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Morphological process found in Fore language in Papua New Guinea

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ABSTRACT

This study is aimed at finding out what morphological processes and morphological rules represented in Fore Language in Papua New Guinea. The data were morphophonemic and taken from "Laboratory Manual for Morphology and Syntax" Seventh Edition written by Merrified et.al. and published in 2003 about Fore Language of Papua New Guinea. The data consist of pronoun markers including first singular (1s), second singular (2s), third singular (3s), and first plural (1p). The Item-and-Process was used to analyze the morphophonemic data. The study found that to construct the person markers in Fore Language, the underlying form of the words should be substituted, inserted, or deleted after attached to the underlying form of the suffix. The rests of the findings will be discussed further.

Keywords: morphological process; fore language; person marker; morphophonemic; item-and-process

INTRODUCTION

Language is how the world differenciate human to non-human (Aronoff, 2007). It contains some linguistics elements to express meaning. There are some linguistics elements in the form of phonology, morphology, syntax, semantics, and pragmatics. Each of them studies about differences knowledge. This paper is going to focus on the morphology, a study of language pattern of language in its form and meaning of the words (Booij, The Grammar of Words: An Introduction to Linguistic Morphology, 2005).

Morphology focuses to study the formation in a word. It includes the coinage of the word in the language and the variety on how human use the word in the sentence (Lieber, 2009). Within the morphology, there is inflection which dealing with the changing on morphemes in numbers, case, gender, and definitives. Inflection does not change the word of class in each morpheme. Therefore, it suits this data about Fore Language. Fore Language particularly discussed about person markers or noun has many inflections process. It can be analysed through Item-and-Process.

Some studies have been discussing about Fore Language (Scott, 1977). The lack of this study is no chapters discussing about person markers throughout morphological process and morphophonemic information. Only general information that lied in the report. Even though the report is complete enough, there are no person markers discussed through morphological process. Therefore, the researcher needs to analyze it further in the perspective of morphophonemic and morphological process.

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SCOPE OF THE STUDY

Morphophonemic

Morphophonemic happens in the realization of phonology throughout morpheme (Katamba, 1989). This morphophonemic data relates to phonological process at the level of basic morpheme (Crowley, 1987). Crowley differs the process of morphophonemic into eight: "lenition, sound addition, metathesis, fusion, unpacking, vowel breaking, assimilation and dissimilation" (1987).

Phonological process:

According to Schane (1973: 49), phonological process is a morpheme's combination which becomes juxtaposed and sometimes it changes into another form. There are many types of phonological processes. One of them is assimilation process. Assimilation is divided into several fragments. There is coalescence, epenthesis (insertion), and deletion. Each type of phonological process has own rules. In general, the rules have formula as follows:

1. Coalescence

Coalescence is closely related to assimilation. It is a kind of phonological alternation which two adjacent sounds become more similar. The segments are merged into one.

$$\left(\emptyset \rightarrow V/C \right) \qquad \_\_\_\_\_ \qquad \#\ K\_\_\_\_\_K$$

2. Insertion (Epenthesis)

Insertion is a segments addition to a morpheme or a word. The rulescan be seen as follow:

$$A \rightarrow \emptyset\ /\ B\_\_\_\_C$$

3. Deletion

Deletion is a segments omission from a morpheme or a word. The rules are described as follows:

$$\emptyset \rightarrow A\ /\ B\_\_\_\_\_C$$

4. Assimilation

Assimilation is about two sounds that are different become more alike.

Morphological Process

Morphological process is the form changing of stem (Booij, 2005). There are some ways to analyze morphological process: 1) derivation, 2) compounding, 3) inflection, and 4) reduplication.

Item and Process

Item-and-process is a morphological process used when it has correlation with phonological process and morphosyntactic information (Bonet, 2008). It functions to process a changing of sound. It suits to the morphemes that has sounds variations (allomorph) of changing in it.

RESEARCH METHOD

The study was a descriptive and qualitative study. The data were obtained from "Laboratory Manual for Morphology and Syntax" Seventh Edition written by Merrified et.al. and published in 2003 about Fore Language of Papua New Guinea. The transcriptions have already constructed within the book itself. The transcription uses International Phonetics Alphabet (IPA) reference.

The data consist of pronoun markers including first singular (1s), second singular (2s), third singular (3s), and first plural (1p). The data were morphophonemic and analyzed using Item-and-Process to find the morphological rules. Later, the results of data analysis were presented in the form of a research report.

