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## **NEW LINGUISTIC EVIDENCE IN FAVOR OF BANGKALAN CONTRADICTS SUMENEP AS THE MADURESE LANGUAGE HOMELAND**

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### **Abstract**

It is widely believed that Sumenep, the eastest district in Madura Island, is the homeland of Madurese. It is based on the collective memories of Madura's people and historical factors of Madurese monarchies. Sumenep is considered as the most powerful monarchy and the center of Madurese culture includes Madurese language. Based on Madurese variation and distribution of vocoid and contoid, and transition area of three dialects (East Madurese dialect, West Madurese dialect, and Bawean dialect) in Bangkalan, it is indicated that the innovation area of Madurese language is Bangkalan. It implies that the homeland of Madurese language is not Sumenep, it is in Bangkalan.

### **Keywords**

focal area, vocoid-contoid variation, geographical diffusion, transition area

## **NUEVAS EVIDENCIAS LINGÜÍSTICAS EN FAVOR DE BANGKALAN CONTRADICEN SUMENEP COMO LA PATRIA DE LA LENGUA MADURESA**

### **Resumen**

Está ampliamente extendido que en Sumenep, el distrito más oriental de la isla de Madura, nació la lengua maduresa. Se basa en los recuerdos colectivos del pueblo de Madura y en los factores históricos de las monarquías maduresas. Sumenep es considerada como la monarquía más poderosa, y el centro de la cultura maduresa incluye el idioma madurés. Sobre la base de la variación y la distribución de vocoides y contoides, y del área de transición de tres dialectos del madurés (el dialecto del este, el dialecto del oeste

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y el dialecto de Bawean) en Bangkalan, se indica que el área de innovación del idioma madurés es Bangkalan. Esto implica que la patria de la lengua maduresa no es Sumenep, sino Bangkalan.

### **Palabras clave**

área foca, variación vocoide-contoide, difusión geográfica, área de transición

## **1. Introduction**

Madurese language is a local language with second largest speakers after Javanese in West Java. 13.694.000 speakers are spread over Madura Island, Madura archipelago, Bawean Island, and small part of eastern part of East Java (SIL 2005: 2). The characteristics of the language is that it has contoid aspirat, geminat, and vocoid [ə] which take place after voiced plosive contoid.

Up to now, Sumenep, the eastest district in Madura Island, is believed to be the center and homeland of Madurese. It is based on the collective memory and historical factors of the monarchies in Madura Island. Sumenep is considered as the most powerful monarchy in Madura and the center of culture and Madurese language. It is also supported by Madurese language speakers who make Madurese in Sumenep as the standard Madurese language.

What is believed by Madurese language speakers who considered Sumenep as the center and homeland of Madurese language is different from the research's findings.<sup>1</sup> Based on phonological variations of Madurese language which are located in forty points of observation (Madurese homogenous area) all over East Java, it is found that the center of Madurese language (focal area) is not Sumenep, it is Bangkalan. It is due to the fact of Madurese language phonological variation which distribution is supported by the following four factors, 1) historical factors of Madurese monarchies, 2) phonological variation factors that determine Bangkalan as innovative area, 3) dialect's transition area, and 4) geographical factors of Sumenep and Bangkalan.

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<sup>1</sup> Data is gathered from 40 points of observation in the whole part of East Java. Each point of observation consists of two groups of informants, old informants and young informants. Method of data collection used is field observation using interview and elicitation. The determination of variation status is conducted by using dialectometry and complete permutation technique.

## 2. Historical factors Madurese monarchies: Bangkalan and Sumenep

Historically, there were centers of administration in Bangkalan, Sampang, Pamekasan and Sumenep, those were monarchies. They belonged to Javanese monarchy which existed since Singhasari monarchy (Ma'arif 2015: 51). Thus, those monarchies were actually districts that developed in Majapahit era (Ma'arif 2015: 51-52). Geographical distance that separated Madurese administration and Majapahit made Madurese people considered that the existing administration in Madura (district) as a monarchy. The chief of the district was named as *raja* and *rato*, as a consequence, there were *raja* and *rato* in Sumenep, Pamekasan, Sampang, and Bangkalan.

The monarchy<sup>2</sup> as it was well-known as Sumenep monarchy began with Arya Wiraraja era in Batuputih, it then moved to Banasare, and finally ended in Sumenep (Ma'arif 2015: 52). The Sumenep monarchy — once it was Pajagalan monarchy — was built in Somala era, the thirty first king of Sumenep (Ma'arif 2015: 52). Arya Wiraraja was Sumenep's first king who was crowned in October<sup>3</sup>, 1269<sup>3</sup> (Ma'arif 2015: 53). Another version mentioned that Arya Wiraraja was banished to Sumenep for his fault. In his banishment, he succeeded in developing Sumenep into a well-known district during Majapahit era. Based on Pararaton which stated about the banishment, Arya Wiraraja was a Javanese who was born in Ranu Pakis village, Lumajang, East Java. He was crowned as Sumenep's chief during Kertanegara's era, the last king of Singhasari (Ma'arif 2015: 54). He brought Sumenep into the most glorious period until it turned into Majapahit's era (Ma'arif 2015: 53). It was different from Bangkalan monarchy in Bangkalan which was strated from King Pragalba in Arosbaya. Bangkalan's development era was initially began with Pratanu,<sup>4</sup> Arosbaya monarchy, which was then continued by Tjakraningrat I,<sup>5</sup> the son of Sultan Agung, the king of Mataram, and Tjakraningrat II

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<sup>2</sup> The monarchies/districts in Sampang and Pamekasan were not further explained in this part due to the fact that the emergence of these two monarchies/districts was not as popular as Bangkalan and Sumenep monarchy/district.

<sup>3</sup> The date was officially declared as the birth of Sumenep district.

<sup>4</sup> The son of King Pragalba, the center of the monarchy is Arosbaya Bangkalan.

<sup>5</sup> Named Prasena, the son of Prince Tengah (the grandson of Pratanu, Arosbaya) who was adopted by Sultan Agung, Mataram (Ma'arif, 2015: 92).

(Ma'arif 2015: 91-93). There was no further explanation about Bangkalan's development.

