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Noun Derivations in Kigiryama Using Aronoff's Word Formation Theory

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Abstract:
Within the broad field of word formation not only in English but also in other languages, derivation has been observed to be a regular and productive morphological process. Common examples of English derivational patterns and suffixes include –ness which when added to an adjective (slow) changes to a noun (slowness). Derivation that occurs in a noun may be called nominalization and it may involve the use of affixes which include common English examples such as employ   employee. However, not much study in derivation has been done in this field particularly in the language in question; Kigiriyama.This paper aimed at analyzing Noun derivation in Kigiryama using Aronoff's Word formation theory and the Extended Level Ordering Hypothesis. Despite the general popularity in current morphological research, it is still an issue of lively debate whether the word is the sole locus of word formation. Shibatani and Kageyama (1988) argue that a new type of noun –verb compound formation is attested in Japanese which involves a sentential structure as its input and presumably takes place in the phonological component. This post syntactic compounding serves to elucidate problems surrounding the delicate and controversial issue of where word formation processes take place. This paper aims at contributing to that debate of whether word formation is word based or morpheme based. This paper while discussing noun derivation within the framework of Aronoff's Word Formation Theory and the Extended level Ordering hypothesis, it also tests the extent to which Aronoff's Word Formation theory (a word based theory) can explain the morphological word formation processes in Kigiryama. This paper was set to address the following objectives:-

- *To identify and describe the noun derivational processes in Kigiryama*
- *To formulate the rules governing these processes*
- *To assess the extent to which Aronoff's Word formation Theory and the Extended Level Ordering Hypothesis can account for the noun derivation processes in Kigiryama.*

The study employed the use of focus group discussions and open ended questions. The focus group discussions (FGDs) comprised of Agiryama males and females aged 18 to 35 years. Data from the FGDs was analyzed transcribed, reviewed and coded to bring meaning and to write the rules of the word formation processes that are stipulated in the objectives of the study. Descriptive statistics were used to analyze the application of the theory. The findings of this study show that affixation process in Kigiryama can to a large extent be accounted for within the Word Formation Theory, while compounding can be accounted for within the Extended Level Ordering Hypothesis, and contrary to predictions of Aronoff that word formation rules operate solely over words this is not the case in Kigiryama, that they can operate over morphemes and groups of words like phrases.(e.g the Kigiryama adjective morpheme –ii-) which means 'wicked' can be used to formulate the abstract noun uwi which means 'wickedness'and the compound word mutumui which means 'a wicked person'.

Keywords: Affixation rules, truncation rules, allormorphy rules, the extended level ordering hypothesis

1. Introduction

Despite the general popularity of the lexical hypothesis in current morphological research, it is still an issue of lively debate whether the lexical component is the sole locus of word formation. Shibatani and Kageyama (1988) argue that a new type of noun –verb compound formation is attested in Japanese which involves a sentential structure as its input and presumably takes places in the phonological component. This post syntactic compounding serves not only to weaken the lexicalist hypothesis but also to elucidate problems surrounding the delicate and controversial issue of where word formation processes take place. The discovery that morphological constraints that had hitherto been believed to characterize lexically formed words also apply to post syntactic compounds leads them to dissociate these constraints from the lexicon and set them up as an independent system of general principles that constrain word formation processes in various components in a global manner. This paper aims at contributing to that debate of whether word formation is word based or morpheme based.

JorgSchmind (2017) presents an introductory survey of the scope of word- formation research. It defines and demarcates the subject-matter of word-formation and explains the basic notions related to the internal structures of complex lexemes and the cross-linguistically important word-formation patterns. Major approaches, analytical and descriptive levels and models in the field of word-formation research are outlined from a bird's eye view. The final section

deals with productivity and lexicalization. This work departs from the current research on issues of theory in that the research under study deals with Aronoff's Word Formation theory as opposed to the major analytical and descriptive models of word formation

2. Methodology

Focus Group Discussion questions elicited words, phrases and utterances and how these words are derived in the language of context. The stages of analyses were as follows:-

- Obtaining the nouns and matching each with their English gloss
- The words were then classified under various types of nouns
- The rules and processes that influence the derivation of nouns in Kigiryama were then identified.
- The theory was then applied and itwas determined if the rules governing the theory are present in Kigiryama.
- Determination if the rules operate over a single word or a morpheme.

