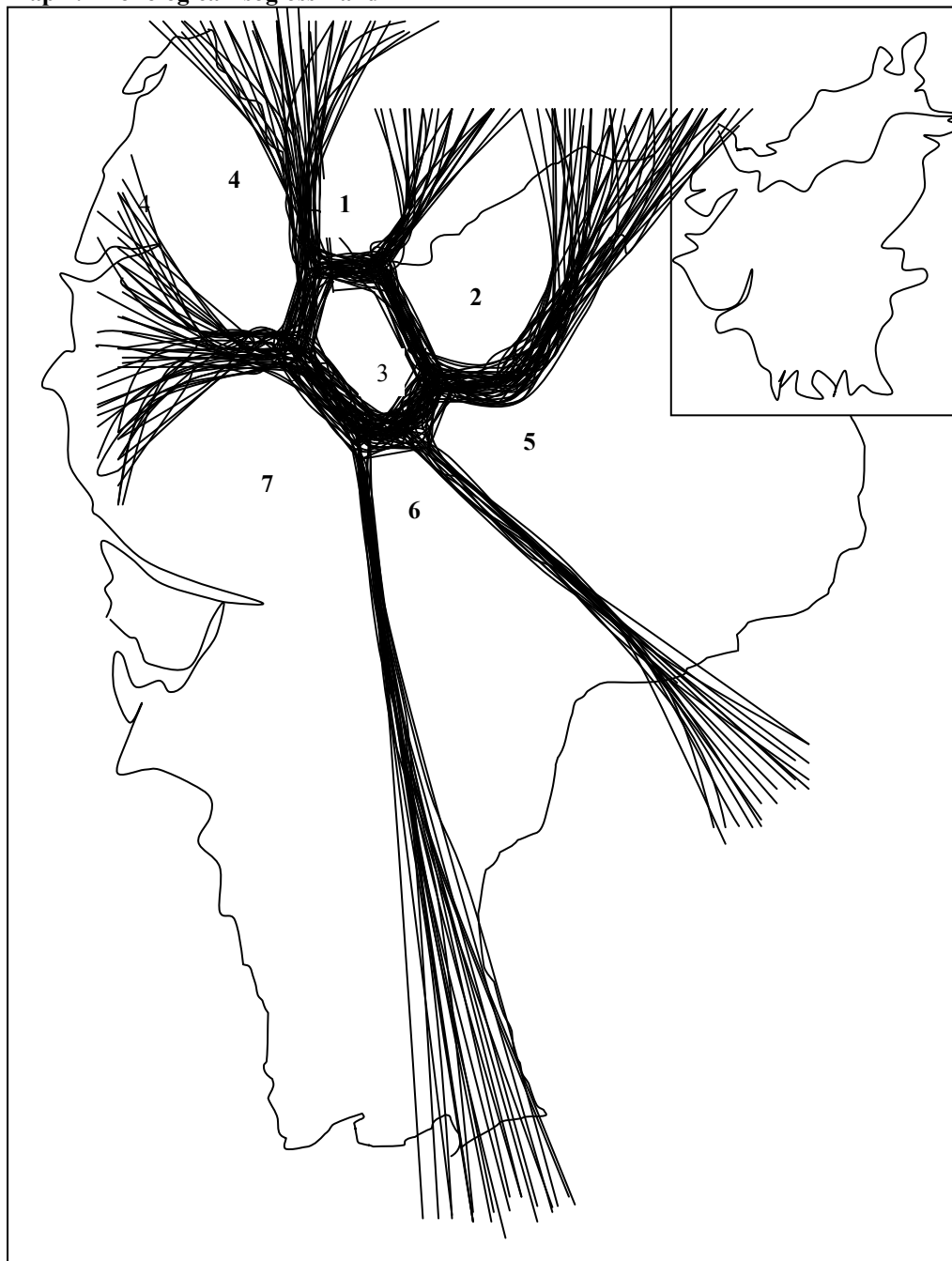
² Isogloss band is the line restricting one dialect to another, one language to another.

Map 1: Phonological Dialectometry Polygon



- Notes : : no difference
 : : speech difference
 : ——— : sub-dialect difference
 : - - - : dialect difference
 : ——— : language difference

Map 2: Phonological Isogloss Band



2. The overall calculation of lexicon difference

Overall, the data of lexicon difference occurs in 350 out of 829 data. The calculation of lexicon dialectometry is based on 350 lexical differences between TPs¹ including TP 1, 2, 3, 4, 5, 6, 7; the compared areas: TP 1 – 2, 1 – 3, 1 – 4, 2 – 3, 2 – 5, 3 – 4, 3 – 5, 3 – 6, 3 – 7, 4 – 7, 5 – 6, 6 – 7, the calculation of lexical differences between TP using inter-village triangle and dialectometry formula. The calculation result of lexical difference dialectometry between TP, overall, can be seen in the table below.

