



The Derivational Affixes of Bambasi Mao Language: Morphological Analysis

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Abstract

This study examined the manner of derivational affixes of Bambasi Mao language, spoken in Bambasi district particularly in Yaku, Shewara and Kusa villeges of Benishangul Gumuz Regional State, Ethiopia. The study described affixation processes of the language in terms of Lexicalist Approach developed by Selkirk (1982) by gathering data from 12 native speakers of the language. Derivational Affixes within nominal, verbal, adjectival and adverbial word classes have been described qualitatively. The result shows that derived abstract nominal is formed from adjectival and nominal bases by adding suffix /-ijə/; agentive nominal is derived by suffixing /-isə/ to verb roots; manner nominal is formed by suffixing /-ə/ to the verb roots. In the process of verbalization, causatives are derived from verb roots, adjectival and nominal bases by suffixing the morpheme /-sisa/; passive is derived from transitive verb roots by suffixing /-ek'á/; the reflexive is formed by suffixing /-ijɨk/ on simple verb roots, and the stative is derived from adjectives by suffixing /-inke/. The reflexive affix /-ijɨk/ is distinguished from the stative /-inke/ by single nasal sound /ɨ/. Adjectival is derived from nominal by suffixing the morpheme /-itə/; adverbials of frequency are formed by the complete reduplication of the base adjectives; whereas, time adverbials are derived by complete reduplication of nouns that refer to time with the suffix /-at/; manner adverb is formed from verb roots by adding /-en/ suffix.

Key Words: Bambasi Mao, Affixation, Derivation, distribution

1. Introduction

The name 'Mao' has been used to refer to a variety of groups and languages. The people who are usually referred to as 'Mao' include the following: (1) Anfillo, (2) The Hozo and Sezo clans of the Begi area; sometimes called Southern Mao, is classified as Nilo-Saharan (3) The Mao of Bambassi and Didessa, sometimes called Northern Mao, is Omotic (Ahlang 2010). The Northern Mao of Ethiopia people primarily reside in rural villages in western Ethiopia, around Bambassi town and in Didessa River Valley. The majority of Northern Mao people are

farmers. These Northern Mao people who settled around Bambassi and in Didessa River Valley share a common culture and language. However, the Northern Mao those settled around Bambassi are predominantly Muslim, while those in Didessa River Valley are predominantly Christian.

According to Fleming (2007) description, 33,683 mother tongue speakers of Mao language lived in Bambasi, Tongo, Hozo and Sezo districts. Moreover, the National census Statistical Agency (2007) indicates that the total population in



Babasi district to be 48,694. Among those 24,720 were men and the remaining 23,974 were women.

On the level of language family, Mao language is categorized as a member of Omotic language family, which belongs to the Afro-Asiatic big language phylum (Ahland 2010). The language is spoken in Ethiopia and in Sudan. In Ethiopia, it has been categorized into Bambasi Mao, Diddesa Mao, Tongo Mao, Ganza Mao, Hozo and Sezo Mao. The classification of this language dialect is concerned with the settlement area of the language speakers (Bender 1971). Likewise, Bambasi Mao language has different names. These names are spelled out as: Bambashi Mao, Siggoyo Mao, Amam Mao, Fadiro Mao, as well as Kere Mao. This study focused on the derivational process of Bambasi Mao language, which is spoken in Bambasi district particularly at Yaku, Shewara and Kosa villages.

Bambasi Mao language among Omotic family has the weakest documentation. Only few works have been done on the description of Mao language in general. For instance, Grottanelli (1940) presents history of Mao people with minimal linguistic information in the form of word lists. Fleming (1988) reconstructs the Proto-Mao phonology nearly similar to Ahland (2010). Ahland explains that Mao language is classified into Northern and Southern Mao. The Mao language of Bambasi and Didessa, sometimes called Northern Mao is Omotic, whereas the Mao language of Begi, sometimes called Southern Mao is classified as Nilo-Saharan. The language, in general, is tonal (Ahland, 2012:85). He also described the phonetic inventory of consonants and vowels as it has been listed below:

Table1. Consonants from Ahland (2012:54)

	Labial	Alveolar	Palatal	Velar	Glottal
Plosive	p b	t d		k g	
Ejective	p'	t'		k'	
Fricative	f	s z	ʃ or ʒ		h
Ejective		s'			
Affricative			tʃ or tʃʰ	dʒ or	
Nasal	m	n	ɲ		
Lateral		l			
tap		r			
semivowel	w	j			

Table2. Vowels from Ahland (2012)

	Front	central	back
High	i i:		u u:
Mid	e e:	ä (ə)	
Low		a	o o:



As it can be seen in the above table (1) and (2), Ahland (2012) has modified twenty four consonants from Bender (2003) on the base of their place of articulation and manner of articulation and six vowels based on the occurrence of tongue position when they are uttered. Furthermore, Siebert (1994) has also analyzed the Northern Mao speech including Bambasi Mao speakers referring to their own language with the autonym /mawésə ats' tose/ which is literally translated as 'Mao person-talk'. However, the aforementioned linguists did not raise any idea about the morphological feature of the language (i.e. the role of derivational affix morphemes, inflectional affix morphemes, and the function of affixes such as prefixes and suffixes that can be added on root morphemes. Therefore, the focus of the present investigation is to describe the morphological feature of the language.

