

Kimeru Word-Formation Processes: An Onomasiological Approach

By:

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Declarations

I declare that this is my original work and it has never been submitted in any other institution of higher learning for examination.

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Dedication

This research project is dedicated to my family, both nuclear and extended.

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OPERATIONAL DEFINITIONS OF TERMS

1. **Word-formation:** In this study, the term refers to the generation of new “actual” (as opposed to “possible”) complex naming units which are analysable both formally and semantically.
2. **Naming unit:** According to the Onomasiological Theory of Word-Formation, the term ‘naming unit’ is used to mean a complex unit generated by the Word-Formation Component. It stands for a complex lexeme or complex word.
3. **Actual naming unit:** A new naming unit coined to satisfy a real-life linguistic demand (naming need) of a speech community to give a name to a new ‘object’. The new coinage has to be a well-formed linguistic sign generated by the productive word-formation rules. It is also referred to as ‘existing/occurring word’.
4. **Object:** In this study, the term ‘object’ refers to any extra-linguistic reality, whether concrete or abstract, e.g., person, thing, animal, idea/concept, etc., that requires a name.
5. **Speech community:** The term has been used here to refer not necessarily to the whole community, which is the ordinary sense of the word, but to one or more speakers seen as member(s) of a society or social group faced with the need to coin a name for an extra-linguistic reality (“object”). It implies the “first-contact” user(s) of a new coinage (see Stekauer 2001).
6. **Productivity:** In this study, the term ‘productivity’ has also been given a slightly different meaning from the common one. Here, it refers to the ability of a cluster of Word-Formation Types/Word-Formation Rules to fully respond to the naming needs of a speech community within the cluster’s conceptual-semantic field of operation.
7. **Onomasiological:** In this study, the word is used to mean ‘of or having to do with the process of expressing, i.e., naming a given “object” that needs to be named’, according to the OT theory naming procedure. Hence, for example, the term ‘onomasiological approach’ (to word-formation) is used for this study to imply an approach in which the process of word-formation is generally taken as a naming exercise.
8. **Onomasiological base:** The seme denoting the general class, gender, species, etc., of the object to be named.
9. **Onomasiological mark:** The seme that specifies the ‘onomasiological base’.
10. **Onomasiological connective:** The logical-semantic relations between the ‘onomasiological base’ and the ‘onomasiological mark’.
11. **Onomasiological structure:** The structure that constitutes the conceptual basis of the process of naming in the Onomasiological Theory of word-formation.

12. **SUBSTANCE, ACTION, QUALITY and CONCOMITANT CIRCUMSTANCE:** The four most general conceptual categories into which the object being named may be classified at the Conceptual Level of the naming process in the Onomasiological Theory of Word-formation (see Stekauer 2001).
13. **Form-to-Meaning-Assignment Principle (FMAP):** The principle that governs the assignment of linguistic units to the semes of the onomasiological structure at the Onomatological Level. It is also, in the OT, referred to as Morpheme-to-Seme-Assignment Principle (MSAP).
14. **Determining Constituent:** One of the two elements that may constitute the ‘onomasiological mark’, the one that acts like a modifier to the other, i.e. to the ‘determined constituent’.
15. **Determined constituent:** The element of the ‘onomasiological mark’ that is modified by the ‘determining constituent’.
16. **Specifying element:** One of the two elements that the ‘determining constituent’ may have that acts as the modifier to the ‘specified element’.
17. **Specified element:** The element of the ‘determining constituent’ that is modified by the ‘specified element’.
18. **Word-Formation Type (WFT):** It refers to the word-formation rule (WFR).

LIST OF ACRONYMS AND ABBREVIATIONS

OT: Onomasiological Theory (of word-formation) or Onomasiological Type (depending on the context).

NU: Naming Unit

WF: Word-Formation

WFR: Word-Formation Rules (= WF Types)

WFT: Word-Formation Types (= WFRs)

WFC: Word-Formation Component

LC: Lexical Component

SC: Syntactic Component

FMAP: Form-to-Meaning-Assignment Principle

MSAP: Morpheme-to-Seme-Assignment Principle

OT 1: Onomasiological Type 1

OT 2: Onomasiological Type 2

OT 3: Onomasiological Type 3

OT 4: Onomasiological Type 4

CCS: Complete Complex Structure (= OT1)

ICSL: Incomplete Complex Structure L, where “L” refers to the expressed left-hand constituent

ICSR: Incomplete Complex Structure R, where “R” refers to the expressed right-hand constituent

SS: Simple Structure (= OT 4)

Obj = object

Act = action

Ag = agent

Instr = instrument

Fact = factitive.

ABSTRACT

This research project focuses on the Kimeru word-formation processes within an onomasiological theoretical framework. It endeavours to: identify the word-formation processes in Kimeru Language; investigate to what extent the individual word-formation rules or processes in Kimeru can be productive; find out whether there are productive syntactically-based word-formation processes in Kimeru; and account for the research data using an onomasiological theory of word-formation. To these ends, an appropriate methodology was adopted: Purposive sampling was used to select a representative sample of ten informants, while carefully drawing two informants from each of the five villages covering our area of research. The selected informants were then used to assist in the generation of data and in counter-checking the data given by each other to ensure correctness and authenticity, as well as in the pronunciation of both the words and the affixes in the data during participant observation sessions. The rest of the data was generated through the introspective method. The collected data was then written down, transcribed, classified, tabulated and analysed morphologically. In the process, intuitions were also made, on the basis of native-speaker knowledge, about the structure of Kimeru words as well as about the correctness of the new word coinages. Thereafter, an attempt was made to explain the data from an onomasiological theoretical angle. After the analysis of the research data, it was found out that four different kinds of onomasiological structures are employed by Kimeru speakers to generate new naming units, and that the specific onomasiological structure (onomasiological type) employed in each case depends on the conceptual-semantic field to which the NU to be coined will belong as well as the pre-requisite conceptual analysis of the “object” to be named. Those Onomasiological Types (OTs) form the bases for the more specific Word-Formation Rules (WFRs) that operate within specific conceptual-semantic fields in the process of coining new NUs in the respective fields as the need arises. The Onomasiological Types (OTs) identified were OT I, OT II, OT III and OT IV, and they were found to complement each other in clusters that proved to be 100% productive and regular within their respective fields of operation. Furthermore, the findings point to the presence of some syntactically-based word-formation processes in Kimeru, which appear to be productive though yielding irregular structures.

CHAPTER ONE

1.0 INTRODUCTION

This introductory chapter gives an outline of the background information regarding the language under study, that is, the Kimeru language, indicating the varieties of the language as identified by different scholars as well as the native speakers of the language, and their geographical location. The chapter also carries the following: a statement of the problem under investigation; the objectives of our research; the hypotheses guiding the study; the scope and limitations of the research; the rationale for the research; the theoretical framework; relevant literature review and the research methodology.