3. Results and Discussion

3.1. Word Formation in Generative Grammar

Word formation theory in Generative Grammar was proposed by Aronoff in 1976. The theory has several assumptions, but the most important feature of this theory which would assist this study to analyze noun derivations in Kigiryama is the assumption that, 'In any language there exist a separate component in the grammar which houses word formation rules (WFRs) which operate over words.

The theory explicitly restricts to derivational morphology and considers what can be called, 'productive morphological processes'.

In addition to the assumptions, the theory has the Unitary Base Hypotheses (UBH) which states that: ' Word formation rules operate over a single type of syntactically or semantically defined base. The UBH goes on to state that an affix may attach to members of the category 'abstract noun' or a transitive verb. Within the theory, Aronoff refers to these as a Natural class Nominals [+N].

The theory is governed by the following:-

- Affixation rules
- Truncation rules
- Allormorphy rules.

Therefore, the first task is to determine if the rules governing the theory are present in Kigiryama and determine if they operate over a single base.

3.2. Affixation Rules

Atypical operation of word formation Rule is to take an existing word and add an affix to it.
Consider example 1 below:

Verb Root		Derived Sg Noun	
a. Gita	'to cook'	Mu-git-i	'a cook'
b. Guza	'to sell'	Mu-guz-i	'a seller'
c. Jema	'to tap'	Mu-jem-i'	'a tapper'
d. Shoma	'to read'	Mu-shom-i'	'a reader'
e. Vina	'to dance'	Mu-vin-i'	'a dancer'

Table 1

Note that from example 1 above, the affixation rule in Kigiryama adds an affix 'mu' to the verb to change it into a noun that denotes 'the doer of an action'. From the examples above, the following rule can be formulated:

Given a verb of the form X, one can form the corresponding nominal with the meaning 'who does' X' by prefixing Mu (a class 1 or 2 singular prefix in Kigiryama) and replacing the last segment with /i/. The rule can be represented with the formula:

Mu- X-i

Where mu= the prefix, X =the root of the verb and /i/ =replaces the last vowel.
Another rule which can be used to derive [+ animate] nouns from verbs is; -

Given a verb of the form X, one can form the correspond 'doer noun' which denotes an agent or doer of an action by prefixing [MW] and [A] to class 1/2 singular /plural prefixes and replacing the last vowel /a/ with/i/
See the examples below: -

	Verb		Doer Noun		Plural	Gloss
a.	Laga	'to Kill'	Mw-alag-i	'Killer'	A-lag-i	'killers'
b.	Kola	'to Save'	Mw-okol-i	'a saviour'	A-kol-i	'saviours'
c.	Nula	'to Lift'	Mw-anul-i	'a lifter'	A-nul-i	'lifters'
d.	Nonga	'to spoil'	Mw-anong-i	'spoiler'	A-nong-i	'spoilers'
e.	Gesa	'to wash/clean	Mw-ages-i	'a cleaner'	A-ges-i	'cleaners'

Table 2

Again, the above examples are a result of some phonological processes in Kigiryama. In these examples, we see a case of glide formation, where the bilabial glide /w/ is formed when the high back vowel [u] in the /mu/ is immediately followed by a vowel [u] in the /a/ or /o/. Here;
u-------------- w/ ----------V [a/o]
The rule can be put in words as follows; -
A high back vowel [u] becomes a glide [w] in the environment before an open rounded vowel.
Consider also example 3 below of deriving Abstract Nouns from Adjectives. In Kigiryama, the stem is only given to a word which the proper prefix must be attached.