Grammar specifies how language is structured at different levels of representation and provides a basis for distinguishing well-formed from ill-formed sentences (Chomsky, 1986). This happens because grammar also provides the main data for constructing morphological rules.

Morphology refers to the structure of words through the smallest elements of morphemes meaning, which includes the structure of base words, prefixes, roots and suffixes. Morphological awareness can be viewed as the ability to infer word meaning and grammatical function through morphemes. Henry (1997) states that "The greatest benefit from instructional time spent on word study can be gained from exploring roots,

prefixes, suffixes, and networks of related words." Furthermore, morphology describes the rules of word formation process in any language.

According to (Kemmer, 2011) there are two types of word formation processes. These are major and minor word formation processes. Major word formation processes are highly productive ways of creating new words, while minor word formation processes are small scale in productivity (Yule 2006, 57). The scholar explains derivation as "the most common word formation process" that enables to create new words by adding morphemes to stems. These morphemes are added to the target stem by affixation, through prefixes and suffixes.

One part of the function of grammar in linguistics study is the justification of word part categories in a language. In many languages words have different componential parts such as prefixes, roots, base words, and suffixes. Speakers may know the lexical and functional category of words in their language orally, but they do not know the technical terms of the internal constituents of word parts. Similarly, in Bambasi Mao language, words have different constituent parts and new words are formed by affixation. However, their internal constituents haven't been fully described so far. Therefore, this study gave structural analysis of morphological (lexical) features of Bambasi Mao language following the Weak Lexicalist Approach for the Approach stipulates words with derivational morphology, excluding syntactic structures.



In Generative Grammar, various approaches were outlined to the study of word structure. Among these approaches, the Transformationalist and the Lexicalist Approaches are very influential. After Chomsky's 'Remarks on Nominalization' in (1970), it was argued that much of derivational morphology was semantically irregular and should not be handled by syntactic rules which are regular. Out of this argument the Lexicalist Approach were developed. The Lexicalist Approach, contrary to the Transformationalist Approach, advocates that syntax does not have access to the internal structure of words. As pointed out above, Chomsky (1970), the pioneer of the Lexicalist Approach, strongly argues that words with derivational features cannot be derived syntactically from the deep structures as they should be part of it (Selkirk, 1982:1).

Based on the assumption that the Lexicalists have on derivational and inflectional morphology, the Lexicalist Approach was divided into two: Weak and Strong Lexicalist (Selkirk 1982:1) and (Aronoff 1976:9). The Weak Lexicalist Approach assumes that derivation and inflection takes place in the lexicon. On the other hand, the strong Lexicalist Approach assumes that inflectional and derivational morphology are in the lexicon; and excludes all morphological issues out of syntax (Aronoff 1976:9). As a guide for this study, the researchers have used the model of Selkirk (1982).

As a result, the morphemes of derivational affix as well as the distribution of prefixes and suffixes of the language were distinguished; this enhances a clue about word structure for

Mao language learners, users and teachers; it helps to document the linguistic data of the language associated to its word affixation. Thus, the following research questions were answered. 1. How derivational affixes are attached with content words to form other words in the language? 2. How prefixes and suffixes are distributed through content words? To fully answer the questions, the scope was extended to include different derivational affix morphemes such as nominal affixes, verbal affixes, adjectival affixes and adverbial affixes as well as the distribution of prefixes and suffixes in the language.

2. Methodology of the Study

The objective of the study was to describe the derivational affix morphemes as well as the distribution of prefixes and suffixes in Bambasi Mao language; specifically, to examine derivational affixes in the language, and to identify the distribution of prefixes and suffixes through content words with in the language. The methodology employed in this study is informant method, where native speakers of Bambasi Mao were interviewed. The researchers prepare appropriate linguistic questionnaires: derivational and inflectional structure of words, phrases, clauses and sentences that help us to collect qualitative data. The lingua franca was Amharic which both the researchers and all the informants speak and understand. The informants were asked to utter each linguistic unit through elicitation and in the form of texts from continuous speech. The researchers record on the informants' speech utterance and then transcribed them phonemically using the International Phonetic Alphabet (IPA symbols) and glossed them in English.