Based on the two monarchies, it was indicated that Sumenep monarchy was more famous than Bangkalan monarchy.<sup>6</sup> Moreover, the name Sumenep was cited in Pararaton "*...dinothaken, kinun adipati ring sungeneb, anger ing Madura wetan*" (Ma'arif 2015: 29). The naming Sumenep had existed since Singhasari era. At that time, Sumenep was named as *Songénnéb*, which derived from Kawi's language *sung* which means 'cavity' and *énnép* which means 'calm sediment' (Ma'arif 2015: 29). This makes the monarchy/district in Madura Island famous as it happened to Sumenep monarchy.

During Dutch's colonialism, the administrative division occurred in Madura. There were two Dutch auto-administrative districts/residencies headed by Indonesians which was based on the division of East Madura and West Madura which had existed since Majapahit up to Sultan Agung period (Rifa'i 2007: 32-35). The above mention argument changed when Dutch made a new policy caused by culture stelsel and the unsuccessful Indonesian administration. The Dutch's removal of Indonesian administration resulted the direct Dutch administration on Madurese's region started from Pamekasan in 1858, Sumenep in 1883, and Bangkalan in 1855 (Rifai 2007: 36). Starting from that period, there was only one Dutch residency in the whole part of Madura Island and the term Madura was used to refer to whole part of the island (Rifai 2007: 37). The division into two residencies affected the Madurese language. Up to now, it seems that Madurese's speakers are divided into two groups, namely, the West Madurese and the East Madurese. The West Madurese consists of Bangkalan and Sampang, the East Madurese consists of Pamekasan and Sumenep.

The historical factors result the understanding that Sumenep is the homeland and the center of Madurese language. It is supported by the mentioning of Sumenep in Pararaton that makes Madurese people believe that Sumenep is the homeland and the center of Madurese culture and language. Thus, the labelling of Sumenep as the homeland of Madurese language is mainly based on the historical factor of glorious Sumenep monarchy/district instead of linguistic factors (language variation).

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<sup>6</sup> Based on Ma'arif (2015:91) "Arosbaya was frequently stated as the center of development and civilization of Madurese tribe' however, the fact today shows that Sumenep is still considered as the center of Madurese culture.

### 3. Phonological variation of Madurese: Bangkalan as the Innovative Area

#### 3.1 Variation and Distribution [a] ~ [ə] ~ [ɸ]

Variation of [a] ~ [ə] ~ [ɸ] corresponds to [ə] with [a] or [ɸ] at the first syllable. This variation happens to old speakers and young speakers of Madurese language. Vocoid [ə] the first syllable of an etyma varies to [a] on other etyma or delete the vocoid [ə] or [a]. The example of the pattern can be shown as follows, etyma [təɾetan] → [təɾetan] → [tɾetan] ‘brother’. Vocoid [a] of the first syllable of the etyma [təɾetan] varies to vocoid [ə] or varies to [ɸ] — deleting vocoid [ə] / [a].

The correspondence above is very perfect since it takes places in similar environment and it also has similar geographical distribution. The correspondence results the area of [a], [ə], and [ɸ] in geographical diffusion as it can be seen from the map below.

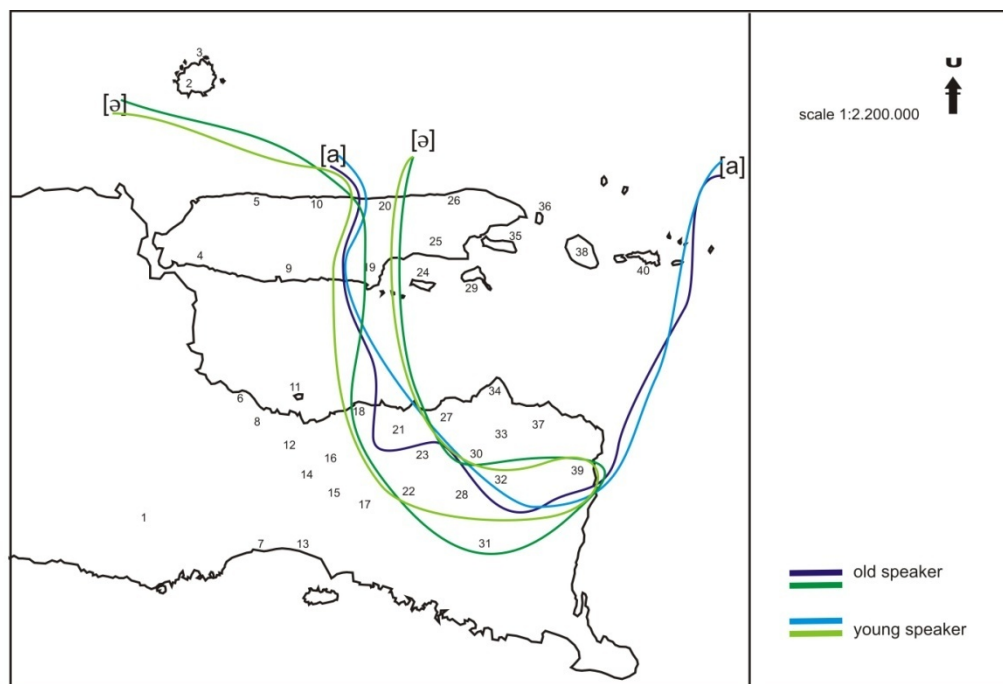


Figure 1. The Distribution of [a] ~ [ə] ~ [ɸ] of old and young speakers.

Based on Figure 1, vocoid area [a] lies on the eastern part, starting from point of observation 19, 20 (Pamekasan, Madura island) and point of observation 18 (Randumerak), 22 (Selodakon), 31 (Kalibaru) which spreads to the east part until it reaches Sumenep archipelago. The points of observation in the middle part are vocoid area of [ə] and transition area of vocoid [a] → [ə]. Thus, the area of [ɸ] are the western parts which are begun from point of observation 9, 10 (Sampang, Madura island) and 16 (Ranuagung), 17 (Selodakon) in Java island.

Referring to three points on geographical diffusion (Chambers & Trudgill 2004: 168),<sup>7</sup> those are found in correspondence of [ə] ~ [a] ~ [ɸ]. First, vocoid [a] in the correspondence of [ə] ~ [a] ~ [ɸ] tends to occur in isolated area. It can be traced from the spread of vocoid [a] in the eastern part and the archipelago. It implies that vocoid [a] is an older form compared to [ə] and [ɸ]. Second, vocoid [a] is in peripheral area. It can be seen from the distribution of vocoid [a] which tends to happen in the east part, meanwhile [ɸ] is on the west part which is closer to the center of administration (East Java province). This means that vocoid [a] is an older form compared to vocoid [ə] and [ɸ]. Third, based on its distribution, vocoid [a] has an equal distribution with [ɸ].