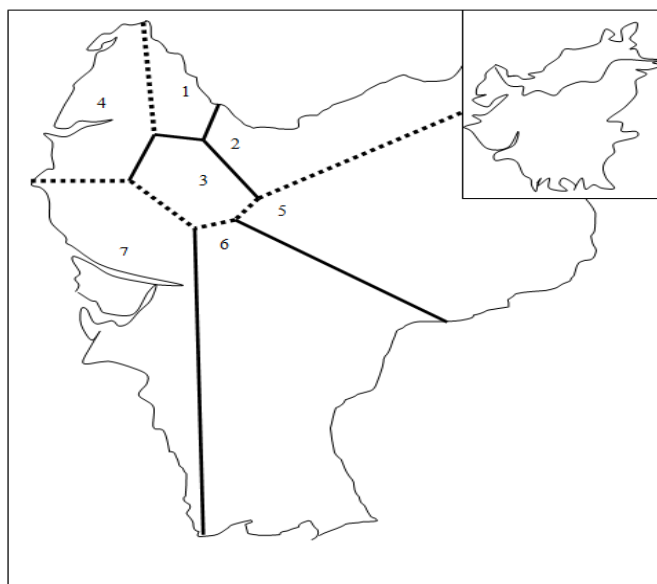
¹ TP stands for *Titik Pengamatan* (observation point) constituting the area taken for its data, in this research there were 7 observation points.

Table 3 : Overall Lexical Dialectometry

| NO | Observation Point | Difference | Percentage % |
|----|-------------------|------------|--------------|
| 1 | 1 – 2 | 140 | 40 % |
| 2 | 1 – 3 | 170 | 48.5 % |
| 3 | 1 – 4 | 189 | 54 % |
| 4 | 2 – 3 | 152 | 43.4 % |
| 5 | 2 – 5 | 195 | 55.7 % |
| 6 | 3 – 4 | 163 | 46.5 % |
| 7 | 3 – 5 | 205 | 58.5 % |
| 8 | 3 – 6 | 177 | 50.5 % |
| 9 | 3 – 7 | 205 | 58.5 % |
| 10 | 4 – 7 | 240 | 68.5 % |
| 11 | 5 – 6 | 156 | 44.5 % |
| 12 | 6 – 7 | 113 | 32.2 % |

Considering the overall lexical dialectometry table above, TPs *no difference* and *speech difference* were not found. The TP with the lowest percentage was TP 6 – 7 = 32.2% belonging to sub dialect. Some TPs belong to sub-dialect difference: TP 1 – 2 = 40 %, 1 – 3 = 48.5 %, 2 – 3 = 43.4 %, 3 – 4 = 46.5 %, 5 – 6 = 44.5 %, and 6 – 7 = 32.2 %. TP dialect difference includes TP 1 – 4 = 54 %, 2 – 5 = 55.7% , 3 – 5 = 58.5 %, 3 – 6 = 50.5 %, 3 – 7 = 58.5 %, and 4 – 7 = 68.5 %, the estimation of lexical difference with dialectometry triangle found 7 dialect differences. The TP with the highest percentage was TP 4 – 7 = 68.5 %, while the one with the lowest percentage was TP 6 – 7 = 32.2 %. The lexical difference between TPs was mapped in dialectometry polygonal map, and isogloss band map below.

Map 3: Overall Lexical Dialectometry Polygon



- Notes : : no difference
 : speech difference
 ————— : sub-dialect difference
 : dialect difference
 ————— : language difference

The calculation of phonological and lexical differences has similar result. The calculation of phonological difference found 5 dialects in research area, the calculation of lexical difference found 7 dialects in research location. The isogloss band of phonological and lexical differences has similarity.

3. The reconstruction of retention and innovation lexicon

Gloss ‘bibir’ (86) in TPs 1, 5, 6, 7 PAN **bíbír > [b**í**bír], this reflection is ‘relict’ retention. In TPs 2, 3, 4, PAN *bíbír > [b**i**bír], this reflection is innovation.

Gloss ‘rumpuť’ (398) in TPs 2, 3, 4 PAN *rumpuť > [r**o**mput] this reflection is ‘relict’ retention¹. In

¹ Retention is the reflection of the present language as same as the proto-language or relict

TPs 1, 5, 6, 7 PAN *rumpu > [rompu] this reflection is innovation¹.