In this study, the researchers collected data essentially from primary sources. It has been mentioned that sources indicate the total population who speak the language in Babasi district are 48,694. Since it is difficult to ask and collect data from the whole community, researchers used purposive sampling technique and select four bi/multilingual Bambasi Mao speakers as informant from each of three areas of the district. The reason that such bi/multilingual informants are selected from different places is to collect reliable data and to make cross checking activity on the collected data through primary sources. At the same time the total number of respondents is limited to 12 to avoid dialectical factors.

The data collecting instrument for the study was interview. In the interview, elicitation technique was applied. Researchers prepared questions in Amharic language in order to make clear communication with informants. They used scheduled elicitation and Analytical elicitation techniques so as to get original, genuine and detail data from the selected informants in a face to face situation by employing open-ended questions. The participants were asked to utter each linguistic unit through elicitation and in the form of texts from continuous speech. The researchers recorded on the informants' speech utterance and then transcribed them phonemically using the International Phonetic Alphabet (IPA symbols) and glossed them in English.

To analyze the basic morphological feature of words in the language, qualitative method was applied. The collected data from the informants by elicitation technique using Amharic language was translated into English.

Then, the translated words were organized.

3. Data Analysis and Interpretation

The derivation of a word is the set of morphological operations used to form new word (Radford 1997:503). In the same manner, Lyons (1977:522) defines derivation as the morphological process that results in the formation of new lexemes. New words or lexemes can be derived by the attachment of different derivational affixes to different base or root words. Traditionally there are two types of morphological affixes, derivational and inflectional affixes. Katamba (1993:50) summarizes, derivational affixes are used to create new lexemes. In this study, different derivational affix morphemes that are used to derive nominals, verbals, adverbials and adjectivals as well as the distribution of prefixes and suffixes in Bambasi Mao language were described.

Nominal Derivational Affixes (Nominalizers)

Noun expressions can be converted from nouns or other word-classes by attaching different derivational affixes to a base or root word (Radford 1997: 519). The processes of these formed words are known as nominalization. In Mao language different derivational affixes are added on different word categories: such as on verbs, adjectives and nouns (nominals) to form other derived nouns (i.e. abstract nouns, agentive nouns and manner nouns.

Abstract Nominal Affixes

Abstract Nominal affixes are part of words these hosted with different lexical word classes to form nouns. Such derived nouns express the non-concrete qualities and have a meaning of 'state' or



'condition' of something (Katamba 1993-49). In Bambasi Mao, abstract nominal derivation affixe /-ijə/ is added to base

nouns and adjectives to form derived abstract nouns as shown in table (1) and (2) below:

Table 1: Abstract nominal affixes added to base nouns

No	Mao base Nouns	gloss	Derived nouns	gloss	Nominal Affix
1	megew-e	'friend'	megew-ijə	'friendship'	-ijə
2	piŃ-e	'boy'	piŃ-ijə	'boyhood'	-ijə
3	ine-e	'mother'	ine-ijə	'motherhood'	-ijə
4	ink-e	'father'	ink-ijə	'fatherhood'	-ijə
5	kan-e	'dog'	kan-ijə	'doghood'	-ijə
6	muns'-e	'lady'	muns'-ijə	'ladyship'	-ijə

As shown in table 1 above, abstract nominal affix is symbolized by the suffix /-ijə/ and it is hosted on different base nouns to form abstract nouns. Similarly

such derivational affix morpheme is hosted with base adjectives to form other derived abstract nouns. Consider the following examples:

Table 2: Abstract nominal affixes added to Adjectives

No	Mao base Adjectives	gloss	Derived nouns	gloss	Nominal Affix
1	k'o:m-e	'old'	k'o:m-ijə	'oldness'	-ijə
2	mank'-e	'ill'	mank'-ijə	'illness'	-ijə
3	ent'-e	'male'	ent'-ijə	'maleness'	-ijə
4	Ńaf-e	'sharp'	Ńaf-ijə	'sharpness'	-ijə
5	Ńengil-e	'light'	Ńengil-ijə	'lightness'	-ijə

As it is noticed from table (1) and (2), abstract nominals are derived from nominal and adjectival bases by suffixing /-ijə/. Since the derived elements are abstract nouns, it can be considered that the suffix /-ijə/ is said to be an abstract nominalizer affix morpheme. Similarly, root nouns and root adjectives carry terminal vowel /-e/ and changed into base

words. This terminal vowel /-e/ is also deleted or omitted when derivational affixes are added on such base words.