1.1 BACKGROUND TO THE KIMERU LANGUAGE

Kimeru is a Bantu language spoken by the Ameru people, who mostly occupy the Meru County in Kenya. Kimeru has many varieties, but scholars have differed on the exact number of dialects. Bennett (1981), for example, lists 6 dialects: Chuka, Egoji, Mwimbi, Imenti, Tigania and Tharaka; while Marete (1981) identifies 5 dialects of Kimeru which he regards as regional varieties. These are Ki-tharaka, Gi-tigania, Gichuka, Ki-mwimbi and Ki-imentu. Mberia, K. (1981), on the other hand, picks out Ki-tharaka and convincingly argues for its identity as a distinct language separate from Kimeru.

However, according to the more recent studies, for example, Gacunku (2005), up to 8 dialects can be isolated from Kimeru. These are: Ki-igembe, Gi-tigania, Gi-chuka, Ki-muthambi, Ki-mwimbi, Ki-igoji, Ki-imentu and Ki-miutine.

1.2 PROBLEM STATEMENT

Many studies have been carried out on the subject of word-formation by different scholars using different theories, with the mainstream of these theories of word-formation being modelled on Generative Grammar. For example, Aronoff (1976) proposes that a word-formation component be added to the Lexicon of Generative Grammar, while Bauer (1983) equates the word-formation process with the syntactic process of sentence formation or generation. Another scholar, Pavol Stekauer,(1998, 2001), proposes an onomasiological approach to the study of Word-Formation,

introducing the so-called Onomasiological Theory of Word-Formation, in which he asserts that word-formation processes or rules are 100% productive. Moreover, scholars have adopted different approaches in their study of word-formation, with some using a synchronic approach, others using a diachronic approach while, still, others use a combination of the two.

Needless to say, conflicting opinions have arisen on key theoretical issues hence, as yet, there is no consensus on, say, which is the best and most applicable theory of word-formation; or on whether word-formation is based on analogy or on productivity. Probably, this is partly because the studies have not been done on a sufficient number of natural languages. Most of the linguists who have studied word-formation, especially in the recent years, have concentrated on only the English word-formation. For example, Marchand (1960), Adams (1973), Bauer (1983), William O'Grady & Guzman (1996), Stekauer (2001), Yule (2006), and so on, have all used data from the English language. However, it is only after more data, from a wider range of natural languages, have been analysed when the controversial theoretical issues in word-formation can be resolved.

Meanwhile, new lexemes have continued and still continue to come up in the Kimeru language, just like in any other natural language, as the need arises: But how do they come into being? What processes are involved in their formation? It is in view of these particular questions, considered against the background revealed in the immediately preceding two paragraphs, that we find the need to study Kimeru language word-formation, which, to the best of our knowledge, has so far not been studied using any of the available theories of word-formation.

More specifically, the research problem that motivates this study consists in investigating the processes that account for the production of new lexemes in Kimeru and finding out whether or not the word-formation processes are one hundred percent productive and regular, as Stekauer (2001:7) asserts with regard to word-formation processes in natural languages. In his Onomasiological Theory of word-formation, Stekauer also argues that there are no productive syntactically-based word-formation processes in natural languages (Stekauer 2001:6). But since Stekauer's research is based on English data, it would also be interesting for us to find out whether or not

that is true of Kimeru word-formation, bearing in mind that Kimeru is a natural language as well.

1.3 OBJECTIVES OF THE RESEARCH

The main objectives of this research will be:

1. To identify the word-formation processes in Kimeru Language;
2. To investigate to what extent the individual word-formation rules or processes in Kimeru can be productive;
3. To find out whether there are productive syntactically-based word-formation processes in Kimeru; and
4. To account for the research data using an onomasiological theory of word-formation.

1.4 HYPOTHESES

The following hypotheses will guide our study:

1. Different new words in Kimeru are formed by different word-formation processes;
2. The individual word-formation processes (word-formation types) in Kimeru language are one hundred percent productive;
3. There are productive syntactically-based word-formation processes in Kimeru language;
4. The data on the word-formation processes of Kimeru language can be explained using the Onomasiological Theory of Word-Formation.

1.5 SCOPE OF THE RESEARCH AND LIMITATION

This research will cover only the Kimeru language word-formation processes that fall within the framework of an onomasiological theory of word-formation, and seek to account for the research data using only the Onomasiological Theory of Word-formation. In the process, we will also highlight some morphophonological processes that will be relevant to Kimeru word-formation, but we will not enter into the full depth of Kimeru morphophonemics. In the same vein, we will also mention some

aspects of Kimeru morpho-syntax that will be directly relevant to Kimeru word-formation without getting into more detail.

Moreover, the data for this research will be collected from only the Ki-igembe dialect of Kimeru, and due to the limitation of time, space and other resources, the data collected will be only as much as would be sufficient to achieve the objectives of this research.

1.6 RATIONALE/JUSTIFICATION FOR THE STUDY

It is hoped that the findings of this study will enhance scholarly understanding of the internal structure of Kimeru language and, therefore, help in the writing and teaching of Kimeru grammar.

The findings can also be used by Comparative Linguists as a source of synchronic data on the morphology of Kiigembe dialect of Kimeru for comparison with data from the same language at other stages of the language's development, or even for comparison with other different languages. Scholars doing dialectal studies will also benefit from this research as they can use the data from Kiigembe to make comparisons with data from the other dialects of Kimeru not covered by this study.

Moreover, the findings of this research will hopefully make a contribution to the scholarly debate on word-formation, and, at least generally, contribute to the development of linguistic theory. Particularly, the findings of this research will help test, at least in a small way, the adequacy of the Onomasiological Theory of Word-Formation (OT) as a model of morphological description. For example, the study will help prove or disapprove, albeit only in relation to Kimeru, the theory's claim that all word-formation processes are one hundred percent productive.

Lastly, this study, being the first study of Kimeru word-formation done from an onomasiological perspective, should stimulate and facilitate further research in the language either in the same area of word-formation or in other aspects of Kimeru morphology.

1.7 THEORETICAL FRAMEWORK

This study will be undertaken in the framework of the Onomasiological Theory of Word-Formation proposed by Stekauer (2001). Stekauer developed the theory mainly between 1998 and 2001 as a reaction to the predominant formalism of generative morphology (Stekauer 2001:1).

Although Stekauer operationalises the theory using English word-formation, the theory could also be used to account for word-formation in other languages since its fundamental principles relate not only to English but also to the universal phenomenon of word-formation in all natural languages. Furthermore, the theory has several advantages over the other available theories of word-formation such as the generative theories of WF. The advantages include the following (see Grzega 2002, Stekauer 2001):

To begin with, the theory has a synthetic rather than an analytic model, i.e., it takes WF as being about composing words as opposed to decomposing, which is the case with the other WF theories; and takes into account the cognitive processes involved in WF. It also treats WF on a par with other language system components, giving it the status of an independent full-fledged component, and recognises the role of the speaker and the speech community in the WF process. Again, the theory is not limited by the Binary Branching Hypothesis, and it sub-categorises NUs not on the basis of the form, but on the interaction of elements and phases before the final form is reached. It, therefore, deviates from the form-oriented notion of the 'head' into a concept-oriented one. Furthermore, this particular theory puts the generation of all NUs on a uniform basis, doing away with the traditional classification of WF processes hence forestalling the potential problems associated with the different versions of the Level Ordering Hypothesis; and does not confine the concept of 'productivity' in WF to only affixation, but rather allows for relating various Word-Formation Types of any structural composition. Last but not least, the theory consistently and uniformly treats the morpheme as a bilateral unit, not like the generative theories of WF that sometimes make it appear like an ambiguous unit of language which is at one time a meaningful unit while at other times it is merely a pure form.