Adjective Root		Derived Abstract Noun	
a. -dzo	'beautiful'	U- dzo	'beauty'
b. –ii	'wicked'	U- wi	'wickedness'
b. - futi	'short'	U - futi	'shortness'
c. - thune	'red'	U- thune	'redness'
d. -choyo	'mean'	U- choyo	'meanness'
e. -pore	'kind'	U-pore	'kindness'

Table 3

From example 3 above, note that the affixation rule in Kigiryama adds an affix /U/ to the adjective to change it into an abstract noun. However what we also note is that the single base of the operation of affixation rules is not always a word. See example (3a) where the morpheme [-dzo] is not a word.

Therefore, the assumption that WFR must operate over words and not morphemes is disqualified according to the Kigiryama data in example (3a) since as we can see, the affixation rules can sometimes operate over morphemes or stems.

3.3. Allormorphy Rules

Allormorphy rules are rules that apply in cases where other phonological changes have occurred in the base. These changes result in allormorphy (which is often lexically or morphologically governed).
Aronoff proposes that these alterations can be handled in the word completely by means of a special rule called allormorphy rule. Consider example 4 below:

Verb Root		Derived doer Noun	
a. jenga	'to build'	Mu-jenz-i	'a builder'
b. rinda	'to guard'	Mu-rinz-i	'a guard'
c. honda	'to pound'	Mu-honz-i	'a pounder'
d. henda	'to do'	Mu-henz-i	'a doer'
e. enda	'to go'	Mu-enz-i	'one who goes'

Table 4

From example 4 above one can argue that as a result of some phonological processes in Kigiryama, instances of weakening process occurs where;
/d/ or /g/ ⟶ z/ _____ [i]
The above rule can be put in words as: an alveolar stop [d] or a velar stop [g] becomes an alveolar fricative /z/ in the environment before a high front vowel [i].

3.4. Inanimate Nouns or Objects

In animate nouns in Kigiryama can be can be derived from verbs by attaching different types of prefixes to the root. In animate objects or nouns in Kigiryama belong to class 3/4 and 7/8.
The prefix /mu/ for singular nouns and /Mi/ for plurals is attached to the verb roots to derive [- animate] nouns that denote 'the object or thing 'for class 3/4.
See the following examples in 5 below.

Verb Root	Object Singular Noun	Plural Noun
zazig-a 'to play	Mu-zazig-o 'a play'	Mi-zazig-o 'plays'
hasa 'to heal/bless	Mu-has-o 'medicine'	Mi-has-o 'medicines'
pasha 'to sting'	Mu-pash-o 'a sting'	Mi-pash-o ' stings'
songa 'to plait'	Mu-song-o ' hair style	Mi-songo 'hair styles'
kanja 'to roast/maize	Mu-kanj-o 'roasted maize	Mi-kanj-o 'roasted maize

Table 5

The above examples can be used to formulate the following rule;-
Given a verb of the form x one can form the corresponding nominal with the meaning 'the object /thing' by prefixing (class 3 / 4 singular prefix) and replacing the last vowel with an /o/
This rule can be represented by the following formula;
Mu –X-O
Where 'mu'   is the singular prefix.
       X   is the verb root.
        O   replaces the last vowel.
Another rule which can be used to derive in animate nouns from verbs is;-
       Given a verb of the form X, one can form the corresponding nominals with the meaning 'the instrument of X' by prefixing /ki/ and /vi/ (class 7/8 singular / plural) prefixes and replacing the last vowel with an [o] as in the example 6 below:-

Verb Root	Derived Instrument Singular	Plural
fundira 'to cover'	ki-fundir-o 'a bottle top'	Vi-fundir-o 'bottle tops'
kokota 'to announce'	ki-kokoter-o 'microphone'	Vi-kokoter-o 'microphones'
kuna 'to grate'	Ki-kunir-o 'a grater'	Vi kunir-o 'graters
Funika 'to cover'	Ki-finikir-o 'a lid'	Vi-finikir-o 'lids'
Tsundula 'to open'	Ki-tsundulir-o an opener'	Vi-tsundulir-o 'openers'