Data

No.	Meaning	First singular (1s)	Second singular (2s)	Third singular (3s)	First plural (1p)
1.	Axe	tunte	tuka	tunkwa	tute
2.	Clothes	kayne	kayga	kaywa	kayre
3.	One (thing)	ka: ʔne	ka: ka	ka: ʔwa	ka: te
4.	Liver	awnte	awka	awnkwa	awte
5.	Knot	awʔne	awka	awʔwa	awte
6.	Eye	awne	awga	awwa	awre
7.	Shell	pine	piga	piwa	pire
8.	Snake	ma: ʔne	ma: ka	ma: ʔwa	ma:te
9.	Trap	kone	koga	kowa	kore
10.	Skin	awʔne	awka	awʔwa	awte
11.	Bee	inte	ika	inkwa	ite
12.	House	na:nte	na:ka	na:nkwa	na:te
13.	Name	agene	agega	agewa	agere
14.	Bag	koʔne	koka	koʔka	kote
15.	Vomit	mune	muga	muwa	mure

16.	Kneecap	arawnte	arawka	arawnkwa	arawte

Table 1. *List of Fore Language person markers in PapuaNew Guinea*

Finding Underlying Form (UF) of The Words

Before analyzing the data through Item-and-Process, the researcher should determine the underlying form of the person markers which lies on the Fore Language of Papua New Guinea first. Underlying form (UF) of a word of a morpheme is the main or abstract from that is determined before any phonological or morphophonemic rules have applied to it (Schane, 1973). The underlying form should be able to apply to any morphemes and has various chances to attach to one another morphemes.

In this person marker of Fore Language, the underlying form and the base have not determined yet, both of them. To determine the underlying form which occurs in the person markers, we should determine the most various distribution suffix that able to attach to the morphemes.

To begin determining the underlying form, first of all, the researcher try to use the first singular (1s) as the UF. Based on the data above, the distribution of the morphemes 1s have various distribution if it becomes the underlying form. For example, *tunte* is turned into *tuka*. If it becomes the underlying form, the distribution cannot be generalized to other morphemes, like *tunte* *tute*. There will be many possibilities and distributions if the underlying form coming from 1s. It also has similar impact if the underlying form has been chosen from the 2s, 3s, or 1p. Therefore, the researcher tries to find other possibilities by creating or determining the stem from the data above.

According to the person marker data from Fore language, the stem of each morpheme is the deletion of the suffix. The researcher takes the possibility stem from 1s person marker to find the underlying form.

1s (First Singular Word)	Underlying Form
tunte	tun
kayne	kay
ka: ʔne	ka:ʔ
awnte	awn
awʔne	awʔ
awne	aw
pine	pi

Table 2. The Underlying form of the words or morphemes

The underlying form that coming from the first singular (1s) can be generalized to another person marker to create a morphological rule. The researcher only finds a few varieties of the rules. Therefore, this underlying form is suitable to another person marker to create a morphological rule. The researcher determines the

morphological rules using this underlying form in the discussion part using the morphophonemic data.

Underlying form of affix

Some affixes construct first singular (1s), second singular (2s), third singular (3s), and first plural (1p) person marker in Fore Language of Papua New Guinea. These following lists are:

First singular (1s)	Second singular (2s)	Third singular (3rd)	First plural (1p)
-ne	-ka	-kwa	-te
-te	-ga	-wa	-re

Table 3. List of suffixes

From the affixes above, the first thing to do is to determine the underlying form for each person marker. These rules need to find out to determine each change of the person markers.

Firstly, there are two suffixes, (-ne) and (-te), created first person marker (1s) or first singular. Due to (-ne) has more distributions coming from various environment compared to (-te), suffix (-ne) has been chosen as the underlying form. It is because suffix (-te) only occurs when the underlying form of the words ended with the sound *n* or nasals. While suffix (-ne), compared to suffix (-te), ithas more environment and distribution, such as when the underlying form of thewords ended with the sound *ʔ (glottal), w-y (glide)*, and vocal sounds. Therefore, to construct the first-person marker (1s), the underlying form of the affix is (-ne). Secondly, there are also two suffixes, (-ka) and (-ga), constructed second person marker (2s) or second singular. Because (-ga) has various environment comparedto (-ka), suffix (-ga) has been declared as the underlying form. Due to (- ka) only shows up when the underlying form of the words are ended with *ʔ (glottal)* and *n (nasal)*. While suffix (-ga), has more distributions.

Next person markers create using suffix (-kwa) and (wa). Suffix (-wa) is chosen because it has more environment of its distributions compared to (-kwa), such as the underlying form of the words are ended with semi vokal *y*, glottal *ʔ*, glide *w*, vocal *i o e u* in creating third singular or third person markers.

Lastly, the underlying form of the suffix in first plural person markers are suffix (-te) and (-re). The most various distribution is (-te). It is because when the underlying form of the words ended with *n, ʔ,* while the other one only attached with vocal sounds.