Below (1.7.1-3) is an outline of the theory.

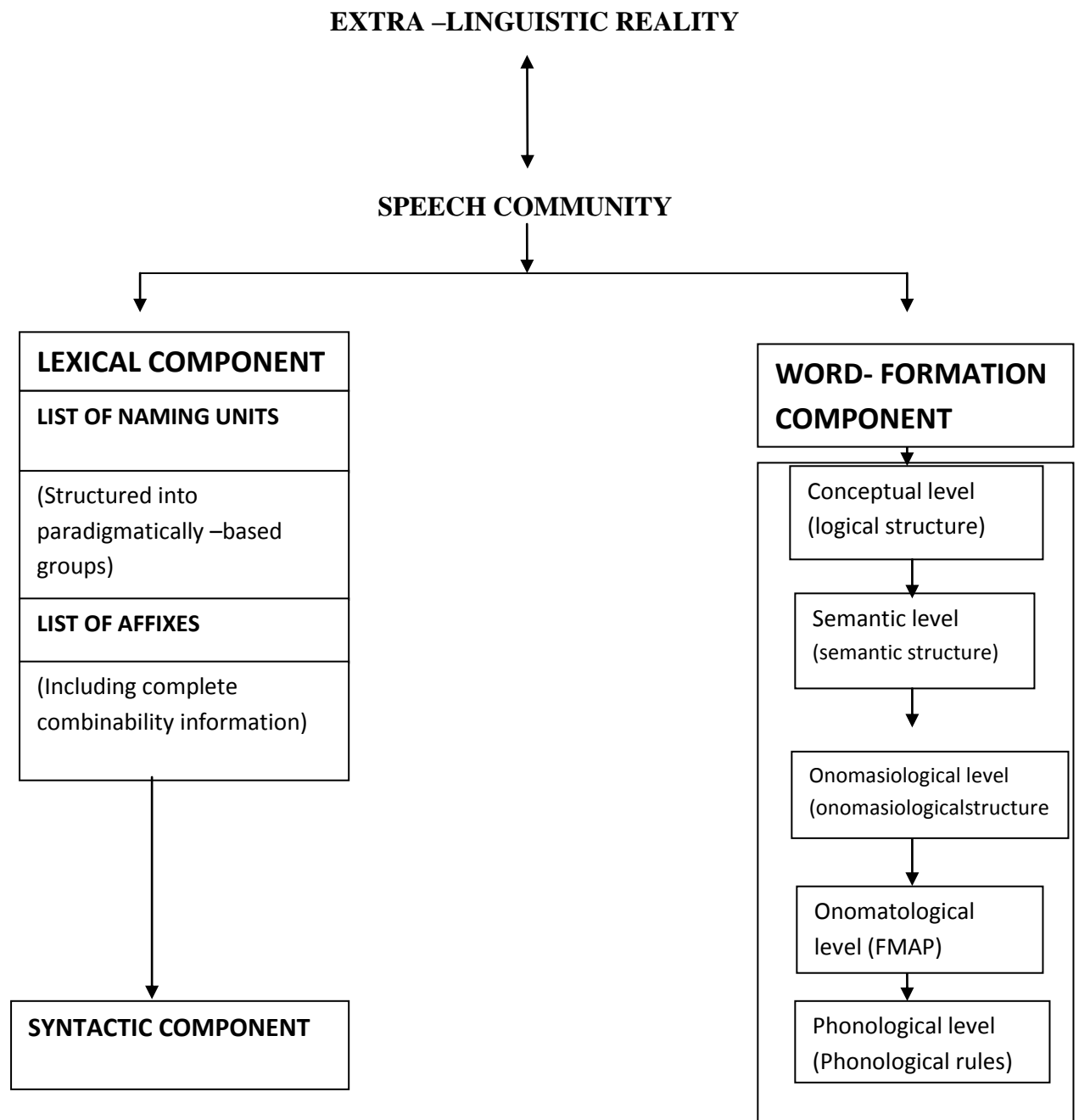
1.7.1 The Onomasiological Theory of Word- Formation (OT)

The following are the main tenets of an Onomasiological theory of word-formation according to Stekauer, P. (2001):

First, the Onomasiological Theory conceives of word-formation as an independent component in the system of linguistic components. This is captured in the model below:

Figure 1.1: Word-Formation Component and its relation to other linguistic components

Source: Stekauer, P. 2001:5. Fundamental Principles of an Onomasiological Theory of English Word-formation.



According to the above model, there is a direct relation between the Word-Formation and the Lexical Components, on the one hand, and between the extra-linguistic reality and the naming demands of a speech community, on the other. Each naming process responds to a specific demand of a speech community for assigning a name to an extra-linguistic object. The two levels are, therefore, mutually interconnected. The notion of “speech community” is technically used by Pavol to refer to the one or more members (speaker/s) of a speech community who is/are faced with the need to coin a new name for some new extra-linguistic reality.

According to Stekauer, the naming process starts with the potential new-word coiner scanning the Lexical Component for the needed naming unit. The scanning then determines the next steps to be taken by the potential coiner: either a completely new naming unit is coined by taking the path of the Word-Formation Component; or, if a naming unit is found in the Lexical Component which can serve as a basis for semantic formation, it is the path of the Lexical Component that will be followed.

The Word-Formation Component is interconnected with the Lexical Component, but separated from the Syntactic Component, with the only link between word-formation and syntax being through the Lexical Component. This implies that new naming units are not generated from syntactic structures. Rather, the theory maintains that word-formation is about naming units coined as signs and analyzed as units existing in paradigmatic relations in the vocabulary (Pavol, S. 2001:6). Therefore, all the new words formed in the Word-Formation component are passed to the Lexical Component together with their morphosyntactic features as per the paradigms they belong to.

The second principle of the Onomasiological Theory is the postulation that all the new naming units formed in the Word-Formation Component are coined by productive and regular Word-Formation Rules (also called Word-Formation Types), and so each immediate output of a Word-Formation Rule is predictable. It must be noted that the term ‘productivity’ in this context is understood as the ability of a language to fully respond to naming needs of a given speech community (Pavol, S. 2001:7). It is hence defined as a cluster of Word-Formation Types satisfying the naming needs in a specific conceptual-semantic field, for example, that of naming units representing Agents or Instruments, and each such cluster is 100% productive.

Thus, for example, the cluster of Word-Formation Types generating Agent nouns in Kimeru language includes compounding, *as in* “muwati-mwana” (babysitter), and prefixation, *as in* “mu-thomi” (reader) and “ki-eeri” (broom).