Table 6

3.5. Truncation Rules
Truncation rules are rules that selectively delete certain morphemes which are adjacent to other morphemes.

$$[\text{Root} + \text{A}]x +   \text{B}]y = 1   \emptyset 3$$

         1   2   3

Where X and Y are major lexical categories.
Truncation according to Crystal (1997: 399) is a term used in phonology to refer to a process of word shortening which is phonologically predictable. Deed (1965) notes that a prefix such as /mu/ in Kigiryama becomes /mw/ before a vowel; and /ki/ becomes /ch/ while /vi/ becomes /zh/. She further points out that the /Mu/ prefix generally becomes /Mw/ before a vowel, but the /w/ may disappear before /o/ and /u/. The prefix /wa/ coalesces with an initial /E/ into the sound /WE/
Consider example 7 below which shows how singular words change to plural in Kigiryama:
7.

Singular	Plural
a. Mwaka ' a year'	Miaka ' years'
b. Mwembe 'a mango tree'	Miembe 'mango trees
c. Mwanga 'a lighter'	Mianga 'lighters'
d. Mwezi ' a month'	Miezi 'months'
e. Mwamba 'a coral'	Miamba 'corals'

Table 7

Similarly, the prefixes /Ki/ and /Vi/ before the vowel /A/ become /Ch/ and Zh/ respectively. Consider the following phrases;
Kirahucharuhe   'a white shoe'
Virahuzharuhe   'white shoes'
Other examples of nouns of the /Ki/ prefix which changes to /ch/ when followed by a vowel. See example 8 below.

Prefix	Root	Singular	Word	Plural
a. [Ki + ao] ⟶	chao	'their'	zhao	'theirs'
b. [Ki + akurya] ⟶	chakurya	'food'	zhakurya	'foods'
c. [Ki + aa] ⟶	chaa	'a cattle pen'	zhaa	'cattle pens'
d. [Ki + eti] ⟶	cheti	'a certificate'	zheti	'certificates'
e. [Ki + ula] ⟶	chula	' a frog'	zhula	'frogs'
f. [Ki + uwo] ⟶	chuwo	' a book'	zhuwo	'books'

Table 8

Notice that in the data in 8, the vowel /i/ in the /ki/ prefix is deleted once it has influenced the palatalization process. The deletion of the vowel reduces redundancy and reduplication of phonetic features.

In addition, the truncation rules also operate on the /lu/ class prefix in Kigiryama where they have the function of patching up the phonological form of words which have been produced by WFRs.
Consider the following Kigiryama examples where a noun beginning with /lu/ prefix, changes to plural by adding /ny/ prefix to the root.

Consider the following Kigiryama examples where a noun beginning with /lu/ prefix, changes to plural by adding /ny/ prefix to the root.

Singular	Gloss	Plural	Gloss
a. Lufu	'a corpse'	Nyufu	'corpses'
b. Lugwe	'a rope'	Nyugwe	' ropes'
c. Luzi	' a thread'	Nyuzi	' threads'
d. Lwambo	'slander'	Nyambo	'slanders'
e. Ludzoga	' a feather'	Nyoga	'feathers'
f.Lwayo	' a foot'	Nyayo	'feet'

Table 9

Another way in which the /lu/ nouns form their plural in Kigiryama is by deletion or dropping of the prefix and remaining with the root word only. Consider example (9b) below:

Singular	Gloss	Plural	Gloss
Lukohe	' eyelash'	Kohe	'eyelashes'
Lukombe	' nail'	Kombe	' nails'
Lukolo	' a clan'	Kolo	'clans'
Lushero	' a broom	Shero	'brooms'
Lutsaga	' a granary'	Tsaga	'Granaries'
Lufudzo	' a stirring rod'	Fudzo	'stirring rods'

Table 10

Notice how the examples in (9b) form their plurals by completely dropping the prefix and remaining with the root word only.

