



Articles

The Reconstruction of Etymon Proto of Sambori and Teta Isolects Spoken in Bima Regency-NTB-Indonesia

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A B S T R A C T

The previous studies that describe the phonological system of the isolects and the description of their differing and uniting linguistic features have not yet answered the doubts among Indonesian linguists whether or not the Proto of Sambori-Teta (PSm-Te) were descended from Proto Austronesia (PAn). Thus, this article aims to describe the interrelatedness of the two protoes and to describe the types of sound changes from the PAn to PSm-Te etymons. This descriptive study applied a comparative method by implementing bottom-up and top-down analysis in reconstructing the PSm-Te. The linguistic features as the evidence of the interrelatedness of the two protoes were identified and analyzed using sound change theories. This study found 1691 (99.35%) definitive etymons of PSm-Te among 1702 etymons of Sambori and Teta Isolects identified in this study, and the types of sound change from PAn to PSm-Te etymons showed addition, deletion, metathesis, diphthongization, fusion, fortition, lenition, fronting, and backing. The definitive PSm-Te and the identified types of sound changes can be used as the linguistic evidence to determine that PAn descend PSm-Te. Therefore Sambori and Teta isolects reflect PSm-Te.

I. INTRODUCTION

The subgrouping languages in Indonesia, including in Bima Regency, NTB Indonesia, has not yet been done completely though some isolects in the region have been determined as languages. Budasi and Sudirman (2018) found that Bima, Sanggar, and Kolo isolects were quantitatively determined as different languages of the same family using lexicostatistic analysis. In contrast, Taloweri and Mbojo isolects involved in the study were found as two dialects of Bima language. Previously, based on quantitative and qualitative analysis, Syamsuddin (1996) identified that Bima language was descended from Proto Austronesia (PAn). If Sanggar, Kolo, and Bima isolects were quantitatively determined as three different languages of the same family, rationally, it means that Kolo and Sanggar languages are also inherited from PAn. However, Sambori and Teta isolects, which were also spoken

in the regency, were not involved in Budasi and Sudirma's study. Budasi and Inriani (2019) proved the two isolects' status as two dialects of the same language. So, in this regency, there are four languages include Sambori. In this study, Sambori and Bima quantitative kinship language relatedness was found 38.8%. Referring to Swadesh's language classification, they are two languages of the same family. Budasi and Inriani's study also found that the kinship relationship between Teta and Sambori is 98%. Based on the Swadesh language classification, the kinship relatedness (81%-100%) should be classified as two dialects of the same language.

So far, it is not known yet whether or not Sambori language is also descended from PAn. Based on the researchers' prior observation, most Bimanese people mentioned that Sambori language does not belong to Bima language subgrouping. It was even said as the original language of Bimanese before

the speakers of Bima, Kolo, and Sanggar languages were spoken in this region. They stated that their mutual intelligibility with Sambori speakers was not so strong.

The subgrouping of Sambori isolect as one of the languages spoken in the area has been conducted by some researchers. However, their interpretation of their lexicostatistic analysis results is still questionable since the cognate percentage between Sambori and Bima language was controversially interpreted. Arafiq (2016), for example, stated that the status of Sambori isolect is a dialect of Bima language for their cognate lexicostatistic analysis showed that the two reached 61% dissimilarity (or 39% similarity). Yusra, Lestari, Ahmadi, Asyhar, & Soemerep (2016), who also did a lexicostatistical analysis of the two, declared that Sambori is a dialect Bima (61.2% dissimilarity or 38,8 % similarity). When we see the levels of language classification by Swadesh (1952) mentioned earlier, the percentage of 38.8% is between 36% and 81%, which means that their status should be two different languages of the same family. Rosadi and Hermanto (2018) examined the fundamental differences of the dialects of the indigenous people of Sambori Village with the Bima Community. They concluded that Sambori only a dialect of Bima language. If we connect the figure of 38.88% with the language classification by Sawadesh (1952), it is no doubt aware of saying that Sambori and Bima should be two different languages.

Based on the discussion above, no study yet has been done to determine whether or not Sambori and Teta Isolects are inherited from Proto Austronesia, such as the one mentioned by Samsyuddin (1988) as mentioned earlier. Therefore, further investigation urgently needs to be done. The branch of linguistics which can be used to overcome the matter is historical-comparative linguistics (HCL). It can identify the two isolects' kinship and their historical developments (Adhiti, 2016; Anggayana et al., 2020; Campbell, 2013; Ino, 2013).

The research in HCL tends to apply a comparative method, a study to observe the development of isolects or languages by comparing their characteristics. Its quantitative data in the form of 200 Swadesh Word List were analyzed using lexicostatistics. Its results were usually confirmed

by the qualitative ones (Bynon, 1979; Dyen, 1975; Nothofer, 1975). The assumption that underlies this method is the number of vocabularies in one language can be differentiated into two big groups: (a) the basic words which are not easy to change, that is, the ones which are related to *the human body, pronounce, emotion, feeling, weather and nature, number* as well as the words related to household tools. They are grouped as basic words; (b) the words that are easy to change, include loaned ones to or from other cultures. They are the ones like *chairs, table, and lamp*. They are easy to diffuse (Crowley, 1997; Dyen, 1975).