Thirdly, the theory posits that all naming units are coined on the basis of the material already available in the Lexicon (Lexical Component) of the language, and that no naming unit can be generated from units smaller than the morpheme, with the morpheme being defined traditionally as the minimal bilateral sign having its own specific form and specific meaning.

Fourthly, the theory also asserts that naming units are bilateral signs, including meaning and the form. Therefore, there are no naming units in the Word-Formation Component that are pure forms (formemes).

The fifth principle of the theory is that it is speech-community-oriented. That is, it only describes word-formation processes resulting from the naming needs of a given speech community and does not rest on the intuition of a native speaker. Consequently, it takes into account only actual naming units; therefore, the notion of “possible word” does not arise, thus ensuring that the word-formation rules do not over-generate unwanted or nonsensical words.

Finally, the sixth principle is that the theory is based on the “word-formation base”, which is defined as a bilateral unit introduced by the Form-to-Meaning-Assignment Principle into a new naming unit in accordance with the conceptual analysis and the subsequent semantic analysis of the object to be named (Pavol,S. 2001:10). According to Pavol, the word-formation base cannot be a syntactic phrase or a unit smaller than morpheme. The Word-Formation Rules make use of bilateral units stored in the Lexical Component, and these bilateral units are mostly, though not always, morphosyntactically-unformed stems.

Moreover, the theory proposes the following steps to be followed (1.7.2 below) as its general naming procedure:

1.7.2 The OT General Naming Procedure

The following is the general naming procedure as conceived under the Onomasiological Theory of word-formation:

Firstly, the “object”, or a class of objects, to be named is analysed at the Conceptual Level and conceptually categorized in the most general way using the following conceptual categories: (SUBSTANCE, ACTION [with internal subdivision into ACTION PROPER, PROCESS, and STATE], QUALITY, and CONCOMITANT CIRCUMSTANCE [for example, that of Place, Time, Manner, etc.]) (Stekauer 2001:11).

Secondly, at the Semantic Level, individual logical predicates of the conceptual level are captured by semes (semantic components or “Semantic markers”) and these semantic components are structured, thus forming the semantic structure of the linguistic sign.

Thirdly, at the Onomasiological Level, one of the semes is selected to function as an ‘onomasiological base’ denoting a class, gender, species, etc., to which the object belongs, and another one is selected to function as an ‘onomasiological mark’ which specifies the base. The mark can be divided into the ‘determining constituent’ (which sometimes distinguishes the ‘specifying’ and the ‘specified’ elements) and the ‘determined constituent’. Both base and mark represent one of the general conceptual categories. Moreover, they are connected by the so-called ‘onomasiological connective’ which represents the logical-semantic relations between the onomasiological base and the onomasiological mark. The base, the mark, and the onomasiological connective constitute the onomasiological structure which represents the conceptual basis of the process of naming.

Fourthly, at the Onomatological Level, the onomasiological structure is assigned linguistic units based on the Form-to-Meaning-Assignment Principle (FMAP), also called Morpheme-to-Seme-Assignment Principle – MSAP (Grzega, J. 2002). Specifically, individual members of the onomasiological structure, that is, selected semes, are linguistically expressed by word-formation bases, which could be full naming units or affixes (concrete morphemes), stored in the Lexical Component. Then, to enable the coiner decide on the final form of a naming unit, the particular kind of Onomasiological Structure to be employed in the naming act is chosen from among five possible Onomasiological Types, i.e, OT1, OT2, OT3, OT4 and OT5.

The OT1 structure arises where all the three fundamental constituents of the onomasiological structure are included in the new naming unit, hence it is also called

Complete Complex Structure (CCS), and the naming units coined according to this onomasiological type are labelled as CCS naming units. The OT2, also called Incomplete Complex Structure R (ICSR), results when the ‘determining constituent’ of the onomasiological structure is left unexpressed, and the naming units based on this structure are referred to as ICSR naming units, where letter R refers to the expressed right-hand constituent, i.e., the ‘determined constituent’ of the onomasiological mark (in case of languages that place the ‘determined constituent’ element to the right of the ‘determining constituent’ element, e.g, English). The OT3 includes the cases in which the determined (actional) element is not linguistically expressed, and the respective naming units are called Incomplete Complex Structure L (ICSL) naming units (“L” stands for the expressed left-hand constituent, i.e., to the determining constituent of the onomasiological mark, i.e., for languages such as English that place it on the left). The OT4, variously called Simple Structure type (SS), covers the simple structure naming units in which the onomasiological mark cannot be analysed into the determining and the determined parts. The naming units adopting this structure are designated as SS naming units. The fifth type, OT5, is characterized by the absence of an onomasiological structure and is based on Onomasiological Recategorization. It corresponds to the word-formation process traditionally known as “conversion or zero-derivation”.

The final step in the general naming procedure occurs at the Phonological Level, where the forms are actually combined to form the new naming unit, respecting the relevant phonological rules (including suprasegmental rules like those governing stress assignment).

For illustration, let us consider the following example, from a Kimeru-speaking speech community:

Supposing a need arises for coining a new naming unit in Kimeru language denoting a person whose job is to drive a vehicle. The naming process would proceed as follows:

At the Conceptual level:

It is SUBSTANCE₁

SUBSTANCE₁ is Human

The human performs ACTION

ACTION is the Human's profession.

ACTION concerns SUBSTANCE₂

SUBSTANCE₂ is a vehicle.

At the Semantic level:

[+MATERIAL] [+ANIMATE] [+HUMAN] [+ADULT] [+PROFESSION];

[+MATERIAL] [-ANIMATE] [+VEHICLE], etc

At the Onomasiological Level:

After the conceptual analysis of the object to be named, the coiner identifies the actional relation between the two “substances” as crucial for his naming intention. Hence SUBSTANCE₁ and SUBSTANCE₂ are made the polar members of the onomasiological structure (i.e., the ‘onomasiological base’ and the ‘onomasiological mark’):

SUBSTANCE – SUBSTANCE

The coiner then selects the CCS type (OT 1) as the onomasiological structure type to use in the naming process. The onomasiological connective can then be expressed as follows:

Ag- Act- (logical) obj.,

where “Ag” (Agent) stands for SUBSTANCE₁ (the onomasiological base), “Act”(action) for ACTION (the determined constituent of the onomasiological mark), and ‘Obj’ for SUBSTANCE₂ (the determining constituent of the onomasiological mark).