Based on three above mentioned of geographical diffusion, it can be seen that vocoid [a] is an older form. Even if vocoid [a] has nearly similar distribution with [ɸ], the distribution of vocoid [a] tends to be more isolated and peripheral. It is also supported by the diachronic evidence as in “palahu, paraquh, pAra[h]u<sup>8</sup> for glossary of ‘perahu’ ‘boat’” (Wurm & Wilson 1978: 21); “ka[l]ańd’aŋ<sup>9</sup> and ka/r/anzaN<sup>10</sup> for glossary of ‘keranjang’ ‘basket’” (Wurm & Wilson 1978: 21). Based on that, vocoid which appear mostly is vocoid [a]. There is no correspondence with [ə] or [ɸ] (pelahu/plahu, peraquh/praquh, ke[l]ańd’aŋ/ k[l]ańd’a |, ke/r/anzaN/k/r/anzaN) in *finderlist*. As a consequence, in the correspondence of [ə] ~ [a] ~ [ɸ], vocoid [a] is a relic and [ɸ] is innovative.

<sup>7</sup> In this case, Chambers & Trudgill (2004) argued that those three principles are tendentious so that they cannot be applied precisely. In accordance with that fact, Chambers & Trudgill (2004) gave example of postvocalic /r/ in conservative dialect in England. In relation to this research, those three principles are used to determine the center area due to the fact that the distribution of vocoid, contoid, and lexical variation show those three principles.

<sup>8</sup> PPHZC (Proto-Philippine, Zorch and Charles 1971) in Wurm & Wilson (1978).

<sup>9</sup> PAND (Proto-Austronesian, Demplwolff 1983) in Wurm & Wilson (1978).

<sup>10</sup> PANDLO (Proto-Austronesian, Lopez n.d.) in Wurm & Wilson (1978)

### 3.2 Variation and Distribution of [i] ~ [ɛ]

The correspondence of [i] ~ [ɛ] is a regular variation of vocoid [i] and [ɛ] in the middle position, both in an open and close syllable. The example of this correspondence is [biniʔ] and [bineʔ] ‘woman’; [piyʔ] and [peyʔ] ‘grandson/granddaughter’; [kɔŋ:iʔ] and [kɔŋ:ɛʔ] ‘turmeric’. The correspondence of [i] ~ [ɛ] happens to older speakers as well as young speakers. Based on geographical distribution, the correspondence takes place in the area of [ɛ] in Bangkalan, Bawean and Pasuruan. The area of vocoid [i] are Pamekasan, Sumenep, Probolinggo, Lumajang, Jember, Bondowoso, Situbondo, and Banyuwangi, as the below map shows.

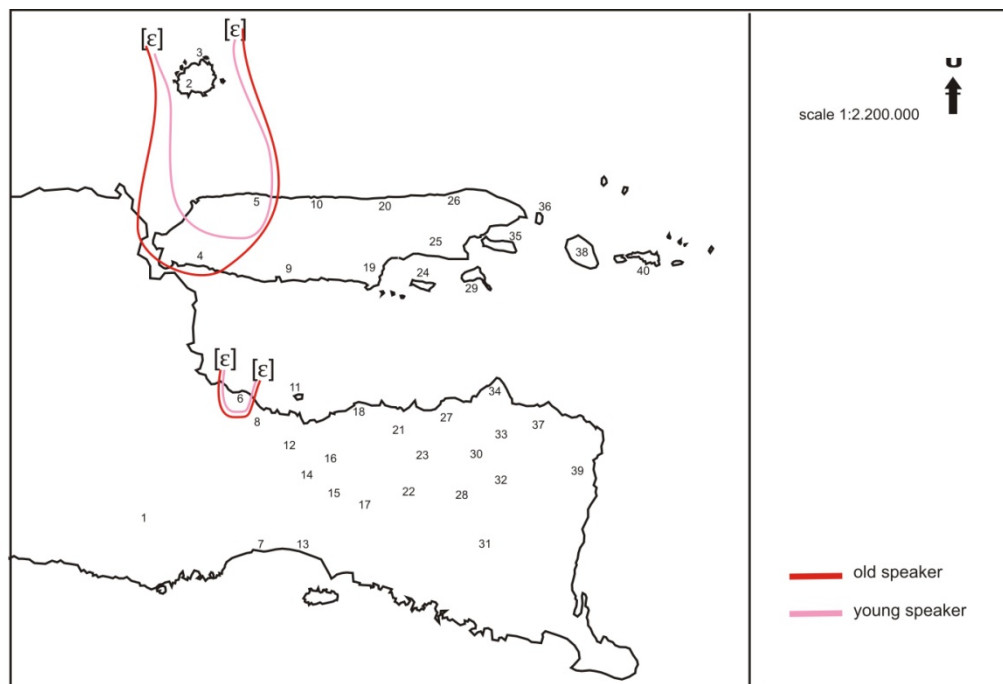


Figure 2. The Distribution of [i] ~ [ɛ] of old and young speakers

Based on the geographical diffusion (Chambers & Trudgill 2004: 168), there are three facts as follows. First, vocoid [i] tends to happen in isolated area. The archipelago and enclaves in East Java tend to use vocoid [i] in the variation of [i] ~ [ɛ]. Second, vocoid [i] in [i] ~ [ɛ] tends to take place in peripheral area, meanwhile, vocoid [ɛ] appears in Bangkalan — in this case, it is considered as the center. In spite of the fact

that vocoid [ɛ] appears in peripheral area (Bawean and Pasuruan), their appearance only take place in those two places and those two places are near to Bangkalan. Thus, vocoid which is frequently used in peripheral (up to the archipelago) is vocoid [i]. Third, the distribution of vocoid [i] is wider than the distribution of vocoid [ɛ]. Based on the three facts, it can be deduced that vocoid [i] is an older form compare to vocoid [ɛ]. It is also supported by kuniŋ<sup>11</sup> and kuniN<sup>12</sup> and inum<sup>13</sup> (Wurm & Wilson 1978: 244), which show that vocoid [i] in [i] ~ [ɛ] is older than [ɛ].