The quantitative data are used to determine the percentage of relatedness and determine the family tree of language. The result of quantitative-based language subgrouping is usually used as the working hypothesis for further exploration of the qualitative subgrouping languages (Anggayana et al., 2020; Dyen, 1978; Mbeti, 1990). The next step is to count separating the period of two isolects or language by applying glottochronological statistics (Keraf, 1997). The assumption based on that calculation is a set of words with universal characteristics and remain constant along the years around (Adhiti, 2016).

The language classification from the quantitative analysis may be measured using Swadesh's theory (1952), as mentioned in the following.

Table 1. Language classification

Level	Time of separation in a century	Cognate %
Language	0-5	100-81
Language Family	5-25	81-36
Stock	25-50	36-12
Microfillum	50-75	12-4
Messofillum	75-100	4-1
Macrofim	100- above	>1%

In an attempt to investigate the kinship relationship among isolects, Nothofer (1975) suggested researchers apply *bottom-up analysis* in examining the early stage of their proto-language and apply *top-down one* to check the linguistic evidence of phonological or lexical retention, and phonological and lexical innovation that happen to the compared isolects. The two approaches are known in reconstructing proto-language. To identify the

interrelatedness between PAn to its descendant languages, historical-comparative linguists used to describe the phonological correspondences by mentioning the types of sound changes from PAn etymons to its descendant languages. Some linguists such as Crowley (1997), Anttila (2009), and Cser (2014) mentioned different types of sound changes. Crowley (1997) mentioned 11 types; *lenition, fortition, sound addition, metathesis, fusion, unpacking, vowel breaking, assimilation, haplology, and paragoge, abnormal change*; Cser (2014) underlies nine types; *lenition, fortition, deletion, insertion, metathesis, assimilation, dissimilation, diphthongization, and raising*; and Anttila (2009) declared five types; *insertion, assimilation, dissimilation, deletion, fronting, and backing*. So, based on the three experts, there are 13 types of sound change; *addition/insertion (prothesis, epenthesis, and paragoge), deletion (aphaeresis, syncope, and apocope), diphthongization (vowel breaking), unpacking, fusion, fortition, lenition, fronting, backing, raising, abnormal change, assimilation, and dissimilation*.

Based on the description mentioned above, it can be stated that: (1) quantitative and qualitative linguistic evidence can be used to determine subgrouping isolects. The approach characteristics make use of linguistic aspects static in nature with theoretical consideration and linguistic aspects, particularly the 200 Swadesh's word list. The words in the list are assumed to be difficult to change and statistically inherited from its language proto. In comparison, the qualitative linguistic evidence is considered dynamic. They are assumed to be easy to change, (2) qualitative linguistic evidence can also be used as the basis to determine the definitive subgrouping. Each subgrouping is supposed to have its proto-language, (3) When the result of quantitative subgrouping language is similar to the qualitative one, the determination of definitive subgrouping language is considered perfect (Mbeti, 1990; Nothofer, 1975). If the comparison shows a different result, the qualitative one is used to determine the definitive subgrouping language(s).

Based on the argument discussed earlier, determining the language classification status of Sambori and Teta isolect is so important. In connection to this, Ratna (2019) successfully

described the phonological system of Teta Isolect, while Allan (2019) described the phonological of Sambori Dialect. Lately, Mitta (2019) successfully described the linguistic features which differentiate and unite the two dialects. However, the qualitative linguistic evidence determining the interrelatedness of PSm-Te to PAn assumed as the proto of all languages in Bima regency was not yet discussed in the three studies.

Based on the study background and the theories mentioned earlier, determining the language classification of the two isolects is not only important to research, but it must be done as soon as possible since the success of categorizing their status will help make subgrouping local languages in the regency, and in Indonesia as a whole. Thus, this article aimed (1) to describe the interrelatedness of the two protoes by firstly reconstructing PSm-Te etymons and (2) secondly to observe and describe the types of sound changes from the PAn to PSm-Te etymons. By doing the reconstruction, the missing structure and language system will be identified through the language features that are still used today (Cho, 2020).

II. METHODS

This article was designed in qualitative research whose subjects were the speakers of Sambori and Teta isolects. Three speakers of each isolect were selected as the informants of the study, and their selection was based on a set of criteria suggested by Samarin (1967, 1988). The study objects were the two dialects' cognate words and the sound change types of PAn etymons to PSm-Te ones. The primary data in the forms word lists; 200 Swadesh', 973 Holle', and 488 Nothofer's were collected using interview and recording techniques. The secondary data were based on the ones available in Findex Dictionary by Wurm and Wilsom (1975).