At the Onomatological Level:

Here, the Lexical Component is scanned for the available appropriate bilateral units (free morphemes or affixes) to assign linguistic representation to the onomasiological structure according to the Form-to-Meaning-Assignment Principle or Morpheme-to-Seme-Assignment Principle (FMAP/MSAP). From the Kimeru lexicon/Lexical Unit,

“Agent” can be expressed by the prefixes “ mu- and ki-”, while ‘Action’ can be expressed by the morpheme ‘itithia’; ‘Object’ can be expressed by ‘ngari’, which is a generic name for all types of vehicles. From the available options, the coiner then chooses ‘mu-’ for the average human ‘Agent’ (since ‘ki-’, on the other hand, is used to denote an inanimate agent and is applied to an animate one only when a derogatory connotation is intended). Hence the morphemes ‘mu-’, ‘itithia’, and ‘ngari’ will be selected and assigned to the semes of the onomasiological structure as follows:

Agent- Act- Obj

mu- itithia- ngari

At the Phonological Level:

At the phonological level, the new naming unit, ‘muitithiangari’, undergoes the relevant phonological processes, e.g., that of glide formation (due to the occurrence of the high front vowel sound, /e/, at the initial position of the root morpheme, ‘-itithia’ (/eteðja/), immediately after the low back vowel, /o/, of the prefix ‘mu-’(/mo/), and then stress is placed on the first syllable of the new naming unit. Therefore, the coined new naming unit will be:

mwithiangari (/mweteðjaŋgare/) ‘vehicle driver’.

OT further posits the following with respect to assignment of morphosyntactic features to the newly-coined naming units:

1.7.3 Determination of Morphosyntactic Features of the New Naming Units in the OT

According to the Onomasiological Theory (OT) model, the determination of the category of word-class and the related morphosyntactic features of a new lexeme takes place at the Onomatological Level. The category of word-class and other related morphosyntactic features of a new coinage are assigned on the basis of the Head. The ‘head’, according to the theory, always refers to a general class of objects, a genus, etc., and is to be taken to be the Onomasiological Base of the onomasiological structure. The theory proposes that the head, therefore, is not to be identified positively or morphologically, but on the basis of the conceptual analysis of the extra-linguistic reality (or object) which takes place at the Conceptual Level of the OT

model. This implies that the head can be a suffix, a prefix, or a word-formation base. Furthermore, the theory asserts that all heads identified as onomasiological bases are in a position to transfer their morphosyntactic features to the respective naming units. We consider the following Kimeru naming unit, /ke:ri/, for illustration:

ke	-	ε:ri	‘broom’	←	(ke-	+	ε:ra)
Substance	-	act(ion)			‘a tool for		‘to sweep’
					doing something’		

During the naming process that gave rise to the above word, the prefix ‘ke’, denoting ‘a tool for doing something’, was taken as the ‘onomasiological base’, and hence the ‘head’, since its meaning is more general than the action it does, i.e., ‘to sweep’; the prefix ‘ke’ has the meaning of ‘any tool (a general class) used to carry out an action’.

Compare:

(i) ke-	+	andeka	→	ke-andeki
		‘write’		‘a pen’
(ii) ke-	+	wata	→	ke-wati
		‘hold/catch’		‘a pair of tongs’

From the analysis of the naming process involved, the word-class of the NU ‘ke-ε:ri’ will be a noun since the prefix ‘ke’ is used to derive inanimate doers of actions (nouns). Consequently, the word-class of ‘noun’ will determine all the inflectional word-forms associated with the new coinage ‘ke ε:ri’; for instance, the grammatical agreement inflectional affixes, those for number, etc.

Once the morphosyntactic features have been determined, the new naming unit is passed to the Morphophonological Level where it can be specified in terms of stress and other rules determining the phonological form of naming units.

After the naming process is complete, the newly-coined naming unit is passed on to the Lexical Component together with its morphosyntactic features, for storage.

1.7.4 Application of the Onomasiological Theory to the Study of Kimeru Word-formation

In this research, we intend to apply the OT theory in the study of Kimeru word-formation as follows:

First, from our research data, we will compile lists of naming units coined within the various conceptual-semantic fields under the different word-classes and try to figure out the general patterns in their formation as revealed within the respective conceptual-semantic fields. Then we will subject the observed general patterns in the formation of new NUs to an onomasiological investigation to find out the possible underlying WF processes and come up with the general WFRs that are in operation in each case.

We, therefore, intend to work backwards from the collected data to the probable naming procedure used during the coining of the new NUs in the different conceptual-semantic fields, cutting across the various word-classes. More precisely, we will be seeking to establish the possible ‘onomasiological structure’ employed in each case of new word coinage by a member(s) of the Kimeru speech community, and to use those particular onomasiological structures to formulate general word-formation rules (WFRs).

For illustration, let us take a collection of NUs from the conceptual-semantic field of ‘human doers of specified actions/activities’ such as the one below:

mũrĩmi	‘farmer’
mũrui	‘cook’
mwĩti	‘traveller’
mũkoobi	‘borrower’

From the form or structure of the NUs in the above data, we can discern a general pattern in their formation, i.e., the apparent trend of adding the suffix ‘mũ-/mw-’ to a stem that has an embedded verbal root in each case. Having noted that, we would then seek to know why the coiner of each of the NUs decided to pick on the particular prefix and the particular verbal root that appear to be part of the physical form of the

respective NUs, and how exactly the same coiner went about the whole process of doing so. It is at this point in our inquiry that we would seek a plausible explanation from the theory, the Onomasiological Theory of word-formation.

Now, taking the NU ‘Mūkoobi’ (borrower) as an example, we subject it to the OT naming procedure with a view to reconstructing the process by which the coiner had given such a name to the extra-linguistic reality in question. The process would proceed as follows:

We would initially conceptually analyse the ‘object’ to be named in an attempt to classify it under any of the most general conceptual categories posited by the theory, i.e., SUBSTANCE, ACTION, QUALITY or CONCOMITTANT CIRCUMSTANCE, thus:

Conceptual Level:

It is SUBSTANCE

The SUBSTANCE is Human

The Human performs an ACTION

The Action involves borrowing money

After that conceptual-level analysis, we would proceed to the Semantic Level where we would express the logical predicates of the supra-linguistic level in terms of semantic components so as to arrive at the semantic structure shown below.

Semantic Level:

[+MATERIAL] [+ANIMATE] [+HUMAN] [+ACTION] [+BORROWING MONEY]

From there, would then move to the next level, the Onomasiological Level, where we would attempt to work out the onomasiological structure that would possibly form the more specific basis of our naming act. Hence using our prior conceptual analysis, we make ‘SUBSTANCE’ and ‘ACTION’ the polar members of the onomasiological structure:

SUBSTANCE - ACTION

Since SUBSTANCE represents the general class of the ‘object’ we are naming, we will take it as the ‘onomasiological base’ around which our naming act will be centred, while the ACTION will be taken as the ‘determined constituent’ of the onomasiological mark. Consequently, we will select OT II for this particular naming act because the ‘determining constituent’ of the onomasiological is not linguistically expressed. And to complete the onomasiological structure we seek to figure out the ‘onomasiological connective’ by considering the logical-semantic relationship between the ‘base’ and the ‘determined constituent’. Now the relationship here is clearly an agent-action one since the base is the ‘agent’ of the ‘action’ indicated in the determined constituent; therefore, the onomasiological connective of this particular onomasiological structure will be expressed as follows:

Ag(ent) – Act(ion)