### *3.3 Variation and Distribution of Aspirated Contoid and Geminated with Non-aspirated and Non-geminated*

Aspirated contoid and geminated occur in all points of observation of the research, but there is a tendency for them to be varied with non-aspirated contoid and non-geminated in old speakers as well as young speakers. Variation between aspirated contoid and non-aspirated in old speakers and young speakers is gained from eleven correspondences of the followings, 1) [b] ~ [b<sup>h</sup>], 2) [t] ~ [t<sup>h</sup>], 3) [g] ~ [g<sup>h</sup>], 4) [d] ~ [d<sup>h</sup>], 5) [d] ~ [d<sup>h</sup>], 6) [d<sup>h</sup>] ~ [d<sup>h</sup>:] ~ [d:], 7) [g<sup>h</sup>] ~ [g:] ~ [g], 8) [t<sup>h</sup>] ~ [t<sup>h</sup>:] ~ [t] ~ [t:], 9) [g<sup>h</sup>:] ~ [g<sup>h</sup>] ~ [g:] ~ [g], 10) [d<sup>h</sup>] ~ [d<sup>h</sup>] ~ [d] ~ [d] and 11) [d<sup>h</sup>:] ~ [d<sup>h</sup>] ~ [d:] ~ [d]. Variation between contoid geminated and non-geminated is resulted from fourteen correspondences as follows 1) [l] ~ [l:], 2) [r] ~ [r:], 3) [t] ~ [t:], 4) [ʔ] ~ [ʔ:], 5) [p] ~ [p:], 6) [s] ~ [s:], 7) [g] ~ [g:], 8) [k] ~ [k:], 9) [m] ~ [m:], 10) [c] ~ [c:], 11) [ŋ] ~ [ŋ:], 12) [n] ~ [n:], 13) [b] ~ [b:] and 14) [n] ~ [n:]. For old speakers, contoid [ɟ] does not geminate meanwhile for young speakers contoid [b] and [s] do not geminate. The distribution of the variations can be mapped as follows.

<sup>11</sup> PAND (Proto-Austronesian, Dimplwolff 1983) in Wurm & Wilson (1978).

<sup>12</sup> PANDLO (Proto-Austronesian, Lopez n.d.) in Wurm & Wilson (1978).

<sup>13</sup> PANDYPMPL (Proto-Austronesian, Dyen 1953); PANDYTV (Proto-Austronesian Dyen 1949); PANS (Proto-Austronesian, Stresemann 1927) in Wurm and Wilson (1978).



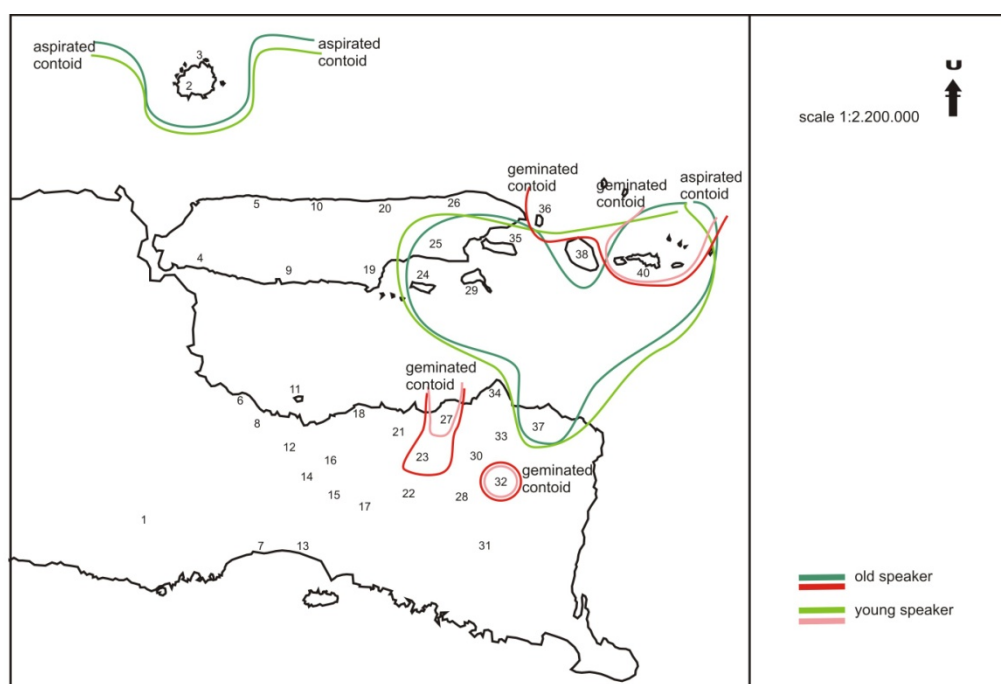


Figure 3. The Distribution of Aspirated/Geminated Contoid → Non-aspirated/Non-geminated in old and young speakers.

Based on geographical diffusion as it can be seen from the map, the distribution of non-aspirated and non-geminated is wider than aspirated and geminated contoid. However, it does not indicate that non-aspirated and non-geminated contoid are older forms. Based on the map, aspirated contoid and geminated happens in isolated area and peripheral. In accordance with geographical diffusion (Chambers & Trudgill 2004: 168), it means that aspirated contoid and geminated are the older forms and non-aspirated and non-geminated are the innovative forms.

### 3.4 Variation and Distribution of Initial Syllable Reduplication

Initial syllable reduplication in this research are etyma which are as if as they undergo initial syllable reduplication, in fact, those etyma are free variation since there is no morphological process happen to those etyma. The initial syllable reduplication may be followed by elicitation or not. The geographical distribution of initial syllable reduplication occurs in Bawean and eastern part of East Java.