The procedure of data collections and data analysis passed the following steps: *a*. Cognate words of the two isolects were firstly identified using the three types of word lists, and secondly, the PSm-Te etymons were determined based *bottom-up analysis* and passing the following procedures: (1) if the cognate words of the two isolects showed the same forms, they were directly determined as PSm-Te etymons; (2) if the two isolects show similar cognate, both forms were determined as the

PSm-Te etymons; **b.** To define definite PSm-Ten etymons, the *top-down approach* was considered. The approach passed the steps: (1) the analysis of step **a.** mentioned earlier was compared to the PAn etymons in the Finder List dictionary by Wurn and Wilson (1975). The etymons selected were the ones that show cognate to the PSm-Te reconstructed in **a**; (2) If the PAn etymons showed the same forms with the PSm-Te etymons, they were directly determined as the definitive PSm-Te etymons.

If they are different, the definitive PSm-Te were determined the same as the ones which were based on the *bottom-up approach*, and 3) If PAn etymons showed similarity to one of the PSm-Te etymons reconstructed based on a bottom-up approach, the more similar forms were determined as the definitive PSm-Te; **c.** the types of sound changes from PAn etymons to PSm-Te ones were finally described based on Crowley's (1997), Anttila's (2009), and Cser's (2014) sound change theories. Some types of change were found, but other than those mentioned by the three experts were also identified.

III. RESULT

3.1 The Obtained Data based on Bottom-Up Analysis

Based on the obtained data analyzed using *bottom-up analysis*, 1691 (99.35%) PSm-Te etymons were determined. 11 (0.65) glosses from the three types of word lists were found empty. The etymons were originally grouped into two categories; (1) cognate, which the same forms, and (2) cognate different forms of Sambori and Teta isolects. See Table 2 and 3.

Cognate of the Same Forms between Sambori and Teta Isolects

Table 2 shows the examples of PSm-Te etymons, which mean; *person, man, female, husband, wife, father, mother, child, name, who, I, you, he, they, hand, foot, fruit, soul, evaporate, sit, blow, indigo, grilled, palm wine, and teacher* which were respectively reconstructed from the cognate words of Sambori and Teta isolects which had the same forms. When the cognate forms in Sambori and Teta Isolects are the same, they are reconstructed using the same form as those two forms. For

instance, PSm-Te *dou, which means person, was reconstructed from Sambori 'dou' and Teta 'dou.'

Table 2. The Examples of PSm-Te Reconstructed Based on the Cognate Forms in Sambori and Teta Isolects

English	Sambori/Teta	PSm-Te
<i>person</i>	dou /dou	*dou
<i>man</i>	mone/mone	*mone
<i>female</i>	wine/wine	*wine
<i>husband</i>	la'i/la'i	*la'i
<i>wife</i>	wei/wei	*wei
<i>father</i>	ama/ama	*a:ma
<i>mother</i>	i:na/i:na	*i:na
<i>child</i>	a:na/a:na	*a:na
<i>name</i>	ŋanta/ŋanta	*ŋanta
<i>who</i>	se/se	*se
<i>aku</i>	rae/rae	*rae
<i>he</i>	re/re	*re
<i>we</i>	ame/ame	*ame
<i>they</i>	re-ra/re-ra	*re-ra
<i>hand</i>	lima/lima	*lima
<i>foot</i>	lanŋe/lanŋe	*lanŋe
<i>soul</i>	nawa/nawa	*nawa
<i>evaporate</i>	mawa/mawa	*mawa
<i>Sit</i>	to'o/to'o	*to'o
<i>blow</i>	upi/upi	*upi
<i>indigo</i>	nila/nila	*nila
<i>grilled</i>	tunu/tunu	*tunu
<i>palm wine</i>	tua/tua	*tua
<i>teacher</i>	guru/guru	*guru

Note:

PSm-Te: Proto Sambori-Teta

Cognate of Different Forms between Sambori and Teta Isolects

Table 3 shows the examples of PSm-Te etymons: *flower, string, fire, we, you, eye fill, female, road, close, bite, hate, male, sap, long, famous, blood, dog, turn, listen, see, and under.* They were reconstructed from Sambori and Teta Isolects' cognate words, which had different forms between Samboi and Teta isolect. When the cognate forms in Sambori and Teta are different, both forms are taken as the reconstruction forms. For instance, PSm-Te*wunta/*buŋa was reconstructed from Sambori 'wunta' and Teta 'Bunga' which means *flower.*

Table 3. The Examples of PSm-Te Etymons (Reconstructed from Different Forms between Sambori and Teta)