The next step, which takes place at the Onomatological Level of the naming process, is to assign linguistic units from the Kimeru Lexicon (as contained in the Kimeru Lexical Component) to the selected semes (the ‘agent’ and the ‘action’) of the onomasiological structure in accordance with the Morpheme-to-Seme-Assignment Principle (MSAP). So after searching through the Kimeru LC for the appropriate morphemes that can represent the respective semes, the ‘agent’ and ‘action’ of our particular OS, and, of course, considering both the semantic aspects of the morphemes and their combinability restrictions as contained under their entries in the LC, we settle on the prefixal morpheme ‘mũ-’ that stands for a human agent in Kimeru and assign it to the ‘Ag’ of our OS, while we select the verbal free morpheme ‘kooba’, that stands for the action of borrowing money, and assign it to the ‘Act’ of our OS, resulting in the tentative form below:

Ag - Act

mũ- kooba

Then the tentative NU, ‘Mũkooba’, is taken through the final step, the Morphophonological Level, where it undergoes the relevant phonological and morphological rules in Kimeru. In this particular case, a morphological rule in Kimeru will change the epenthetic ‘-a’ of the verbal root (koob-a) to ‘-i’ so as to give the newly-coined NU the ‘-i’ ending that is distinctively typical of the nominal NUs in

this conceptual-semantic field. Hence, the final phonological shape of the new NU will be:

mũkoobi (mũ- + koob-a → mũ-koob-a → mũkoobi) ‘money-borrower’

On the basis of the above reconstruction of the onomasiological WF process resulting in the new NU “mũkoobi”, and assuming the same formation process would apply to the other members of the group (as will be confirmed in Chapter Four of this project), we can then formulate the following general WFR for coining new NUs in this conceptual-semantic field:

OT II: Agent – Action

mũ- + verb root + -i

On the basis of the above short discussion, we could say that the Onomasiological Theory of word-formation will be applicable to our study of Kimeru word-formation.

1.8 LITERATURE REVIEW

1.8.1 Literature Based on Kimeru Language Studies

A number of studies have been done on Kimeru language, especially in the areas of syntax and phonology. Such works include Kithaka wa Mberia (1979), Marete (1981), Nkubitu (1993), Gacunku (2005) and Mwebia (2006). However, to the best of my knowledge, no specialised studies have been done on Kimeru word-formation. The earlier researchers on Kimeru appear to have concentrated on other areas of the language. For example, consider the subject of each of the following Kimeru research works: Mberia (1979) studies the morphology of the Kithara nominal word; Marete (1981) discusses grammatical agreement in Kimeru syntax, and classifies nouns using a syntactical approach; Nkubitu (1993) studies the Wh-construction as realized in Kimeru, using the Government and Binding theory; Gacunku (2005) analyses the phonological irregularities and variation in the Kimeru nominal concordial system, concentrating on the phonology; and Mwebia (2006) studies Kimeru language in the area of Pragmatics. Clearly, none of them has directly and exhaustively dwelt on the topic of Kimeru word-formation. Nevertheless, a number of works by the researchers

on kimeru language have made some contributions that are important to the study at hand, as illustrated below.

Mberia's (1979) M.A. thesis entitled, "The Morphology of the Kitharaka Nominal Word" is one such work. The insights gained from his discussion of the morphology of the Kitharaka nominal word and, especially, his discussion of the nominal classes and the concordial agreement prefixes have aided our understanding of the formation of kimeru nominal words, *moreso*, those that are syntactically-based. The data and findings in Kithaka wa Mberia's later research in Kitharaka morphophonemics are also very applicable to our study by helping us understand better the morphophonemic aspects of Kimeru word-formation.

Marete's (1981) work is also important to this study; although his survey of Kimeru morphology and phonology is too brief, he throws very important light on some of the phonological processes that act on the forms of agreement morphemes changing their phonetic shapes. Furthermore, his classification of Kimeru noun classes helps us identify derivational classes that represent forms such as augmentatives and pejoratives.

Gacunku (2005) is significant to our study because our research will draw a lot of insights from Gacunku's detailed discussion of Kimeru Phonological processes and Kimeru noun-class prefixes. The information will be important to us because according the Onomasiological Theory of word-formation (the approach adopted in this study), the final form of a new naming unit is eventually dictated by the phonological rules of the language in question. Moreover, the noun class prefixes discussed by Gacunku (Gacunku 2005) will be among the many other types of prefixal bilateral units studied in this research for their role in word-formation.

Mwebia's (2006) work, too, is relevant to this study in that she sheds some light on the semantic aspects of Kimeru prefixes and discusses the importance of such semantic considerations in any phonological interpretation. This semantic notion is in harmony with the onomasiological approach to word-formation which posits that prefixes, like all affixes, are bilateral form-meaning complexes. Hence the knowledge of the meanings of Kimeru prefixes is necessary for an onomasiological study of Kimeru word-formation since the meaning of the derivational prefixes used in the formation of new words is considered at the Onomatological Level of the OT.

Mwebia, nevertheless, does not go into the depths of the semantics of all the Kimeru prefixes neither does she directly relate the semantic facet of prefixes to the word-formation process.

1.8.2 Literature Based on Studies of other Related Languages

To begin with, the works by Givon (1969), Welmers (1973) and Guthrie (1971) are important to this study. Although their studies are mainly syntactic in nature, their discussion of the morphology of the nominal class of the Bantu languages, and of the hypothetical proto-Bantu, provide valuable insights into the morphology of Bantu languages, the group to which Kimeru belongs.

Kaviti's (2004) PhD thesis entitled: "A Minimalist Perspective of the Principles and Parameters in Kikamba Morpho-Syntax" is also very important to our study. Her data on Kikamba morpho-syntax and the accompanying scholarly discussion helps us to understand better some of the morpho-syntactic issues in Kimeru word-formation since Kikamba, being a Bantu language like Kimeru, shares some morphological features with Kimeru. Moreover, her data elicitation techniques, especially the Introspective Method, are very helpful to our research as the tips we get from her work partly informed our considerable reliance on our personal intuitions as native speakers of Kimeru in the generation, evaluation and analysis of the data on Kimeru word-formation.

Other works that are helpful to our research include Iribe-Mwangi's (2008) PhD thesis entitled, "A Synchronic Segmental Morphophonology of Standard Kiswahili" and Njuguna Margaret Wangari's "Mofofonologia ya Kiswahili Sanifu na Kikuyu Sanifu; Mathalani Kikuyu cha Kabete". These works have also proved very useful to our study as sources of valuable morphological information that is applicable to our research. This is so because the languages they have studied, i.e., both Kiswahili and Kikuyu, are sister Bantu languages to Kimeru, hence similar. The information from their studies, therefore, also helps us to better understand Kimeru word-formation.

1.8.3 Literature on Word-Formation Studies

The subject of word-formation has drawn the attention of scholars from as far back as the seventeenth century, when Panini gave a detailed description of Sanskrit word-formation (Bauer 1983:2-3). Despite this fact, many theoretical questions still remain

unanswered; for example, on how exactly a completely new lexeme enters the lexicon of a language, and whether or not the particular process(es) involved is/are wholly rule-governed and regular.