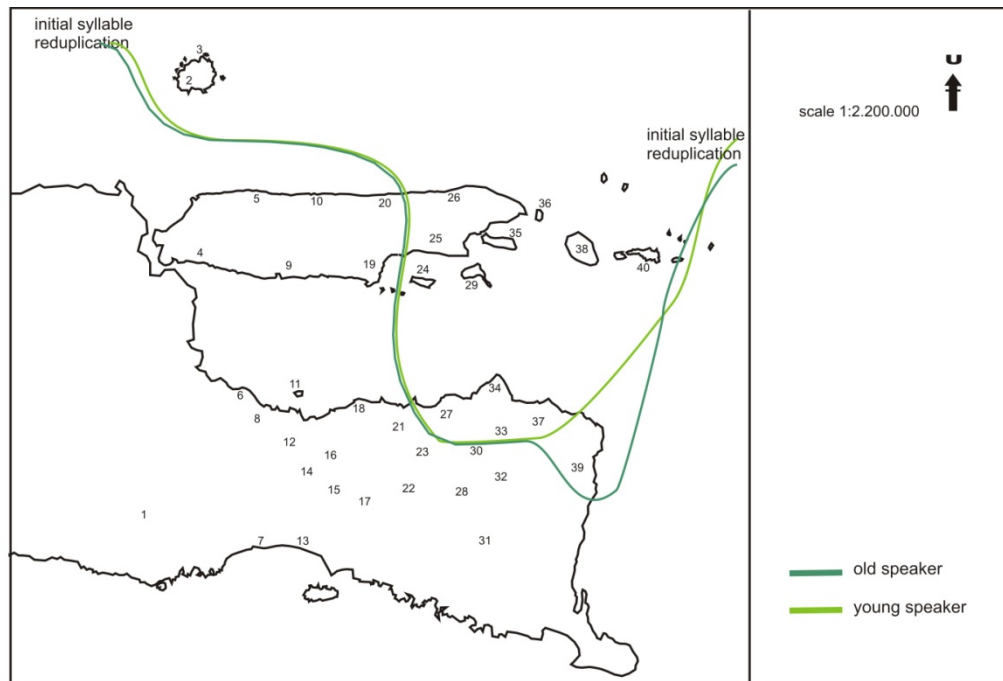


Figure 4. The Distribution of Initial Syllable Reduplication of Old and Young Speakers.

Based on Figure 4, there are three tendencies as follows. First, the reduplication happens in an isolated area, namely, eastern part of East Java and Bawean. This means the form of initial syllable reduplication is an older form. Second, the eastern part of East Java and Bawean are peripheral area, as a result, initial syllable reduplication is an older form. Third, in spite of the fact that the distributional area of etyma's initial syllable reduplication is narrower than etyma without any reduplication, it does not imply that initial syllable reduplication is a younger form. Those narrower distributional areas are caused by etyma's initial syllable reduplication which has varied by deleting its initial syllable. It is only Bawean and the eastern part of East Java which use this reduplication form. The language change which tends to take place is deleting/softening so that initial syllable can be deleted from initial syllable reduplication forms as follows [lɛlɛmaʔ] → [lɛmaʔ] 'five', [dɔduwəʔ] → [duwəʔ] 'two', [tatəl:ɔʔ] → [təl:ɔʔ] 'three', [bəbiniʔ] → [biniʔ] 'woman', [lalakɛʔ] → [lakɛʔ] 'man', [kakabb<sup>h</sup>i] → [kabb<sup>h</sup>i] 'all'. In Wurm & Wilson (1978), the initial syllable reduplication form is an older form as in *babinay* 'woman', *daduwa*<sup>14</sup> 'two', *tetelu*<sup>15</sup> 'three'. Based on those facts, it can be summed up that etyma with initial syllable reduplication is an older form.

<sup>14</sup> PMBOE (Proto-Manobo Elkins 1974) in Wurm & Wilson (1978).

### 3.5 Lexical Variation

Phonological variation that determines Bangkalan as an innovative area is also supported by its lexical variation. Some lexical items to mention a few are [beʔna] → [beʔən] → [kake(h)] 'you', [lad:iŋ] → [tɔɖiʔ] 'knife', [sa(ə)kɔni(ɛ)ʔ] → [didiʔ] 'a few', [taʔ] → [ɭʔ] 'no'.<sup>16</sup> In line with Soetoko et al. (1998: 158-160), [beʔna], [beʔən], [lad:iŋ], [sa(ə)kɔni(ɛ)ʔ], and [taʔ] are relic, meanwhile, [kake(h)], [tɔɖiʔ], [didiʔ], and [ɭʔ] are innovative. Based on the distribution of old and young speakers, the innovative forms are found in western part (Bangkalan/West Madura) and the relics are used in eastern part (Sumenep/East Madura). Thus, it can be concluded that innovative area of Madurese language is in Bangkalan and the relic area is in Sumenep and the eastern part.

## 4. Geographical Diffusion of Madurese Language Phonological Variation

The wave theory explains that innovation is in the center of a certain time spreads from the center to other places consecutively as a wave in body water that the ripples emerge from the center (Wolfram & Schilling-Estes 2003: 713; Britain 2006: 623; Chambers & Trudgill 2004: 166). Innovation diffuses indirectly from one center to another; or from one town (place) to another town, it moves from town to town and from village to village (Chambers & Trudgill 2004: 166). Linguistic innovation which spreads from the center of innovation (focal area) is usually the completeness of innovation and continue to the transition area in which the change happen to the completion and their variation depends on the distance from the center (Wolfram & Schilling-Estes 2003: 721). The wave model theory is used in this research to determine the homeland of Madurese language.

In the formation of area [a], [ə] and [ɸ], which tend to occur in the sound change of [a] → [ə] and [ə] → [ɸ], not the contrary. Based on [a] ~ [ə] ~ [ɷ] in § 3.1, the

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<sup>15</sup> PPHZC (Proto-Philippine, Zorch & Charles 1971) in Wurm & Wilson (1978).

<sup>16</sup> The lexicon is chosen as the determination of relic area since native Madurese speaker consider it as the determinant of East Madurese dialect and West Madure dialect.

tendencies which occur — from diachronic perspective — is  $[a] > [ə] > [\phi]$ , not the contrary due to the fact that the frequently happens in sound change is softening. The variation of  $[a] > [ə]$  is the example of softening so is the variation of  $[ə] > [\phi]$ . Thus, the vocoid  $[a]$  is an older form than  $[ə]$ , and  $[\phi]$  is an innovation form.

Based on its distribution, it is indicated that phonological change takes place from west to east. It happens because vocoid area of  $[a]$  is on the east which is followed by the area of  $[ə]$  and  $[\phi]$ . Thus, the west area as the center of variation spreads to the eastern direction. When vocoid  $[a]$  spreads to the east, vocoid  $[a]$  in the center area varies with  $[ə]$ . When vocoid  $[a]$  reaches the eastern part, vocoid  $[ə]$  spreads to the middle part (Pamekasan), at the same time, vocoid  $[ə]$  in the center area varies with  $[\phi]$ . The variation causes the syllable's reduction, from three syllables into two syllables, the western part becomes two-syllable area and the eastern part becomes three-syllable area because the variations of  $[ə]$  and  $[\phi]$  do not spread to the east. It can be best described into the diffusion phase as follows (Wolfram & Schilling-Estes 2003: 714).