Actor (Agentive) Nominal Affixes

In Bambasi Mao, agentive nominal affixes are attached to verbal roots by the suffix /-isə / to form derived agentive nouns as shown in table (3) below:



Table 3: Actor (agentive) nominal Affixes added to root Verbs

No	Mao root Verbs	gloss	Mao Derived nouns	gloss	Nominal Affix
1	Ko:Š	'play'	ko:Š-isə	'Player'	-isə
2	hadem	'work'	hadem-isə	'worker'	-isə
3	je:s'	'run'	je:s'-isə	'runner'	-isə
4	kum	'collect'	kum-isə	'collector'	-isə
5	pij	'kill'	pij-isə	'killer'	-isə
6	K'ew	'listen'	k'ew-isə	'listener'	-isə
7	u:s	'sing'	u:s-isə	'singer'	-isə
8	qinz	'write'	qinz-isə	'writer'	-isə

The above data reveals that agentive nominals are formed from verb roots by attaching the derivational morpheme /-isə/. Moreover consider the following examples:

- (1) a. tí-ŋ ob-Š kjamb-isə
 b. mǎw-és-wole-Š
 kjamb-isə-wole
 1SG- GEN brother - SBG hunt
 -AFF mao-person-PL-SBJ
 hunt -AFF -PL

"My brother is hunter"
 "Mao people are hunters"

Manner Nominal Affixes

Manner nominal affixes are bounded with root verbs to form manner derived nouns which express the way of doing the actions. In Bambasi Mao manner nominal affix is symbolized by suffix /-ə/ that is added to verb root.

Consider the following data presented in table (3) below:

Table 4: Manner nominal Affixes added to root Verbs

No	Mao root Verbs	gloss	Derived nouns	gloss	Nominal Affix
1	tos	speak	tos-ə	manner of speaking	-ə
2	ku	sit	ku-ə	manner of sitting	-ə
3	iŠ	drink	iŠ-ə	manner of drinking	-ə
4	nunk'	stand	nunk'-ə	manner of standing	-ə
5	ho	walk	ho-ə	manner of walking	-ə
6	s'el	finish	s'el-ə	manner of finishing	-ə

As it can be seen from table (4) manner nominals are derived from verb roots by suffixing /-ə/. As the derived items presented in table (4) above are manner nominals, we can consider the suffix /-ə/ as a manner nominalizer morpheme.

Verbal Affixes (Verbalizers)

Verbalizers are derivational affixes which are hosted with different lexical words to

form derived verbals. Kroeger (2005) explains that verbalization is the process of forming verbals by attaching derivational affixes to bases and by reduplicating the roots. In Bambasi Mao, verbs can be derived from verbal, nominal and adjectival bases. As a result, different kinds of verbals such as causatives, passives, statives, and



reflexives are formed by verbal derivational affixes.

Causative Verbalizers

Causatives convey the notion of one event producing another event or one

person causes another person to do something. In Bambasi Mao causatives are said to be derived from verbal roots by suffixing the morpheme /-sisa/ as illustrated in table (5) below:

Table 5: Causative Verbal Affixes added to verbs

No	Mao root	gloss	Derived verbs	gloss	Verbal Affix
1	s'og	'collect'	s'og-sisa	'cause someone to collect something'	-sisa
2	k'of	'cut'	k'of-sisa	'cause someone to cut something'	-sisa
3	tos	'speak'	tos-sisa	'cause someone to speak'	-sisa
4	jaf	'cry'	jaf-sisa	'cause someone to cry'	-sisa
5	hadam	'work'	hadam-sisa	'cause someone to work something'	-sisa
6	iš	'drink'	iš-sisa	'cause someone to drink something'	-sisa

The above data in table (5) reveals that the process of adding verbal affix /-sisa/ is not bring category change since, the roots and the derivatives are both verbs. However, there is meaning change as it

changes the verb from non-causative to causative. In addition to the above causative verbalization process, causatives can also be derived from adjectival bases as shown in table (6) below:

Table 6: Causative Verbal Affixes added to adjectives

No	Mao base Adjectives	gloss	Derived verbs	gloss	Verbal Affix
1	kogon-e	'wide'	kogon-sisa	'cause someone to make something wide'	-sisa
2	?am-e	'narrow'	?am-sisa	'cause someone to make something narrow'	-sisa
3	s'uk'-e	'fat'	s'uk'-sisa	'cause someone to make something fat'	-sisa
4	k'awun-e	'short'	k'awun-sisa	'cause someone to make something short'	-sisa
5	kangil-e	'dry'	kangil-sisa	'cause someone to make something dry'	-sisa

The above data shows that, causative verb is formed from adjectival bases by

affixing the morpheme /-sisa/. In a similar way, other verbal causatives can



be derived from nominal bases. Consider the following data in table (7) below:

Table 7: Causative Verbal Affixes added to Nouns

No	Mao base Nouns	gloss	Derived verbs	gloss	Verbal Affix
1	ke:w-e	'wound'	ke:w-sisa	'make wound'	-sisa
2	kiš-e	'pus'	kiš-sisa	'discharge pus'	-sisa
3	kes-e	'swell'	kes-sisa	'cause something to swell'	-sisa

The above mentioned data depicts that adding the suffix /-sisa/ to an adjectival or nominal base word enables to create causative verb. In this case, causativization can bring category change, that is, adjectivals and nominals are changed to verbals as shown in table (6) and (7).