The essence of Aronoff's model is that WFRs in their productive or synthetic function create new words by adding morphemes to the old words. Moreover, in their function as redundancy rules they serve to analyze existing words into their component morphemes. This means that the morpheme has an important role to play in this theory, however, the notion of 'morpheme' according to Aronoff does not include the notion 'exponent of inflectional category'. Inflectional morphology in Aronoff's theory is a property part of syntax and categories, such as 'plural' 'genitive case' or 'subjunctive' which are all morph syntactic categories and cannot therefore be regarded as morphemes.

Aronoff offers some arguments for word-based morphology. The most direct justification is simply that the productive processes of derivational morphology do not seem to operate over anything other than words. Other types of word formation processes such as compounding are not so productive in any language according to Aronoff.

The most powerful support for word-based morphology comes from considerations of meaning. In traditional morphological theory, the morpheme was the smallest unit of meaning or in different terms 'the minimal sign'. However, it seems clear that morphemes cannot constitute the 'minimal sign' because sometimes they do not have any meaning. Aronoff further strengthens the argument on meaningless morphemes by pointing out that they are fairly widespread in the English lexicon. However, in many languages, the roots constitute the basis of word formation rather than the words themselves. This is particularly true of inflecting languages. Scalise (1984) suggests that we should understand the term 'word' to mean 'completed word minus its additions'.

For instance, in Kigiryama, we add an affix -ni- to a verb root to give an aspectual meaning of roughly 'to do regularly'. For example, in the expression, *'Atu-ni-kugita'* meaning, 'people cook' or are in the habit of cooking. This

expression is formed from the verb *'Gita'* which means 'to cook'. Notice that here we are adding the derivational prefix -ni- to a root (which is a stem). Hence, this type of morphology is typical of Kigiryama where the habitual action is expressed by the infinitive preceded by -ni-. This is for all persons and animals.

The compounding process of Kigiryama is likewise over roots (or occasionally stems). Moreover even in Kigiryama, where the basic form of a word is typically uninflected root; we find cases such as (mutumui) 'wicked person'. which appears to have been derived from the nonexistent word (-ii-). Such examples suggest that word formation can be defined over units smaller than the word, (i.e. the prefix plus the morpheme -ii-).

On the other hand, if we take certain varieties of Kigiryama compounding into account, it is clear that word formation processes can include phrases such as, *mutuwaakili* referring to 'a sensible man'.

One major question that Aronoff's theory does not address is what constitutes a 'word'. Many of the discussions concerning the definition of word hood were centered on compounds. The problem of a word hood gives rise to another question, namely the status of the distinction between inflection, derivation and compounding.

Aronoff totally rejects the assumption that inflection and derivation be lumped together as the same process, namely affixation; he instead places derivation and inflection in totally disjoint components of grammar. This theory in turn means that it does not seem to adequately handle the morphological process of deriving Kigiryama compounds keeping in mind that Kigiryama has merger of derivations and inflections. Consequently, the analysis of compounding in Kigiryamanominals should be done within the theoretical framework of the Extended Level Ordering Hypothesis.

3.6. The Extended Level Ordering Hypothesis

3.6.1. Introduction

According to Spencer (1991) an important feature of any generative Grammar is the use of extrinsic rule ordering. However, one argument against extrinsic ordering is that it is difficult to see how a child can learn the order the rules are supposed to apply. One way of stipulating the ordering is to split the grammar into well-defined and well-motivated blocks, or components and establish an ordering between the blocks.

Spencer (1991) further posits that this strategy works perfectly whenever all the rules of the earlier block may or must precede all those of the later block. If the relative ordering can be easily related to some other salient property of the grammar, then this type of ordering will not pose a learn ability problem.