English	Sambori /Teta	PSm-Te
<i>flower</i>	wunta /buŋa	*wunta / *buŋa
<i>string</i>	u:ma/ kafa	*u:ma/ *kafa
<i>fire</i>	suw/api	*suw/ *api
<i>We</i>	yinta/ame	*yinta/ *ame
<i>you</i>	oene/emerance	*oene/ *emerance
<i>fill</i>	isi/ pai	*isi/ *pai
<i>female</i>	wilo/wina	*wilo/ *wina
<i>road</i>	daŋa/dorŋka	*daŋa/ *dorŋka
<i>close</i>	tapa/kabu	*tapa/ *kabu
<i>bite</i>	aka/ŋaka	*aka/ *ŋaka
<i>hate</i>	iti/benci	*iti/ *benci
<i>male</i>	pria/priw	*pria/ *priw
<i>sap</i>	puru/mana	*puru/ *mana
<i>long</i>	loi/dopi	*loi/ *dopi
<i>famous</i>	mbou/mbaba	*mbo/ *mbaba
<i>blood</i>	ra'a/ra'ara	*ra'a / *ra'ara
<i>dog</i>	lako/asu	*lako/ *asu
<i>turn</i>	poku /pokune	*poku/ *pokune
<i>listen</i>	paliŋa/sado'o	*paliŋa/ *sado'o
<i>see</i>	eta/lie	*eta/ *lie
<i>under</i>	utumba/ untum- bara	*utumba/ *untumbara

Note:

PSm-Te: Proto Sambori-Teta

3.2 The Obtained Data Based on Top-Down Analysis

Based on *the top-down* analysis, this study identified PSm-Te 1691 etymons. Among them, 551(30%) were found underwent retention; (1) retention with change were 493 (28,97%) and (2) retention without change 18 (1.06%), (3) 366 (21,5) were different from PAN, and 816 (47, 9%) were not found in PAN., and 11 (0,65) were found empty glosses. See the examples in table 4 and 5.

Retention with Change (Similar Forms)

Based on the etymons in Findex Dictionary (Wurm & Wilsom, 1975), PSm-Te etymons in Table 4 which mean *live, none, mous', snake, fur, wood, grass, leaf, roo, fruit, cook, eat, such, hous', string, dust, as, fire, person, male, female, husband, wife, father, mother, child, we, they, house string, ash, dust, salt, soil stone lake, and rain* reflected respectively from PAN *atay, *ijun, *labaw, *sawa, *lawi, *kayu, *awa, *rau, *yamut, *buwah, *nansu, *pangan *soso, 'rumaq, *waRo', *lebu*,

*abu', *siraq, *tanaq, *batu, *danaw, *hud'an.

In Table 4, column two shows the PSm-Te etymons reconstructed based on the *bottom-up analysis*. In contrast, column 3 shows the data sources under PAN experts and their years of identification, 2 figures after the expert's name in PAN, and column 4 shows the definite PSm-Te etymons reconstructed based on the Top-down approach. Using the examples mentioned in table 4, the definitive PSm-Te that can be determined are PSm-Te*a:te, *i:lu, *lawo, *sawa, *rambi, *hadu, *rata, *ro'o, *amu, *rua, *manasu, *manga. *noso, *u:ma, *wa'u, *kalubu, *kalubu, and *api. Furthermore, some PAN and the PSm-Te etymons (reconstructed based on *bottom-up analysis*) show the same forms. Some examples can be seen in Table 5, column 2 and 3.

Table 4. The Examples of the Similar Forms of PSm-Te Etymon (Reconstructed Based on Bottom-Up Approach (BUA) and the PAN Etymons)

English	PSm-Te (BUA)	PAN/ Expert/ Year	PSm-Te (TDA)
<i>liver</i>	*a:te	*atay/ PANC43	*a:te
<i>nose</i>	*i:lu	*ijun/PAN- DYPMP53	*i:lu
<i>mouse</i>	*lawo	*labaw/ PANS72	*lawo
<i>feather</i>	*rambi	*lawi/PANBI- ROLI 65	*rambi
<i>wood</i>	*hadu	*kayu/ PANS72	*hadu
<i>grass</i>	*rata	*awa/PCP- PAW69b	*rata
<i>leaf</i>	*ro'o	*rau/PWF- PAWF 71	*ro'o
<i>root</i>	*amu	*yamut/ PANC43	*amu
<i>fruit</i>	*wua	*buwah/ PANC43	*wua
<i>cook</i>	*manas u	*nansu/POC- GR69	*manas u
<i>eat</i>	*maŋa	*paŋan/ PAND38	*maŋa
<i>suck</i>	*noso	*soso/POCB- LA73	*noso
<i>house</i>	*u:ma	*rumaq/ PANDYM70	*u:ma
<i>rope</i>	*wa'u	*waRo/POC- GR69	*wa'u