Passive Verbalizer

Passive verbalizer in Mao language is added to transitive verb roots to form passive verbs by suffixing the morpheme /-ek'a/. Consider table (8) below:

Table 8: Passive Verbal Affixes added to Verbs

No	Mao root verbs	gloss	Derived verbs	gloss	Verbal Affix
1	t'uš	'tie'	t'uš-ek'a	'be tied'	-ek'a
2	kaš	'close'	Kaš-ek'a	'be closed'	-ek'a
3	bus'	'wash'	bus'-ek'a	'be washed'	-ek'a
4	s'ak	'break'	s'ak-ek'a	'be broken'	-ek'a
5	k'of	'cut'	k'of-ek'a	'be cut'	-ek'a
6	iš	'drink'	iš-ek'a	'be drunk'	-ek'a

The above data depicts that the passive verb is formed from root verbs with verbal suffix /-ek'a/.

In Bambasi Mao, stative verbal affixes are added to base adjectives to form stative verbs as illustrated in the table (9) below.

Stative Verbalizers

Table 9: Stative Verbal Affixes added to Adjectives

No	Mao base Adjectives	gloss	Derived verbs	gloss	Verbal Affix
1	ša:l-e	'thin'	ša:linke	'become thin'	-inke
2	kogon-e	'wide'	kogoninke	'become wide'	-inke
3	kos'-e	'long'	kos'inke	'become long'	-inke
4	t'išin-e	'black'	t'išininke	'become black'	-inke
5	fo:z-e	'clean'	fo:zinke	'become clean'	-inke

The above data shows that statives are formed from adjectives by suffixing morpheme /-inke/. Furthermore consider the following sentential examples:



- (2) a. tí ša:l-inke
1SG thin-stative
'I become thin.'

- b. ham- t'íšin-inke
1PL black-stative
'We become black.'

Reflexive Verbalizers

Reflexives are verbal stems that refer to actions performed to one's own benefit, or simply, the subject and the object relate to the same entity. In Mao

language reflexive affix is symbolized by the morpheme /-ink/ and often suffixed on verb roots to form reflexive verbal. The following table indicates the role of reflexive affix that forms derived verbs.

Table 10: Relexive Verbal Affixes added to root Verbs

No	Mao root Verbs	gloss	Derived verbs	gloss	Verbal Affix
1	mar	'catch'	mar-iŋk	'catch for one self'	-iŋk
2	šan	'buy'	Šan-iŋk	'buy for one self'	-iŋk
3	ješk	'call'	ješk-iŋk	'call for one self'	-iŋk
4	s'og	'collect'	s'og-iŋk	'collect for one self'	-iŋk
5	k'op	'cut'	k'op-iŋk	'cut for one self'	-iŋk

The reflexive marker /-iŋk/ does not change its form for person, gender or number. In the reflexive form of a verb, subject agreement is marked by clitic pronouns. For instance, consider the following sentential structures for /šan/ 'buy':

- a. hí-na alkitab hí-Šan-iŋk
2SG-for book 2SG-buy-REFL
"You buy (a) book for yourself."
b. tí-na alkitab ti-Šan-iŋk
1SG-for book buy -REFL.
"I buy (a) book for myself."
c. haw-na alkitab haw-Šan-iŋk

2(DU)-for book 2(DU)-buy -
REFL.
"You buy (a) book for yourself."

Adjectival Affixes (Adjectivizers)

Adjectival Affixes are part of words which are added to different lexical categories to form new derived adjectives. The process of forming new derived adjectives from different lexical category is called adjectivization. In Bambasi Mao, adjectives can be formed from nouns by attaching the suffix /-itə/. Consider the following data:



Table 11: Adjectival Affixes added to base nouns

No	Mao base Noun	gloss	Derived Adjective	gloss	Adjectival Affix
1	Šo:w-e	'rock'	Šo:w-itə	'rocky'	-itə
2	has'-e	'water'	has'-itə	'watery'	-itə
3	a:w-e	'nature'	a:w-itə	'natural'	-itə
4	biŠ-e	'culture'	biŠ-itə	'cultural'	-itə
5	aniz-e	'gold'	aniz-itə	'golden'	-itə
6	kot'-e	'economy'	kot'-itə	'economic'	-itə
7	bed-e	'salt'	bed-itə	'salty'	-itə
8	imbut'-e	'rain'	imbut'-itə	'rainy'	-itə
9	weg-e	'mountain'	wege-itə	'mountainous'	-itə