Gloss 'enam' (6) in TPs 1, 2, 5, 6, 7 PAN *ʔeneme > [enam] this reflection is innovation. Innovation in TPs 1, 2, 5, 6, 7 *ʔeneme > [enam] occurs with omission */ʔ/ in the beginning of words 'apheresis', omission */e/ in the end of word 'apocope', */e/ changes into /ə/, the finale change into [enam]. Innovation in TP 4 PAN²*ʔeneme > [annam] occurs with omission */ʔ/ in the beginning of word 'apheresis', omission */e/ in the end of word 'apocope', */e/ in the first syllable changes into /ə/, with /m/ sound addition in the middle of word 'epenthesis', the final change into [annam]. Innovation in TP 3 *ʔeneme > [annam] occurs with omission */ʔ/ in the beginning of word 'apheresis', omission */e/ in the end of word 'apocope', */e/ in the first syllable change into /ə/, with /n/ sound addition in the middle of word 'epenthesis', the final change into [annam]. The innovation lexical reconstruction occurring overall is innovation in dissimilation, metathesis, apheresis, syncope, apocope, prothesis, epenthesis, paragoge and sandi manners.

4. The prefix reconstruction of 'Relict' and innovation retention

K.A. Adelaar (1994) called prefix PM³ *tAr-, *mAN-as prefix PM. Prefix PM *tAr > tə-, ti-, tə-, tər-, in TPs 1, 2, 3, 4, 5, 6, 7 is reflected onto innovation, no retention reflection was found. Prefix PM *mAN- > mə-, məm-, mən-, məŋ-, məʔ-, ø-; TPs 1, 3, 5, 6, 7 and *mAN- > m-, n-, ŋ-, ʔ-, ø- are in TPs 2, 4. Prefix PM *mAN- was reflected onto innovation.

5. The distribution of Lexicon and Prefix (Retention and Innovation)

Considering the result of investigation on 20 PAN data, it can be seen that 13 are reflected as retention in TP 1, 12 in TP 2, 13 in TP 3, 10 in TP 4, 17 in TP 5, 15 in TP 6, and 14 in TP 7. The highest number of retention is 17 occurring in TP 5, called the highest conservative area. TP 4 has the lowest number of retention, 10, as the lowest conservative area. The investigation on 169 PAN data indicates that 150 were reflected as innovation in TP 1, 145 in TP 2, 147 in TP 3, 143 in TP 4, 147 in TP 5, 150 in TP 6 and 148 in TP 7. TPs 1 and 6 have the highest number of innovation, amount to 150. TP 4 has the lowest number of innovation, 143.

6. The Distribution of Retention and Innovation Prefix

Considering the PM *tAr- and *mAN- in research site, no retention reflection was found. The reflection of prefix PM *tAr- and *mAN- di TPs 1, 2, 3, 4, 5, 6, 7; all of reflections become innovation. Prefix PM *tAr- is reflected on tə-, ti-, tər- constituting the innovation. In TPs 1, 2, 4, 6, 7 prefix PM *tAr- > te- experiences innovation */A/ changes into /ə/, */r/ disappears, in TP 3 prefix PM *tAr- > ti- experiences innovation */A/ changes into /i/ */r/ disappears, in TP 5 prefix PM *tAr- > tər- experiences innovation */A/ changes into /ə/, */r/ changes into /r/. All reflections PM *mAN- > mə-, məm-, mən- məʔ-, məŋ-, m-, n-, ʔ-, ŋ- occur in TPs 1, 2, 3, 4, 5, 6, 7. Prefix PM *mAN- > mə-, məm-, mən- məʔ-, məŋ- occur in TPs 1, 3, 5, 6, 7; prefix PM *mAN- > m-, n-, ʔ-, ŋ- occur in TPs 2 and 4. Considering the data in research area of TPs 1, 2, 3, 4, 5, 6, 7 prefix PM *mAN- is reflected all on innovation.

7. Conservative and Innovative Areas in Sambas and Mempawah DAS

The conservative area is the one still having much 'relict' retention. The highest conservative area is 17 in number occurring in TP 5 (Karangan) and the lowest one is 10 occurring in TP4 (Sambas). The highest innovative area, TP 1, is in Seluas area and TP 6 in Menjalin is the highest innovative area that is 150 in number, while TP 4 of Sambas area is the lowest innovative area that is 143 in number.

CONCLUSION

- Phonologically dialect geography in Sambas and Mempawah DAS found 5 dialects.
- Lexically dialect geography in Sambas and Mempawah DAS found 7 dialects.
- The calculation of phonological and lexical differences has the similar result.
- The highest 'relic' retention is 17 in number occurring in TP 5, while the lowest one is 10 in TP 4.
- The highest innovation lexical distribution is 150 out of 169 data occurring in TPs 1 and 6. The lowest one is 143 in TP4.
- The highest conservative area is 17 in number occurring in TP 5 (Karangan), while the lowest one is 10 in TP 4 (Sambas). The highest innovative area distribution occurs in TPs 1 (seluas) and 6 (Menjalin) amount to 150, while the lowest one in TP4 (Sambas), amount to 143.

¹ Innovation is the reflection of the present language changing from proto-language or relict.

² PAN is Proto Austronesia

³ PM is Proto-Malayan

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