<i>dust</i>	*kalubu	*lebu'/ PAND38	*kalubu
<i>ash</i>	*kalubu	*abu'/ PAND38	*kalubu
<i>fire</i>	*api	*apuj/PAND38	*api
<i>person</i>	*dou	*cau/PANL72	*dou
<i>male</i>	*mone	*many/ PANC43	*mone
<i>female</i>	*wine	*biney/ PANDYM70	*wine
<i>husband</i>	*la'i	*laki'/PAN38	*la'i
<i>wife</i>	*wei	*beHi /PPHZE 71	*wei
<i>father</i>	*a:ma	*ama/PAN- DYPMPL53	*a:ma
<i>mother</i>	*i:na	*ina'/ PAND38	*i:na
<i>child</i>	*a:na	*anak/ PANS72	*a:na
<i>we</i>	*yinta/a me	*kinta/ PAN- DYTV49	*yinta
<i>they</i>	*re-ra	*ra/PF- PAWF71	*re-ra
<i>house</i>	*u:ma	*rumaq/ *waRo/POC- GR 69	*u:ma
<i>string</i>	*wa'u	*lebu'/ PAND38	*wa'u
<i>ash</i>	*kalubu	*abu'/ PAND38	*kalubu
<i>dust</i>	*kalubu	*lebu'/ PAND38	*kalubu
<i>salt</i>	*sia	*siraq/PAND- LO (n.d)	*sia
<i>soil</i>	*dana	*tanaq/ PAN- DLO (n.d)	*dana
<i>stone</i>	*watu	*batu/ PAN- PR74	*watu
<i>lake</i>	*danaw	*danaw/ PANS72	*danaw
<i>rain</i>	*u:ra	*hud'an/ PANS72	*ura

Note:

BUA= *Bottom-Up Analysis*

PAn/Expert/Year: Proto Austronesian/Expert who identified the form / The year of identification (only the last 2 figures are presented)

PSm-Te= Proto Sambori-Teta

TDA=*Top Down Analysis*

Retention without Change (Different Forms)

Based on data presented in Table 5, the words which mean *hand, breast, snake, flower, come, life, safe, yawn, indigo, grilled, burn, breast milk, string, extinguish, iron, swallow, sit, and teacher* show the same forms between PAn etymons and

PSm-Te (reconstructed based on *bottom-up approach*). Therefore, the definitive reconstructed PSm-Te etymons were determined based on the forms, which are the same.

Table 5. The Same Forms between PAN Etymons and PSm-Te Etymons (Reconstructed Based on Bottom-Up Analysis)

English	PSm-Te (BUA)	PAn/Expert/Year	PSm-Te (TDA)
<i>hand</i>	*lima	*lima/PANS72	*lima
<i>breast</i>	*susu	*susu/POM-CI61	*susu
<i>snake</i>	*sawa	*sawa/PANS72	*sawa
<i>come</i>	*mai	*mai/PAN-BLAA73	*mai
<i>life</i>	*nawa	*nawa/PANS72	*nawa
<i>seat</i>	*to?o	*to?o/PM69	*to?o
<i>yawn</i>	*mawa	*mawa/ PAMS27	*mawa
<i>indigo</i>	*nila	*nila/PAN-BLWO 71	*nila
<i>grilled</i>	*tunu	*tunu/PNCHA71	*tunu
<i>burn</i>	*tunu	*tunu/PNCHA71	*tunu
<i>breast milk</i>	*oi susu	*susu/POCGR(- MA) 69	*oi susu
<i>string</i>	*kafa	*kafa/ PPNDf29	*kafa
<i>iron</i>	*besi	*besi/ PANDYMC70	*besi
<i>swallow</i>	*nono	*nono /POC- GR69	*nono
<i>sit</i>	*to?o	*to?o/ PMLS69	*to?o
<i>teacher</i>	*guru	*guru/ PPHZA	*guru

Note:

BUA= *Bottom-Up Analysis*

PAn/Expert/Year: Proto Austronesian/Expert who identified the form / The year of identification

PSm-Te= Proto Sambori-Teta

TDA=*Top Down Analysis*

The form of PSm-Te reconstructed from bottom-up analysis, as mentioned in Table 5 column 2, means *hand* was found the same in PAn etymon *lima see (column 3). Therefore, its definitive PSm-Te is *lima, as presented in column 4. The form of PSm-Te in Table 5 column 2, which means *breast* was found the same as PAn etymon *susu mentioned in column 3. Therefore, its definitive PSm-Te is *susu (column 4).

3.3 The Different Forms of PAN and PSm-Te

816 (47.94%) etymons of PAn (see example in column 3 in Table 6) underwent lexical innovation

(see column 2). The etymons PSm-Te in Table 6 column 2 which means *she, we, you, shoulder, blood, neck, hair, teeth, ear, eyes, top, mouth, soul of feet, female, bed, mat, borrow, fill, and close* were undergone lexical innovation of PAN*ia(h), *kita, *kamu?, *baya, *{dD}araq, liqeR*, *d'[ae] (m)but *gigi' *teliŋa*mata, *teliŋa *ŋu(s)u*(g) age, *palapana *binay *lapik, *pola, *beles, *oso, and *ekub. The definitive PSm-Te, therefore, was determined like the one in column 4.