The above listed data show that nominal bases become adjectivals by suffixing the adjectivizer morpheme /-itə/. For better clarification consider the following sentential Examples:

(4) a. itjop'i-Š weg-itə
k'es' Ethiopia-SBJ mountain-SUFF-country
"Ethiopia is mountainous country"

b. nehaw-Š imbut'-itə ?awe today
SBJ rain SUFF day "Today is rainy day"
Semantically, the suffix /-itə/ in Bambasi Mao is similar to the Amharic adjectivaizer derivational affix /-amma/as in the words /təraramma/ 'mountainous',

/wərk'amma/ 'golden', /Č'əwamma/ 'salty', and /wuhamma/ 'watery' these all are derived from nouns.

4.4. Adverbial Affixes (Adverbializers)

Adverbial affixes provide various kinds of information by added to different class of words.

In Bambasi Mao, the most common types of adverbs are time, frequency and manner adverbs which are derived from nouns, adjectives and verbs respectively. Time adverbials are formed by means of reduplicating nouns that refer to time as presented in table (12) below:

Table 12: Time Adverbial Affixes added to base nouns

No	Mao base Noun	gloss	Derived Adverbs	gloss	Adverbial Affix
1	p'os'-e	'morning'	p'os'pos'-at	'every morning'	-at
2	?aw-e	'day'	?awa?-at	'daily'	-at
3	ans-e	'month'	ansans-at	'monthly'	-at
4	wag-e	'year'	wagwag-at	'yearly'	-at
5	behal-e	'week'	behalabahal-at	'weekly'	-at

As it can be observed from the data in table (12) above, time adverbials are derived by reduplication of base nouns and adding the suffix /-at/at the end of the

reduplicated form. Similarly adverbs of frequency are from by reduplication of base adjectives as shown in table (13) below:



Table 13: Adverbial Frequency Affixes added to base Adjectives

No	Mao base Adj.	gloss	Derived Adverbs	gloss	Adverbial Affix
1	P'ens-e	'usual'	P'ens-ip'ense	'usually'	-ip'ens
2	nis'iŠ-e	'rare'	nis'iŠ-nís'iŠe	'rarely'	-is'iŠ
3	iŠkiw-e	'occasional'	iŠkiw-iŠkiwe	'occasionally'	-iŠkiw
4	s'e:l-e	'final'	s'e:l-s'elite	'finally'	-s'elit
5	te:p'-e	'near'	te:p'-itep'e	'nearly'	-itep'

The above data depicts that all adverbs of frequency are derived from base adjectives and enable to answer question of 'how much or how often? In addition

to the above adverbs, there is also manner adverb which is derived from root verbs by suffixing /-en/ morpheme as mentioned in table (14) below:

Table 14: Manner Adverbial Affixes added to root Verbs

No	Mao root Verbs	gloss	Derived Adverbs	gloss	Adverbial Suffix
1	we:k'	'open'	we:k'-en	openly	-en
2	Šent	'close'	Šent-en	closely	-en
3	k'e:l	'select'	k'e:l-en	selectively	-en
4	go:m	'observe'	go:m-en	observably	-en
5	ga:r	'read'	ga:r-en	readably	-en

The above data states that in Mao language manner adverb is formed from root verbs by adding /-en/ suffix.

The distribution of Affixes (prefixes and suffixes)

As it is mentioned in the statement part of this study, morphology refers to the structure of words through the smallest elements of morphemes meaning, which includes the structure of base words, prefixes, roots and suffixes. The minimal meaningful units that are used to form words are called morphemes. Some of the morphemes that can stand alone as words are called free morphemes. The morphemes that cannot stand alone are called bound morphemes. Bound morphemes come in different varieties. Those are prefixes and suffixes; the former are bound morphemes that come before the base of the word, and the latter bound morphemes that come after

the base. Together, prefixes and suffixes can be grouped together as affixes.

New lexemes that are formed with prefixes and suffixes on a base are often referred to as derived words, and the process by which they are formed as derivation. Lieber (2009:35) expresses that prefixes and suffixes usually have special requirements for the sorts of bases they can attach to. Some of these requirements concern the phonology (sounds) of their bases, and others concern the semantics (meaning) of their bases. In Bambasi Mao Language the distribution of derivational affixes (i.e. numerical prefixes, temporal prefixes, negative marker suffixes and positive marker suffixes) are separately distinguished and described with different examples as follows:

Numerical prefixes

Prefixes are one or more syllables that are added at the beginning of the base



word. Some prefixes have the capacity to change word classes, meaning and form of the base word.