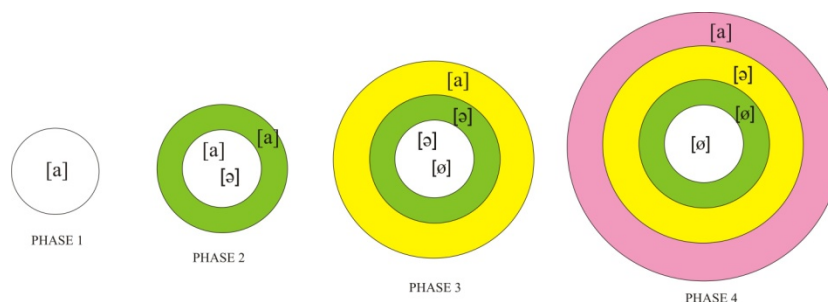


Figure 5. The Geographical Diffusion Phase of Vocoid  $[a] \rightarrow [ə]$

The white circle is focal area (Bangkalan), the green circle is first wave (Sampang), the yellow circle is the second wave (Pamekasan), and the pink one is the third wave (Sumenep). At the first phase, there is vocoid  $[a]$  in focal area. When vocoid  $[a]$  spreads to the first wave, vocoid  $[a]$  in focal area varies with  $[ə]$ . At the third phase, when  $[a]$  has spread to the next wave, that is Pamekasan, vocoid  $[ə]$  has spread to Sampang, meanwhile, vocoid  $[a]$  in focal area has disappeared, there appears  $[\phi]$  as the variation of  $[ə]$ . At the fourth phase, when  $[a]$  has spread to Sumenep, vocoid  $[ə]$  has spread to Pamekasan, meanwhile,  $[\phi]$  has spread to Sampang. At that phase, innovation occurred in focal area does not reach the remote area.

In wave's analogy, the change in center area will spread in other area consecutively. If there is a change in center area, it will spread to the nearest area. Thus, the nearest areas to the center will show more similarities compared to those farther from the center. It is indicated by the distribution of vocoid [a] → [ə] → [ɤ]. From each phase, it can be seen that the distribution of vocoid [ə] occurs in the near area of the focal area. Hence, the two-syllable area in Madura Island can be found in Bangkalan and Sampang. In the wider distribution, that is the next distribution, vocoid [a] is present in each wave to the eastern part of Madura and the eastern part of horseshoe (tapal kuda) so that it forms the group of vocoid [a] area, meanwhile, [ɤ] spread to the western part of horseshoe (tapal kuda) and Malang which is near to the center.

The area formation of [ɤ] is supported by the correspondence of [ə] ~ [ɤ] that forms the area of [ɤ] in the western part (Bangkalan and Sampang) as well as the area of [ə] in the eastern part (Pamekasan and Sumenep). The examples of the correspondences are [bəriŋɪn] → [brɪŋɪn] 'banyan tree', [bəɾəkai] → [brəkai] 'monitor lizard', and [bələɾaŋ] → [bləɾaŋ] 'crab'. It is similar to [a] ~ [ə] ~ [ɤ], which varies into [ə] ~ [ɤ] that begins from the focal area which has the vocoid of [ə] and spreads to each wave. Simultaneously, [ə] in focal area varies into [ɤ]. It shows that Bangkalan is the homeland of vocoid [a] in [a] ~ [ə] ~ [ɤ] and the origin of vocoid [ə] in [ə] ~ [ɤ] — in the form of three-syllable — which then holds up until today in Sumenep.

The above-mentioned diffusion is also valid to the correspondence of geminated/aspirated contoid with non-geminated/non-aspirated contoid (Wolfram & Schilling-Estes 2003: 714).

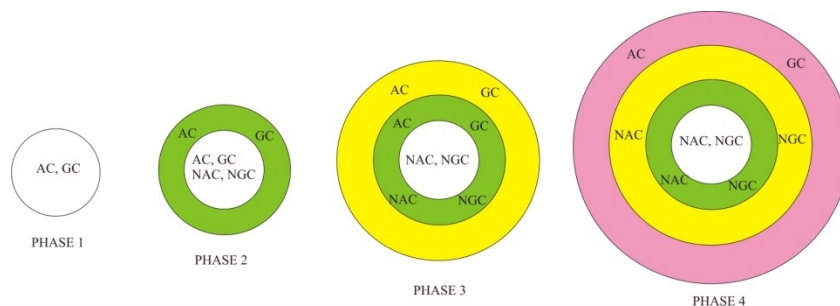


Figure 6. The Geographical Diffusion of Aspirated/Geminated → Non-aspirated/Non-geminated

The white circle is the first phase of change, there is geminated contoid (GC) and aspirated contoid (AC) in focal area. At the second phase, GC and AC move to the first wave. It means that AC and GC have spread to other area. If the center is analogized as the center of the wave, other distributional areas of AC and GC are considered as the first wave (the green circle). At this second phase, non-geminated (NGC) and non-aspirated (NAC) contoid appear in the center as the variation of GC and AC. It implies that there are some geminated contoid that delete its geminate so that the non-geminated contoid appears; there are also some aspirated contoid that deletes its aspiration so that non-aspirated contoid emerges. At the third phase AC and GC have further distributed to the third phase (yellow circle). In this phase, NGC has spread to the first wave, meanwhile in the center GC and AC have disappeared. It signifies that NGC and NAC remain in those variations. At the fourth phase, AC and GC have reached the fourth circle (pink circle) and the distribution of NAC and NGC have reached the third wave. If the points of observation 2 and 3 are considered in that wave phase, the contoids which tend to appear in 2 and 3 are aspirated contoid meanwhile non-geminated contoid does not reach or spread to 2 and 3. On the other side, the east-direction wave, CA and GC have reached the eastern part of points of observation. Consequently, the eastern part of points of observation are aspirated and geminated areas.