Table 6. The Examples of Different Forms of PAN from PSm-Te (Bottom-Up)

English	PSm-Te (BUA)	PAn/Expert/Year	PSm-Te (TDA)
<i>she</i>	*re	*Ia (h)/ PANDYPM PL53	*re
<i>we</i>	*ame	*kita/ PANDYMC70	*ame
<i>you</i>	*oene/emerance	*kamu?/ PANDYMC70	*oene/emerance
<i>shoulder</i>	*dunce	*baya/PANC43	*dunca
<i>blood</i>	*ra'a	*{dD}araq/PAN-DYTV49	*ra'a
<i>neck</i>	*wo'o	*liqeR/ PANDYPM-PL53	*wo'o
<i>hair</i>	*hoŋgo	*d'[ae](m)but/PAND38	*hoŋgo
<i>teeth</i>	*woi	*gigi'/PAND38	*woi
<i>ear</i>	*wiro	*teliŋa/PANC43	*wiro
<i>eye</i>	*porom u/isi poro	*mata/PANDYMPL53	*poro
<i>top</i>	*kawoŋga	*kasiŋ/PPHCH73	*kawoŋga
<i>mouth</i>	*asa	*ŋu(s)u/PANBIROL65	*asa
<i>soles of the feet</i>	*kopa lanŋe	*(g)age pala pana / PCPPAW69b	*kopa lanŋe
<i>female</i>	*wilo / *wine	*binay/PANS72	*wine
<i>bed</i>	*difa	*lapik/PAND38	*difa
<i>mat</i>	*topo	*pola/PPNDF	*topo
<i>borrow</i>	*sepe	*beles/PPHCH 73 (SC)	*sepe
<i>fill</i>	*isi/*paisi	*oso/POCMI61	*isi
<i>close</i>	*tapa/*kabu	*ekub/PANBL73	*kabu

Note:

BUA= Bottom-Up Analysis

PAn/Expert/Year: Proto Austronesian/Expert who identified the form / The year of identification

PSm-Te= Proto Sambori-Teta

TDA=Top Down Analysis

3.4 Types of Sound Change from PAN Etymons to PSm-Te

Based on the comparison of PAN etymons and

the definitive PSm-Te etymons, and the top-down analysis mentioned earlier, several types of sounds were found. Each of which is described as follows:

Addition

Three types of phoneme addition: *prothesis*, *epenthesis*, and *paragoge*, were found from PAN to PSm-Te etymons; The examples of each are presented in the following:

a. Prosthesis

PAN*ua found in (PAMS27) which means *aunt*→PSm-Te*dua, where PAN -ø→ PSm-Te-d; PPHZC71 *aku which means *confest*→PSm-Te*ŋaku, where PAN ø→PSm-Te*ŋ.

b. Epenthesis

PAN*panii seen in PANDLO12 which means *bat* underwent *epenthesis* →PSm-Te*paniki, where PAN ø- PSm-Te *-k-/ , PAN *pi-a seen in PANDL72 which means *dishes*→PSm-Te*piŋa, where PAN ø- →PSm-Te -ŋ-

c. paragoge

PAN*tan as seen in PANDM72, which means *know* underwent *paragoge* →PSm-Te*tanda, where ø- →/da/.

Deletion

Deletion, which occurs from PAN to PSm-Te includes *aphaeresis*, *syncope*, and *apocope*. PAN*koe in PPNBIWO70, which means *you* underwent *aphaeresis* →PSm-Te*oe, where PAN*k→ PSm-Te*ø. PAN*namu in PPNBIWO70 which means *smell*→PSm-Te*nu, where PAN*am→ PSm-Te*ø; PAN*moquri in PEPPAW70 which means *skinning*→PSm-Te*koi, where PAN*qu→ PSm-Te*ø; PAN*leyqa in PANDYMT46 which means *ginger* underwent *syncope*→PSm-Te*lea, where *-yq- → PSm-Te*ø/

a. Apocope

Most of the data of PAN etymon underwent *apokope*. For example PAN*bawaŋ in PANDYMPT74, which means *onion*→PSm-Te*bawa, where PAN *ŋ- in ultima → PSm-Te*ø. PAN*tolur in PANPWS47, which means *egg*→PSm-Te*tolu, where PAN*r- → PSm-Te*ø-. PAN*teras in PANDB72 which means *hard* →PSm-Te*tera, where *s-→ PSm-

Te*Ø-. PAn*timun in PAND38 which means *cucumber* → PSm-Te*timu, where PAn*n- → PSm-Te*Ø-. PAn*timah in PAND38, which means *tin* → PSm-Te*tima, where PAn*h- → PSm-Te*Ø. PAn*kilap in PAND38, which means *flash* → PSm-Te*kila, where PAn*p/ in position → PSm-Te**Ø. PAn*baway in PANDYMP74a, which means *onion* → PSm-Te*bawa, where *ŋ → PSm-Te*Ø. PAn*kapuk in PAND38, which means *kapok* → PSm-Te*kapu, where *k/ → Ø-. PAn*gendar in PAND38, which means *drum* → PSm-Te*genda, where PAn*ŋ → PSm-Te*Ø-. PAn*lintah in PANS72, which means *leech* → PSm-Te*linta, where PAn *h- → PSm-Te*Ø-.