Table 15: Numerical prefixes added to base words

No.	Mao base words	gloss	Numerical form	gloss	Numerical prefixes
1	kúal-e	'syllable'	íŠkí-kúal-e	'mono-syllable'	íŠkí-
2	ke:t'Š-e	'form'	íŠkí- ke:t'Š-e	'uni-form'	íŠkí-
3	khal-e	'lingual'	numbu-khal-e	'bi-lingual'	numbu-
4	s'é:l-e	'lateral'	numbu-s'é:l-e	'bi-lateral'	numbu-
5	ket'íŠ-e	'angle'	te:z- ket'íŠ-e	'tri-angle'	te:z-
6	hadem-e	'functio'	gejesí- hadem-e	'multi-function'	gejesí-

As indicated in the table above, numerical affixes, such as /íŠkí-/ 'mono-', /numbu- 'bi-', /te:z-/ 'tri-' and /gejesí-/ 'multi-'; temporal affixes like, /tiwiŠin-/ 'post-' and /jeniŠ-/ 'pre-' as well as superlative affix /gija-/ 'est' are added at the beginning of lexical words.

Temporal prefixes

Temporal prefixes are time related expressing which are limited in number and they have the semantic notions like 'before', 'now' and 'after'. Consider the following examples:

Table 16: Temporal prefixes added to base words

No.	Mao base words	gloss	Temporal formed	gloss	Temporal prefixes
1	s'og-e	'exam'	P'at'wiŠin- s'og-e	're-exam'	P'at'wiŠin-
2	dilid-e	'graduate'	tiwiŠin-dilid-e	'post-graduate'	tiwiŠin-
3	à:lid-e	'knowledge'	jeniŠ-à:lid-e	'pre-knowledge'	jeniŠ-

As it is shown in table 16, different numerical prefixes and different temporal prefixes are added to different base words. These different prefixes can change the form and meaning of the base words without word class changing.

Negative marker suffixes

Suffixes are one or more syllables that are added at the end of the base word to form a new word. Suffixes can be divided in to two categories (word class maintaining and word class changing).

Table 17: Negative marker suffixes added to base words

No.	Mao base words	gloss	Negative form	gloss	Negative suffix
1	te:z-e	'care'	te:z-íkot'	'care-less'	-íkot'
2	p'at-e	'use'	p'at-íkot'	'use-less'	-íkot'
3	abol-e	'color'	abol-íkot'	'color-less'	-íkot'
4	je:Šm-e	'taste'	je:Šm-íkot'	'taste-less'	-íkot'
5	ju:s'-e	'harm'	ju:s'-íkot'	'harm-less'	-íkot'

As it is shown in table (17) word class changing negative marker suffix /-íkot'/ is added to different base words and can

change word classes the form and meaning of the base words.



Positive marker suffixes:

Table 18: Positive marker suffixes added to base words

No.	Mao base words	gloss	Positive form	gloss	Positive suffix
1	kes'-e	'meaning'	kes'-íkot'te	'meaning-full'	-íkot'te
2	te:z-e	'care'	te:z-íkot'te	'care-full'	-íkot'te
3	P'at-e	'use'	P'at-íkot'te	'use-full'	-íkot'te
4	s'o:w-e	'power'	s'o:w-íkot'te	'powerful'	-íkot'te
5	ge:s'-e	'beauty'	ge:s'-íkot'te	'beautiful'	-íkot'te
6	ju:s'-e	'harm'	ju:s'-íkot'te	'harmful'	-íkot'te

As it is shown in table (29) word class changing positive marker suffix /-íkot'te/ is added to different base words and can change the parts of speech the form and meaning of base words.

4. Findings

From the study, the following derivational Affixes were identified.

Nominalizers (nominal affixes): Nominals are often employed to derive abstract nouns from verbs, adjectives, and nouns. Such abstract nouns can denote actions or results of actions. In Bambasi Mao, abstract nominal affix /-ijə/ is added to base nouns to form derived abstract nouns such as megew-ijə 'friendship', piš-ijə 'boyhood', ine-ijə 'motherhood' ink-ijə 'fatherhood' kan-ijə 'dodgy' and muns'-ijə 'ladyship'. This affix is also added to adjectives to form abstract nouns like, k'o:m-ijə 'oldness', mank'-ijə 'illness', ent'-ijə 'maleness', šaf-ijə 'sharpness', šengil-ijə 'lightness'. Agentive nominal affix /-isə / is added to verbal roots to form derived agentive nouns such as ko:š-isə 'player', hadem-isə 'worker', je:s'-isə 'runner' and pij-isə 'killer'. Manner nominal affix /-ə / is added to root verbs to create new nominal words (i.e. tos-ə 'manner of speaking', ku-ə 'manner of drinking', iš-ə 'manner of sitting', nunk'-ə 'manner of standing', ho-ə 'manner of walking', and s'el-ə 'manner of finishing').