The above geographical diffusion also happens to the correspondence of [i] ~ [ɛ] as well as the variation of initial syllable reduplication. At the first phase, there were vocoid [i] and initial syllable reduplication in focal area. When [i] and syllable reduplication spread to the first wave, vocoid [i] in focal area varies with [ɛ], so does the initial syllable reduplication. The form of initial syllable reduplication in focal area has deleted its initial syllable (as it can be found in [bebini?][bini?] ‘woman’). At the next phase, vocoid [i] has spread to the next wave and cover wider area., meanwhile vocoid [ɛ] which is the variation of [i] in focal area has spread to the wave around the focal area (areas near to the focal area). The similar thing also happens to initial syllable reduplication. As the consequence, the initial syllable reduplication form occurs in eastern part (Eat Madurese dialect) and Bawean due to the fact that in focal area, the

initial syllable —as the reduplication form — has disappeared, replaced by its variation, that its non-reduplication form.

Based on geographical diffusion, it can be indicated that the variation tends to take place in Bangkalan and spreads to its surroundings and so on — which have been analogized as the waves. This means that Bangkalan is the center of the spread and it can be summed up that Bangkalan is the origin of Madurese language.

## 5. Bangkalan: The Three-Dialect Transition Area

The conclusion that Bangkalan is the origin of Madurese language is supported by the coverage area of Madurese language which is resulted from the calculation of full permutation of lexical variation. Based on the calculation, there are 5 dialects and 30 sub-dialects (Savitri 2015: 480-488). Those dialects are East Madurese dialect, West Madurese dialect, Bawean dialect, Malang dialect and the archipelago dialect, and Patemon Bondowoso dialect (young speakers only). The coverage area of those dialects for both old and young speakers can be indicated by the map below.

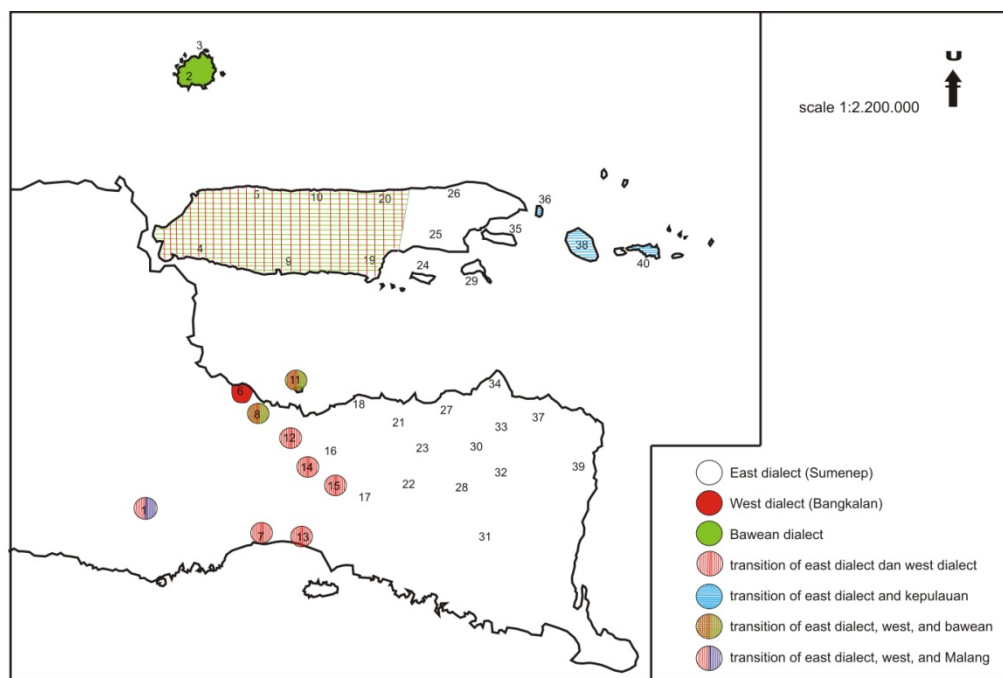


Figure 7. The Coverage Area of Madurese Dialect for Old Speakers (Savitri 2015).

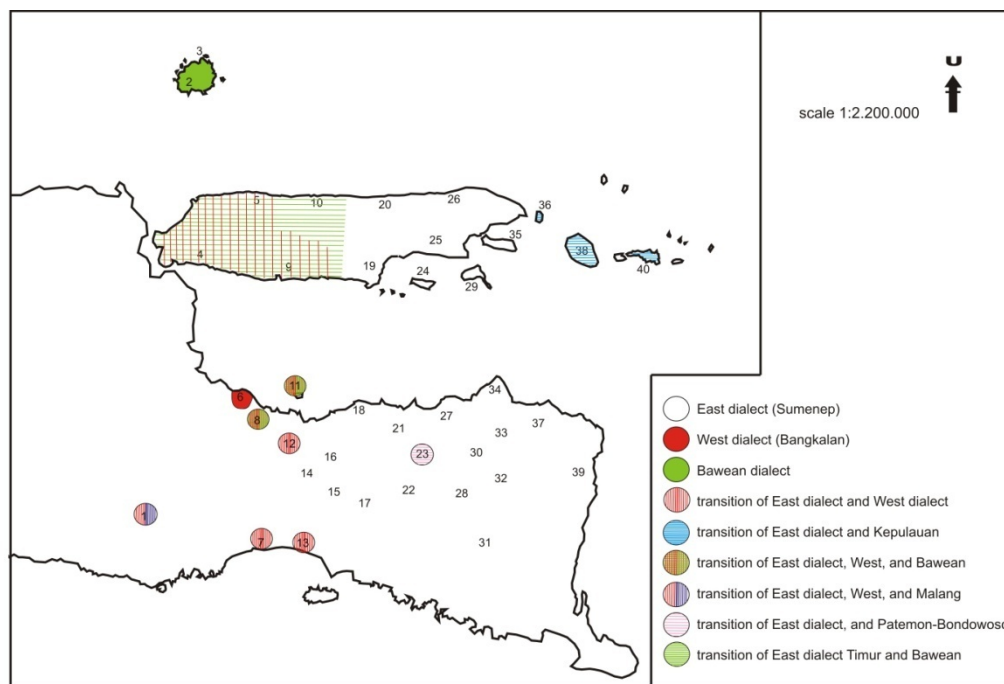
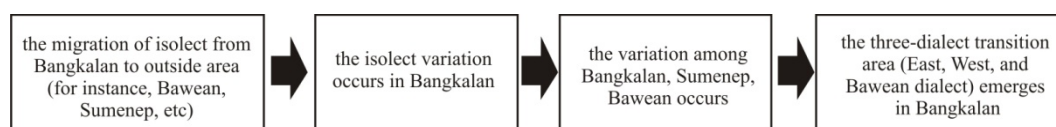


Figure 8. The Coverage Area of Madurese Dialect for Young Speakers (Savitri 2015).