Person Markers	Suffixes
1s	[-ne] [-te]
2s	[-ka] [-ga]
3s	[-wa] [-kwa]
1p	[-re] [-te]

→

Underlying Form
[-ne]
[-ga]
[-wa]
[-te]

Table 4. List of underlying form of suffixes

RESULT AND DISCUSSION

Morphological rules create a certain word class such as noun, verb and construct word forms of a particular category. It functions to indicate how the complex words constructed (Booij, 2005). To determine the morphological rules of the Fore Language in Papua New Guinea particularly in its person markers, the researcher use Item-and-Process theory model which can be utilized to determine the morphophonemic data.

1. Constructing first singular person marker (1s) using suffix (-ne)

/tu**n**/ /na:n/ /arawn/ /kayn/	+ /-ne/	→	[tunte] [na:nte] [arawnte] [kaynte]

When the Underlying Forms end with the sound [n], the sound [n] dissimilates to the suffix /-ne/ becomes stem /tu**nn**e/, /na:**nn**e/, /araw**nn**e/, and /kay**nn**e/ first. Then, in the place of articulation, the sounds [n] or the sound of *nassal* changes into [t] or the sound of *dental.* Both of these sounds are plossive. Therefore, the morphological rules turn into:

[n] → [t] / [n]_____

2. Constructing second singular person marker (2s) using suffix (-ga)

/tu**n**/			[tuka]
/ka:**ʔ**/			[ka:ka]
/awn/			[awka]
/aw?/			[awka]
/ma:ʔ/			ma:ka]
/in/	+ /-ga/	⟶	[ika]
/na:n/			[na:ka]
/koʔ/			[koka]
/arawn/			[anawka]
/kayn/			[kayka]
/abeʔ/			[abeka]

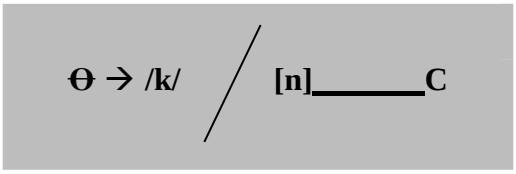
When the stems end with the sound [n] and [ʔ], the sound [n] and [[ʔ] attach tothe suffix /- ga/ and become stem /tu**nga**/, /na:**nga**/, /araw**nga**/, and /kay**nga**/ and tu**n**ʔ/, /na:**nga**/, /araw**n**ʔ/, and /kay**n**ʔ/ first. Then, in the place of articulation, the sounds [n] or the sound of *nasal* and the sounds [ʔ] or glottal change into [k] or the sound of *velar*. The nasal sounds n and ʔ are substituted by [g], consonant velar plosive sounds. Then, it sounds changes into the voiceless one or the sound [k] Therefore, the morphological rules turn into:

[g] → [k] / **[n]**_____

3. Constructing third singular person marker (3s) using suffix (-wa)

/tun/			[tunkwa]
/awn/			[awnkwa]
/in/	+ /-wa/	⟶	[inkwa]
/na:n/			[na:nkwa]
/arawn/			[arawnkwa]
/kayn/			[kaynkwa]

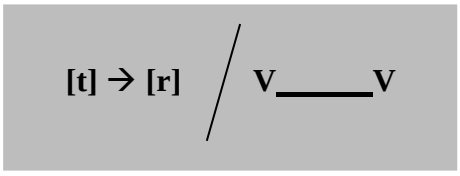
When the Underlying Forms end with the sound [n], the sound [n] attaches to the suffix /-wa/ becomes stem /tu**nwa**/, /aw**nwa**/, /i**nwa**/, /na:**nwa**/, /araw**nwa**/, and /kay**nwa**/. Then, these stems attach to suffix (-wa) and it changes the sound of the morphemes. Fater attaching each other, there is an insertion of sound of [k], velar and voiceless. Therefore, the rules turn out to be:



4. Constructing first plural person marker (1p) using suffix (-te)

/kay/			[kayre]
/aw/			[awre]
/pi/	+ /-te/	→	[kore]
/ko/			[agere]
/age/			[mure]
/mu/			

When the stems end with the sound glide [y, w] and vocal sounds [i,o,e,u], these sounds are attached to the suffix /-te/ and turned into stems /kayte/, /awte/, /pite/, /kote/, /agete/, and /mute/. Then, these vocal and glide sounds are deleted when the suffix are attached. Later, the sound [t] on the suffix changes into sound [r] or trill. Therefore, the rules are:



CONCLUSION

In summary, the researcher found that (1) by changing nasal sound to dental sound after deleting the dissimilation of nasal sound between consonant and vocal sound, it can construct the first singular person marker. Then, (2) by substituting the consonant velar voiced to consonant velar voiceless between vocal sounds, it can construct second singular person marker. (3) By inserting the sound [k] or consonant velar voiceless after the nasal sound of the stems can create third singular person marker. Last, (4) by substituting sound [t] into [r] or trill, it can make first plural person markers.

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