b. Syncope and Apocope

Some PAn etymons underwent *deletion* in *syncope* loss of vowel in the middle of a word and *apocope*, removing a phoneme at the end of a word (Keraf, 1996, Crawley 1997). PAn*diyus in PANC43 which means *bathe* → PSm-Te*diu, where PAn*-y- in penultima position → PSm-Te*-Te*Ø; and PAn*s- → PSm-Te*Ø PAn*balikat in PANDLO (n.d) which means *shoulder blade* → PSm-Te*blika, where PAn*-a- in prepenultima position → PSm-Te*Ø. and PAn*t- in ultima position → PSm-Te*Ø; PAn*(bB) uqayah in PANPR74 which means *crocodile* → PSm-Te*buaya, PAn *-q- in penultima position → PSm-Te*-Ø-. PAn *h- in ultima position → PSm-Te*Ø; and PAn*ti(m)ke(jd) in PPHCH73, which means *heel* → PSm-Te*time, where PAn*-k- → PSm-Te*Ø and PAn*dj- → PSm-Te*Ø. PAn*tuha? in PAND38, which means *old* → PSm-Te*tua, where PAn*-h- in ultima position → PSm-Te*Ø and PAn*?- → PSm-Te*Ø. PAn*sira in PANDIO (nd) means *salt* → PSm-Te*sia, where PAn*-r- in ultima position → PSm-Te*Ø.

Metathesis

Some PAn etymons underwent *metathesis*, the transposition of sounds or syllables in a word (Crawley, 1997; Anttila, 2009), as well as phoneme substitution. For example, PAn*ekub means *close* → PSm-Te*kabu and PAn*-e → PSm-Te*-a- in the middle position. Phoneme PAn*-k- was transposed into the penultima position and PAn*e → PSm-te*a was transposed to a mid-position in penultima; PAn*nisa which means *blood* → PSm-Te*sila where PAn*-l- in the ultima position → PSm-Te*n in penultima position and

PAn*s in penultima, and PAn*n → PSm-Te*l in ultima position was transposed to ultima position; PAn*kolo which means *cut* → PSm-Te*loto, where PAn*k in penultima position is substituted → PSm-Te*t in ultima position and PAn*l in ultima position was transposed into penultima position. PAn*duna means *log fire* → PSm-Te*hadu, where PAn*n in penultima → PSm-Te*-h in penultima position and PAn-Te*d in penultima position was transposed in ultima position in PSm-Te.

Diphthongization

Some PAn etymons underwent diphthongization, the sound change where one single sound becomes diphthong (Crawley, 1997; Anttila, 2009). For example, PAn*kasawari which means *cassoary* → PSm-Te*kasuari, where single phoneme PAn*-a- in prepenultima position → diphthong PSm-Te*-ua-.

Fusion/Monofthongization

Some Pan etymon underwent fusion sound change where a diphthong becomes a single sound (Crawley, 1997). For example, PAn*atay in PANC43, which means *liver* → PSm-Te*ate, where /ay/ in ultima position → /e/. PAn*apuy in PAND38, which means *fire* → PSm-Te*api, where PAn*uy → PSm-Te *i.

Fortition

Some PAn etymons underwent *fortition*, a consonantal change from a weak sound to a strong sound (Anttila, 2009). It is the opposite of the more common *lenition* (Crowley, 1997). The following are 9 PAn etymons found to show *fortition* in PSm-Te. PAn*cau, which means a *person* in PANL72 → PSm-Te*dou, where PAn*t in penultima position → PSm-Te*d; PAn*dana in PANLO/Nd which means *soil* → PSm-Te*dana, where PAn*t in penultima position → PSm-Te*d. PAn*tumbuq in PANDYPMPL53, which means *body* → PSm-Te*(sa)rumbu, where PAn*t in penultima position → PSm-Te*r. PAn*asi in PMLS69, which means *liver* → PSm-Te*, is where PAn*s in the ultima position → PSM-Te*r.

Lenition

Lenition is a type of sound change that alters consonants, making them weaker (Crowley, 1997). In table 7 below, some PAn etymons underwent *lenition*. Phoneme PAn*b in penultima

position→*w for the etymons, which means: *female*, *wife*, *mouse*, *lips*, and. Phoneme PAN*-ɟ in the etymons, which means *nose* →PSm-Te*-l-, PAN*v in penultima position in the etymon, which means *hit* →PSm-Te*p, PAN*w in the etymon which means *turtle* →PSm-Te*b in penultima and ultima position.