Putting sets rules or processes together in the same block might be expected to correlate with other sets of similarities between those processes. This idea was also supported by Siegel (1979) to capture certain commonalities in the phonological and morphological behavior of affixes in English. Spencer (1991) draws a distinction between two sorts of affixes associated with different boundaries;
[+] those that occur at morpheme boundary and
[#] those that occur at word boundaries
Of these two kinds, [+] morpheme boundary affixes and the [#] word boundary affixes are the most important for morphological theory. Siegel (1979) uses the terms class I and class II respectively to refer to these affixes. She further goes on to show that they can be distinguished in terms of their phonological and morphological properties.
Examples of both class I and class II affixes in English include;
   Class I prefixes: re+, con+, det+, sub+, pre+, in+, etc.
   Class I suffixes: +ion, +ity, +y, +al, +ic, +ive, etc.
   Class II prefixes: re#
   Class II suffixes: # ness

Phonology distinguishes the two classes of affixes in a variety of ways. The class I affixes trigger and undergo phonological processes while the class II affixes are phonologically inert. Secondly, class I affixes may cause stress shift in the base to which it attaches while class II affixes never do this (they are stress neutral). Thirdly, class I affixes may trigger other non-automatic phonological processes i.e., processes that depend entirely on the morphemes which are involved. Class II affixes on the other hand may only trigger automatic processes i.e., those which apply irrespective of the morphological structure of the word. The boxes which are often referred to as levels are embodied in Siegel (1979) dissertations known as the level ordering Hypothesis.

3.7. The Extended Level Ordering Hypothesis

Allen (1979) observed that when words are joined to form compound words such as *house boat,* the components of the compound behave rather like class II affixes, in that they fail either to condition or to undergo non-automatic phonological rules.
Moreover, such compounds do not seem to accept class I or class II affixes; for instance, *passion fruit* but not *compassion fruit*.
Similarly, compounds do not accept regular infections e.g.
10. [house + boat]s in English
[ma [gongolo + zimu]] in Kigiyama
The above examples can be explained if we assume that the compounding (of words) takes place after class II affixation but before regular inflection. This model was known as the Extended Level Ordering Hypothesis and it followed the following steps.

- Level I (+ affixation)
- Stress rules
- Level II (# affixation)
- Level III (compounding)
- Level IV (regular inflections

Therefore, the main task in this study is to determine whether the class I affixation takes place before the class II affixation in Kigiryama and hence conclude that class II affixes are therefore external to the class I affixes (Affix Ordering Generalization).

The Affix Order Generalization as named by Selkirk (1982) was a way of showing how two types of affixes differ morphologically and it states that;

'The class I affixes appear nearer to the root than the class II affixes when there are members of both classes in a word'

Consider the following Kigiryama examples;

11) [Mu + risa] + [wa] + [mbuzi]   ⟶ [murisawambuzi]

In example (11), to derive *'murisawambuzi'*(Feeder of goats), we first join the lexeme *'risa'* which means 'to feed' with the nominalizing prefix /mu/. This takes place at Level I (+affixation), to form '*murisa*' which means 'feeder'. Then we adjoin '*murisa*' to the lexeme '*wa*' (of) and finally to '*mbuzi*' (goat). This happens at Level II and III in order of the hypothesis. At level III.the compound word is properly derived. Note that the lexeme '*risa*' (feed) stands out as the head lexeme in what the overall meaning of this compounding is dependent on.

Since compounds do not accept regular inflections such as those used when forming plurals, what then happens in the process of forming a compound word into plural? This is explained if we assume that compounding of words takes place after class II affixation and before inflection. However, this extended version encounters problems especially in instances in which regular inflection seems to occur both before and after compounding. Consider example 12 below;

Singular Compound	Gloss	Plural Compound	Gloss
Murisawambuzi	Feeder of goats	A-risa a mbuzi	Feeders of goats
Mutuwaakili	A sensible person	A-tu a akili	Sensible people
Charo cha Nairobi	A journey to Nairobi	Zharozha Nairobi	Journeys to Nairobi
Kisima cha kufwaha	A suitable well	Visimazhakufwaha	Suitable wells
Kitanda cha baha	A better bed	Vitandazhabaha	Better beds

Table 11

The examples in 12 above reveal that regular inflections seem to occur before compounding. Spencer (1991) argues that such cases have to be handled by means of a 'loop' in lexical phonology. To this we can add cases in which an entire phrase is compounded. This happens regularly with African languages and to some extent in English. A good example in English is *Car-of- the- month competition*.