Majority of linguists who came immediately after Panini considered word-formation either from a completely synchronic point of view (e.g. Bloomfield, 1935) or from a totally diachronic viewpoint (e.g., Koziol, 1937, in Bauer, 1983). Later, some like Jespersen (1942) tried to integrate synchronic and diachronic approaches in their study of word-formation. However, as Bauer (1983) points out, the field of word-formation remained neglected for years such that even up to the middle of the 20th c, the area of word-formation was not such a main concern to many linguists. Adams (1973:5) says that in the 1940s and 1950s, American Structuralism, for instance, was mainly concerned with units smaller than the word, hence the word had not been given theoretical prominence in Structuralist theory.

Transformational Generative Grammar, on the other hand, was not interested in word-formation because its major interest was in units larger than the word (that is, the structure of phrases and sentences) and, notably, sentences were assumed to be made up not of words but of morphemes. Furthermore, in the Transformational Generative Grammar theoretical framework, the words generated by “word-formation” were treated as a special kind of embedded sentence, and not as a separate type of unit (Lees 1960).

Marchand (1969), however, breaks with tradition by treating word-formation separately from syntax, and adopting a synchronic-diachronic approach, never mind he does not provide any rules which would explain the existing or new forms.

Several other later linguists have approached word-formation from different viewpoints; for example: Halle (1973) gives word-formation a phonological approach; Jackendoff, 1975, uses a syntactic approach; and Leech (1974) looks at it from a semantic angle.

Another scholar, Bauer (1983), uses a basically synchronic and transformational syntactic approach, while also considering other aspects like phonology, morphology, semantics and pragmatics. Although he does not provide a theory of word-formation as such, he discusses some key problems that confront students/ researchers of word-

formation like the issues of productivity and regularity of word-formation processes. He argues that productivity must be viewed as a continuum, with some word-formation processes being more or less productive than others. As for regularity in word-formation, Bauer concedes that there is quite some regularity evident in word-formation but argues that such regularity is only necessary if word-formation is viewed as a rule-governed process; otherwise it is merely coincidental if word-formation is seen as an analogical process (Bauer 1983: 295). He suggests, with evidential data, that analogy could be a more likely basis for word-formation than regularity or productivity, and consequently, proposes that more research needs to be done (including psychological testing) to ascertain this. Bauer also gives an outline of the word-formation types in the English language in which he includes compounding, prefixation, suffixation, conversion, back-formation, clipping, blending, acronymy and word-manufacture. Furthermore, he points out that before a new word can be regarded as a member of the language, it has to pass through three different stages: nonce-formation, institutionalization and lexicalization.

Furthermore, Katamba's (1993) generally generative approach to morphology is also very relevant to our study, especially in its exposition of derivational morphology that directly deals with word-formation, the main subject of our study. The work compares and contrasts inflectional and derivational morphology, and discusses the issues of productivity in word-formation, though in a generative approach. Katamba differs with Stekauer (2001) but concurs with Bauer (1983) on 'productivity' in word-formation; he asserts that:

"...productivity is a matter of degree. It is not a dichotomy, with some word-formation processes being productive and others being unproductive. ... Productivity is subject to the dimension of time." (Katamba 1993:67).

O'Grady & Guzman (1996) have also made contributions that are very relevant to this study. Although they do not consider word-formation from a theoretical framework similar to the one adopted by our study, and they actually do not provide a universal theory of WF, they, nevertheless, discuss different types of word-formation processes with which to compare and contrast our research findings. They suggest nine word-formation processes: derivation, compounding, conversion, clipping, acronymy, blending, back-formation, coinage and onomatopoeia. Yule (2006), who uses an

approach to WF study similar to O'Grady & Guzman's, proposes the following as the word-formation processes, using English data: acronymy, back-formation, blending, borrowing, clipping, coinage, conversion, compounding and derivation.

Stekauer (2001), using an onomasiological approach to WF, discounts Bauer's (1983) claim regarding the criterion for including a new word into the lexicon of a language; he argues that all that is required for a new naming unit to qualify to be regarded as a new member in the language is merely to be coined and used by at least one member of the speech community. Stekauer (2001) also finds fault in Bauer's and O'Grady & Guzman's classification of WF processes, and excludes acronymy, blending and clipping from the list of word-formation types arguing that they are not productive, regular and predictable enough to fit in his definition of word-formation. He asserts that word-formation processes should be one hundred percent productive, regular and predictable. Using his approach, he puts all the word-formation processes on a unified basis. In his onomasiological theory of English word-formation, Stekauer (in Stekauer 2001) conceives of productivity as a cluster of word-formation types, which makes it possible to consider word-formation rules as productive as syntactic rules. But since in his theory, the Word-Formation Component only responds to real naming needs of a speech community, there is no possibility of overgeneration by the word-formation rules, as is the case in generative morphology. Pavol's work is of vital importance to our study as it provides us with the theoretical framework on which our study is based. His description of English word-formation types will equip us in advance with the possibilities, in terms of word-formation processes, to look out for in the language of our study, that is, Kimeru. Moreover, his discussion of the theoretical issues in word-formation will provide us with valuable background knowledge as we consider the subject of word-formation in Kimeru language from an onomasiological approach, the approach that he proposes in his work: "An Onomasiological Theory of English Word-Formation" (Stekauer 2001).

1.8.4 Other Relevant works

Other works that are important to our research by virtue of the relevance, in some other ways, of the information they provide to our study include the following:

Patton (1990) provides us with important information on qualitative evaluation and research methods that we have used in this study.

To be included, too, in this review is Chomsky & Halle's (1968) work for its discussion of distinctive features and natural phonological processes. The information is very relevant to our discussion of the Kimeru morphophonemic processes that influence the phonetic form of a newly-formed naming unit.

That we have not exhausted all the literature relevant to our study cannot be gainsaid, but we hope that what we have presented in this brief literature review will suffice, at least, to put this study in perspective.

1.9 RESEARCH METHODOLOGY

1.9.1 Sample selection and area of research

Prior to the collection of data, Purposive Sampling was used to select a representative sample of informants. Informants with at least basic education and deemed as knowledgeable, proficient Kimeru native speakers were preferred so as to ensure correct and precise data. The sample was taken from five different villages in Igembe-South District, with each of the five villages providing two of the ten informants to enhance representativeness of the sample.

1.9.2 Data collection techniques

The ten sampled informants were used to help generate data and also to cross-check the data given by each of them in a bid to ensure authenticity and correctness, through participant observation sessions. This was in order to balance out the effect of personal native-speaker intuitions when making generalizations (see Kaviti 2004:97). The rest of the data was generated through the Introspective Method. This method involves relying on personal intuitions about the structure of the language under study. Though this method may lack in scientific objectivity, if constantly checked through use of corroborative evidence from the intuitions of other native speakers, the potential subjectivity can be completely ruled out, as Kaviti (2004) observes. To ensure accurate transcriptions of the data, the informants were asked to pronounce the words and the syllables of the affixes in the data while they were being tape-recorded.

Part of the data was also obtained from secondary sources by reading the relevant literature.

1.9.3 Nature of the data collected

The data collected included a wide range of Kimeru words under different word classes, coined in the different possible ways that Kimeru employs in word-formation; the different types of word-formation processes in the Kimeru language, together with samples of words formed through each process; and the types of affixes found in Kimeru, together with the range of possible meanings they can be associated with in the process of word-formation in different situations.