Table 7. Lenition from PAN to PSm-Te

English	PAn/Expert/ Year	PSm-Te	Sound Change
'female'	biney/PANDYMC70	dou wine	/b/→/w/
'wife'	BeHi/PPHZE71	Wei	/b/→/w/
'nose'	idɟun/PANDYPMP53	lɟu	/ɟ/→/l/
'mouse'	labaw/ PANS72	lawo	/b/→/w/
'stone'	batu/PANPR 74	watu	/b/→/w/
Hit	toyo/PAMS27	topa	/v/→/p/
'lips'	bibiy/PAND 38	wiwi	/b/→/w/
'turtle'	penu/PANS72	fonu	/p/→/f/

Note:

BUA = Bottom-Up Analysis

PAn / Expert/Year: Proto Austronesian / Expert who identified the form / The year of identification (only the last two figures are written)

PSm-Te = Proto Sambori-Teta

TDA = Top Down Analysis

Fronting

Some PAN etymons show fronting, which happens because some phoneme in the PAN etymons is made toward the front of the mouth. PAN*paŋan as in PAND38, which means *eat* →PSm-Te*maŋa, where PAN*-p in penultima position →PSm-Te*-m. PAN*koe in PPNBIWO79, which means *you*→PSm-Te*woe, where PAN*k in penultima position →Psm-Te*w. PAN*losi, which means *squeeze*→PSm-Te*posi, where *l in penultima position →PSm-Te*p. PAN*koRo, which means *cut* →PSm-Te*loto, where PAN *k in penultima position →Psm-Te*l.

Backing

Some PAN etymon also shows the backing type of sound change, the changes that happen when they occur by replacing front sounds to back sounds in a language (Crowley, 1997). The following are examples of backing, PAN*dindin in PANDLO (n.d), which means *jerked meat*→PSm-Te*dandan, where PAN*i in ultima and penultima position→PSm-Te*a. PAN*tono in POCGR69, which means *swallow* →PSm-Te*nono, where PAN*t in

penultima position→PSm-Te*n. PAN *kena in PANDLO (n.d), which means *hit* →PSm-Te*kana, where PAN*e in penultima position →PSm-Te*a.

IV. DISCUSSION

Phoneme change is a common process in a language change (Hruschka et al., 2015). Phoneme change could be caused by several factors, namely geographical, social and historical factors (Risdianto, 2017). Based on the result of the study, it is seen here that this study is successful in investigating the qualitative data as the existences of the interrelatedness of PAN to PSm-Te since some PSm-Te etymons were found showing phoneme correspondences between the two protoes. Besides, this study also found that the retention form of PAN to PSm-Te shows the existence of characteristics of sound changes such as addition, deletion, metathesis, diphthongization, fusion, fortition, lenition, fronting, and backing. While assimilation, dissimilation, abnormal changes, and unpacking types of sound changes were not found in this study. Some sound changes from PAN to PSm-Te form a concerted change, which occurs not by chance (Bowerman, 2015). The examples of the concerted changes can be seen in Table 7, i.e., sound change from /b/→/w/.

Based on the types of sound change, the findings of this study support Crowley's (1997), Anttila's (2009), and Cser's (2014) sound change theories. Among the 13 types of sound changes suggested by the three experts, nine were identified in this study. They are all become the characteristics of the types of sound change that occurred from PAN to PSm-Te.

The identification of the interrelatedness of phoneme correspondences of PAN to PSm-Te etymons has answered the doubts among linguists and local people' question whether or not Sambori and Teta isolects as a language descended from PAN. As a Bima language subgrouping member, the findings can also be the linguistics evidence that Sambori is undoubtedly one of the four languages; Bima, Sanggar, Kolo, and Sambori spoken in Bima regency. These qualitative data also confirm the qualitative data found in Budasi and Indriani study (2019). Therefore, this study confirms that the language classification of Sambori is one of

the languages spoken in Bima Regency. However, to complete the linguistic feature as the evidence of the status of language classification of Sambori among all other languages in Bima Regency, further study about the kinship relationship quantitatively and qualitatively is important to be conducted in the future.

V. CONCLUSION

This study investigated; **a.** 1691 (53%) definitive Proto Sambori-Teta (PSm-Te) among 1702 etymons identified in this study. These etymons

show retention of PAn etymons. 511 (30.02%). 366 (21%) PAn etymons underwent lexical innovation, that is, they show different forms of etymon PSm-Te reconstructed from *the bottom-up analysis.*, and 816 (41,9%) Psm-Te were not found in PAn.; **b.** the types of sound change passed by PAn etymon to PSm-Te were nine types of sound change, such as; *addition, deletion, metathesis, diphthongization, fusion, fortition, lenition, fronting, and backing.* Definitively, **a** and **b** can be used as the qualitative linguistic evidence, which states the PSm-Te had been descended from PAn.

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BIOGRAPHY

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