Similarly, Fabb (1988) found out that there are four group of suffixes. One group attaches to any word of any form of the right category. These he argued are genuinely productive free suffixes such as the deverbal (-er) such as in the word *driver*. Members of the second group fail to attach to a word which is already suffixed, while group three consists of suffixes which attach either to a bare unsuffixed stem or to just one other particular suffix. The fourth group consists of doubly affixed words.

Fabb (1988) further posits that we can account for these cases by assuming that the outer suffix is permitted to attach not only to words but also to another suffix. Therefore, the meaning of the doubly affixed word is derived from the meaning of the affixes. In conclusion many of the words formed in Kigiryama cannot be the result of any regular word formation process. Instead, it is a result of the systematic connection that links the existing, permanently stored words in any language.

4. Summary

It has emerged that Aronoff's word formation in generative grammar can adequately account for the affixation processes in Kigiryama; however, it fails to handle the morphological process of deriving compounds. The failure of the choice model of analysis is due to the fact that theory is partly syntactic and ignores the complex morphology of the language under investigation.

On the other hand, the Extended Level Ordering Hypothesis can only handle Kigiryama compounds in as far as they are simple compounds. However, in cases where an entire phrase is to be compounded; the theory seems to fail again due to the complex morphology of Kigiryama.

5. Summary and Findings

This study has been an attempt to describe the morphological and phonological processes that are important in the derivation of Kigiryamanominals. This description was done within the theoretical framework of Aronoff's Word Formation Grammar and the Extended Level Ordering Hypothesis.

The main focus of this study, however, was the morphological processes that derive nouns in Kigiryama. The study has indeed demonstrated that the morphological process of affixation and compound are pre-requisites for the derivation, and compound are pre requisites for the derivation of new words with new meaning. Affixation in Generative Grammar proved to be the most productive process of deriving nouns in Kigiryama. This was done by attaching prefixes to

the root word to derive a new lexeme with a new meaning. Within the confines of Word-Formation rules, prefixation accounted for new lexemes formed from different grammatical classes and those that were formed from the same grammatical class.

The study further confirmed that compounding, though not as productive as affixation is a process of deriving nouns in Kigiryama nouns too. The compound nouns derived in Kigiryama are in the form of endocentric compounds, exocentric compounds, oppositional and copulative compounds. These compound nouns take the form of two free morphemes being put together to derive a new lexeme with a new meaning.

Of great interest to this investigation was to test the extent to which Aronoff's Word Formation theory in Generative Grammar and Extended Level Ordering Hypothesis account for Affixation and compounding as processes of deriving Kigiryama nouns. The study has proved that Noun derivation in Kigiryama could be achieved through the addition of /mu/ and a change in the final vowel and through compounding by joining two or more free morphemes to form a new lexeme.

The study therefore established that derivation of Kigiryamanominals is a morphophonological process that involves both bound and free morphemes. Furthermore, Aronoff's Word Formation in Generative Grammar proved an adequate descriptive tool for the analysis of affixation.

The Extended Level Ordering Hypothesis on the other hand could to some extent account for the compounding in Kigiryama in as far as the simple compounds were concerned. However, in places where we had complex or phrasal compounds the Extended Level Ordering Hypothesis did not prove such an adequate tool.

6. Recommendations

Our study set out invest the morphological processes that are fundamental in the derivation of Kigiryama nouns. To this extent our objectives were achieved and our hypothesis proven.

The findings of this study will make a basis for a morphosyntactic analysis of Kigiryama. Similarly, the findings have shown that it is with semantics and syntax that we should really begin if our study is to have results more interesting than a list of patterns.

This study is however not conclusive, it is obvious how much research there is still to be done in word formation and why it should be the 'deepest most secret part of language'.

Word Formation seems to offer opportunity for valuable and fruitful linguistic research, and a challenge which more and more linguists should take up.

7. References

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