Verbalizers (verbal affixes): Verbalizers are derivational affixes these are hosted with different lexical words to form derived verbs. In Bambas Mao different verbal affixes such as causative, passive, stative and reflexive derivational affixes are added to different lexical words to form new derived verbs. For instance: Causative affix /-sisa/ is added to verbs, adjectives and nouns to convey the notion of one event producing another event or one person causes another person to do something.

Passive affix /-ek'a/ is added to transitive verb roots to form passive verbs. t'uš-ek'a 'be tied', kaš-ek'a 'be closed', bus'-ek'a 'be washed', s'ak-ek'a 'be broken', and k'of-ek'a 'be cut'

Derivational affix /-inke/ is added to base adjectives to form stative verbs such as: ša:l-inke 'become thin', kogon-inke 'become wide', kos'-inke 'become long', t'išin-inke 'become black' and fo:z-inke 'become clean'. Reflexive derivational affix /-iŋk/ is added to verb roots as in: mar-iŋk 'catch for oneself' Šan-iŋk, 'buy for one self' ješk-iŋk, 'call for oneself' and k'op-iŋk 'cut for oneself'.

Adjectivizers (adjectival affixes): Adjectival Affixes are added to different lexical categories to form new derived adjectives. In Bambasi Mao, derivational adjective affix /-ita/ is added to nouns



such as: Šo:w-itə 'rocky', has'-itə 'watery', a:w-itə 'natural', biŠ-itə 'cultural', aniz-itə 'golden', kot'-itə 'economical' and bed-itə 'salty'.

Adverbializers (adverbial affixes): In Bmbasi Mao, the most common types of adverbs are time, frequency and manner adverbs which are derived from nouns, adjectives and verbs respectively. Time adverbials are derived by reduplication of base nouns and adding the suffix /-at/ at the end of the reduplicated form. Examples: p'os'-e 'morning' → p'os'pos'-at 'every morning', ?aw-e 'day' → ?awa?-at 'daily', anse-e 'month', → ansans-at 'monthly'.

Similarly adverbs of frequency are from by reduplication of base adjectives such as:

P'ens-e 'usual' → P'ensip'ense 'usually', nis'iŠ-e 'rare' → nis'iŠ-nis'iŠe 'rarely', iŠkiw-e 'occasion' → iŠkiw-iŠkiwe 'occasionally' and s'e:l-e 'final' → s'e:l -s'elite 'finally'.

Distribution of Affixes (prefixes and suffixes)

Prefixes: Numerical affixes, such as /iŠkí-/ 'mono-', /numbu-/ 'bi-', /te:z-/ 'tri-' and /gejesí-/ 'multi-'; temporal affixes like, /tiwiŠin-/ 'post-' and /jeníŠ-/ 'pre-' as well as superlative affix /gija-/ 'est' are added at the beginning of lexical words.

Suffixes: In Bambasi negative marker suffix, such as /-íkot'/ '-less', and positive marker suffix /-íkot'te/ '-ful' and derivational affixes (i.e. nominal affixes, verbal affixes, adjectival affixes and adverbial affixes except the superlative /gija-/) all of these are suffixes which are added at the end of lexical words.

5. Conclusions

In the process of derivational affixation, different kinds of derived nominals namely: abstract, agentive and manner nominals are formed by attaching different derivational affixes. Nouns and adjectives carry terminal vowel /-e/ and changed into base words. This terminal vowel /-e/ is also omitted when derivational affixes are added on such base words. In the process of verbalization, different kinds of verbal derivation such as, causatives, passives, statives and reflexives are found in the language. Adjectivals are formed from nominals. Adverbials of frequency and time are formed by the complete reduplication of the base adjectives and nouns respectively. Personal pronouns in Mao Language have dual gender function in first, second and second person plurals. Generally, In Bambasi Mao, all Derivational Affixes are class-changing suffixes; they can change the category or class of the word to which they are added.

6. Recommendations

Mao language learners, language users, teachers, curriculum designers, researchers, and Regional Education Bureau of Benishangul Gumuz, should give emphasis to the following recommendations drawn from findings of the study. It should be understood that the terminal vowel /-e/ that exists on nouns and adjectives is omitted when derivational affixes are added. Because of the existence of dual pronouns in the language, meaning should be identified in context. The language syllabus should be designed in the way it helps students to construct new words from different word classes in derivational process. Finally, the researchers believe that further studies should be conducted in



the syntactic and semantic areas of the language independently.

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