Based on the coverage area of old and young speakers, it can be seen that Bangkalan is a three-dialect transition area, which is the transition among East Madurese dialect, West Madurese dialect, and Bawean dialect. It can be further explained as follows.

When speakers migrate from the center (Bangkalan) to other area (Bawean, Sumenep, etc.), the speakers of Madura-Bangkalan bring their isolect and so do the speakers in Madura Island. When they migrate — Bawean Island is one of which — they bring their isolect. Hence, there is isolect's migration from Bangkalan to outside Bangkalan. When the isolect gathered outside Bangkalan, in Bawean and Sumenep, for instances, the change happened to the isolect in Bangkalan. This implies that the isolect in Bangkalan has varried and resulted certain innovations. The variations cause the existing isolect in Bangkalan does not remain the same as it is in Bawean. It can be best described as follows.





The condition above can be analogized in wave movement as follows. The first phase is the migration of Madurese isolect from the center or focal area (Bangkalan) to the next second, third wave. It continues until it reaches the second phase in which Madurese isolect was no longer in Bangkalan which means that the isolect has reached the farther wave away from the center. When the isolect has reached the farthest away from the center, in this case, it has reached Bawean, Sumenep and Sumenep archipelago, the isolect has changed in Madura Island. When the isolect migrate, the migration does not stick on the certain wave, it may occur in other waves. The change may take place in the center as well as the waves. It implies that the isolect results certain innovations both lexical and phonological variation which occur in the center and the waves. This causes the transition area of western Madura is a three-dialect transition. When the west Madurese dialect migrates to the east, the west Madurese dialect in focal area varies. The causes may come from the speaker themselves or the intersection with other isolect's wave, the wave of Javanese dialect, for instance. Thus, there are three isolects in western part of Madura that is Bawean dialect which is the west Madurese dialect carried by the first speakers to Bawean; the east Madurese dialect which is the west Madurese dialect carried by the first speakers to Pamekasan and Sumenep; and the west Madurese dialect which varies in the center area (Bangkalan).

It can be proven from Madurese language's contoid and vocoid distribution (Figures 1-4). Bawean dialect has the phonological characteristics of East Madurese dialect and West Madurese dialect. First, Bawean dialect is a three-syllable area. It is the characteristic of East Madurese dialect which means there is no elition of [ə] in the nucleus of the first syllable. Elition of [ə] occurs in West Madurese dialect. Second, Bawean is the area of aspirated contoid which shows that the area is remote from the distribution of East Madurese dialect (Sumenep). Third, Bawean is the area of vocoid [ə] and [ɛ]. Vocoid [ə] is the variation of the spread of vocoid [a] which is still used in East

Madurese dialect. Vowoid [ɛ] is the variation of the spread of [i] which occurs in West Madurese dialect. It is indicated by the distribution of vowel [ɛ] which only takes place in western part, the points of observation of 2, 3, 4, 5, and 6. Fourth, Bawean still maintains the initial syllable reduplication form which still can be found in East Madurese dialect but has disappeared in West Madurese dialect.

The phonological characteristics of three-syllable, aspirated vowel, and initial syllable reduplication are the evidences that Bawean dialect is older than West Madurese dialect. The phonological characteristic of vowel area of [ə] and [ɛ] is also the evidence to prove that before speakers migrate to Bawean, the islect has varied in western part (Bangkalan) so that there is phonological similarity of with the west Madurese dialect. It is also supported by phonological characteristic in point of observation 6 which is also the vowel area of [ɛ].

Similar to Bawean, West Madurese dialect which is used in middle to west part of Madura Island (points of observation 4, 5, 9, 10, 19, 20 for old speakers and points of observation 4, 5, 9, 10 for young speakers) does not come from islect in point of observation 6 which spread to Madura Island. What happens is the contrary, West Madurese dialect which is used in Madura Island spread to point of observation 6 and other points of observation in Java Island. The question is then why the coverage area of West Madurese dialect is limited to point of observation 6, in fact, the transition area is in Bangkalan (Madura Island). It is due to the fact that West Madurese dialect used in the center (points of observation 4 and 5 in Bangkalan) has changed and on the other side, West Madurese dialect has spread to point of observation 6, but the change does not. This situation makes point of observation 6 become the one and only area which maintains the use of West Madurese dialect. It can be proved by the phonological characteristic in point of observation 6 which has similarities with West Madurese dialect, that it is the vowel area of [ɛ], two-syllable area, non-geminated tendency, non-aspirated tendency (Figures 7 and 8).

Based on the transition area, Bangkalan is the center of the distribution of Madurese language. The variation begins with Bangkalan that spread to the east, north, and south. Bangkalan as the center of distribution and innovation of Madurese language is also sustained by its geographical condition. Bangkalan becomes the main entrance to

Madura Island because it is near to Java Island. There are ports in Surabaya and Gresik that connect Java Island and Madura Island which is different from the smaller port in Sumenep. In addition, the center of economy and development of East Java province is not in Situbondo — which is near to Sumenep — but it is in Surabaya which is near to Bangkalan. Surabaya is a Javanese-usage area. The intersection between those two waves results the language contact and dialect so that the lexicons of those two languages and dialects interchange. Therefore, new lexicon emerges — new in term of lexicon and phonetics — which is the innovative form resulting from the intersection of the two waves.

## 6. Conclusion

Variation and distribution of correspondence of [a] ~ [ə] ~ [ɤ], correspondence of [i] ~ [ɛ], correspondence of aspirated and geminated contoid with non-aspirated and non-geminated, variation and distribution of initial syllable reduplication, and geographical diffusion are linguistic evidences to prove that the homeland of Madurese language is Bangkalan. It is also supported by innovative lexical such as [kake(h)] ‘you’, [tɔɖiʔ] ‘knife’, [didiʔ] ‘a few’, dan [lɔʔ] ‘not’, found in Bangkalan. In addition, Bangkalan as a three-dialect transition area also strengthen the positioning of Bangkalan not Sumenep as the origin of Madurese language.

Bangkalan as the center of Madurese language also implies that the center of distribution does not always be the center of administration. In this case, I indicate that geographical factor has more significant role in forming Bangkalan as the center of distribution. Bangkalan which locates near to Java Island as well as two big ports make it possible as the first entrance for Madurese language carried by Madura ethnics.

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