1.9.4 Data analysis

Once collected, the data was written down, transcribed, described, classified, tabulated and analyzed morphologically. Intuitions were made about the structure of words in Kimeru and the correctness of new word coinages. Then the data was explained using an onomasiological approach to the study of word-formation.

CHAPTER TWO

AN INVENTORY OF KIMERU PHONEMES AND THE NOUN-CLASSES

2.0 Introduction

This chapter aims at providing the basic information regarding Kimeru language, information that will prove useful in facilitating the understanding of the discussions that follow in the succeeding chapters. It begins with an outline of the phonological units of the Kimeru language, including both the consonant and vowel segments, with each of the sounds being described and its orthographic representation in Kimeru indicated. That information will come in handy in the discussion of the morphophonemic processes affecting Kimeru word-formation in Chapter Three. This chapter also gives a survey of the noun classes in Kimeru as a prerequisite foundation to facilitate the discussion of the morpho-syntactic aspects in Kimeru word-formation that will come in the last sections of Chapter Three.

2.1 The Kimeru Phonological Units

To be discussed in this section are the Kimeru consonantal and vowel phonological segments.

2.1.1 The Consonant Sounds in Kimeru

From our research data, we were able to establish that the Kiigembe dialect of Kimeru has a total of twenty-eight consonant sound segments. The following table shows the consonant sound segments in Kimeru (Kiigembe dialect), their orthographic representations and sample words containing each of the sounds:

Table 2.1: Kimeru Consonant Segments

Source: Field data (2012)

IPA symbol	Orthographic representation	Sample word	Phonemic transcription	Gloss
/p/	p	pĩrĩpĩrĩ	/pefepefe/	careless talk/ restlessness
/mp/	mp	mpeempe	/mpɛ:mpɛ/	maize
/β/	b	bangĩ	/βaŋge/	Others

/mb/	mb	mbeça	/mbɛçã/	money
/nð/	nth	nthata	/nðata/	a barren animal or person
/ð/	th	thaambia	/ðã:mbja/	wash
/t/	t	toonga	/tɔ:ŋga/	touch
/nt/	nt	nyoonta	/ɲɔ:ntã/	thirst
/r/	rr	bũrrũ	/βo:ro/	a group of boys
/l/	r	mpara	/mpafa/	hunger/famine
/l/	l	lung'e	/luŋe/	a boy who has not undergone the naming rite of passage
/nd/	nd	ndaa	/nda:/	louse
/c/	c	cukuru	/cukuru/	school
/ɲc/	nc	ncabĩ	/ɲcaβe/	black bean(s)
/j/	y	yaa	/ja:/	these
/j/	j	mwiji	/mweje/	boy
/ɲf/	nj	njũri	/ɲfori/	council of elders
/k/	k	kabeti	/kaβeti/	a small wallet/ purse
/ŋk/	nk	nkoro	/ŋkɔrɔ/	heart
/s/	g	gĩĩ	/ɣete/	chair
/ŋg/	ng	ngeerre	/ŋgɛ:rɛ	sheep
/m/	m	muntũ	/munto/	person
/n/	n	anene	/anɛnɛ/	officials of high rank
/ɲ/	ny	nyungũ	/ɲuŋgo/	pot
/ŋ/	Ng'	ng'ara	/ŋafa/	scratch (verb)
/w/	w	wata	/wata/	hold/catch
/ʔ/	Ø	nkwaa	/ŋkwaʔa/	armpit
ʧ	ch	machanko	/matʃankɔ/	maize cobs

2.1.1.1 Phonetic Description of the Kimeru Consonant Segments

In this section, we give a detailed description of each of the consonant segments of Kimeru. Look at the table below.

Table 2.2: Phonetic descriptions of the Kimeru consonant segments

Source: Field data (2012)

Symbol	Phonetic description
/p/	voiceless bilabial plosive
/mp/	pre-nasalized voiceless bilabial plosive
/β/	voiceless bilabial fricative
/mb/	pre-nasalized voiced bilabial plosive
/ð/	voiced inter-dental fricative
/nð/	pre-nasalized voiced inter-dental fricative
/t/	voiceless alveolar plosive
/nt/	pre-nasalized voiceless alveolar plosive
/r/	alveolar trill
/ɾ/	alveolar tap or flap
/l/	alveolar lateral liquid
/nd/	pre-nasalized voiced alveolar plosive
/c/	voiceless palatal plosive
/ɲ/	palatal nasal
/j/	voiced palatal fricative
/j/	palatal approximant
/ɲf/	pre-nasalized voiced palatal plosive
/k/	voiceless velar plosive
/ŋk/	pre-nasalized voiceless velar plosive
/ɣ/	voiced velar fricative
/ŋg/	pre-nasalized voiced velar plosive

/m/	bilabial nasal
/n/	alveolar nasal
/ɲ/	palatal nasal
/ŋ/	velar nasal
/w/	labial-velar approximant
/ʔ/	voiced glottal plosive
/tʃ/	voiceless alveo-palatal affricate

2.1.1.2 An IPA Chart of the Kimeru Consonants

The above (2.1.2) phonetic descriptions of the Kimeru consonants can be summarized by placing the Kimeru consonants in the IPA chart as shown below:

Table 2.3: An IPA chart of the Kimeru consonants

Source: Adapted from “A Handbook of International Phonetic Alphabet”

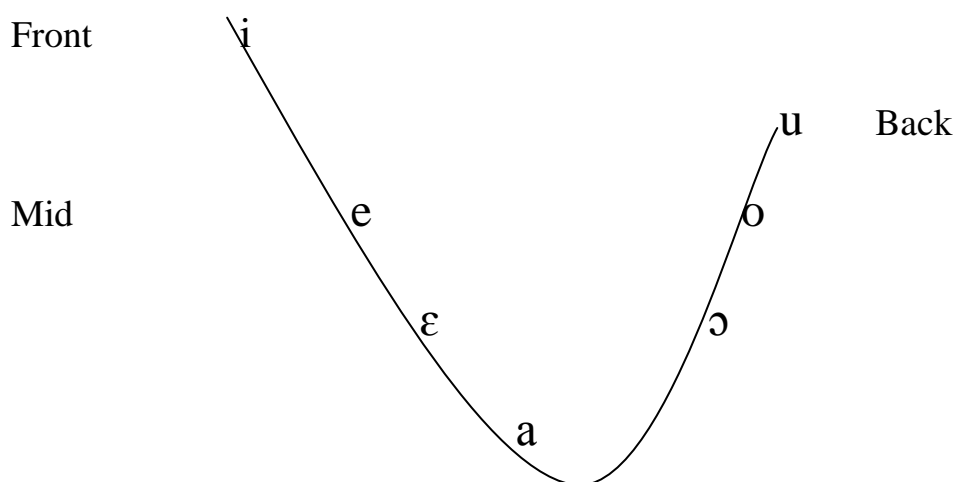
	Bilabial	Labio-dental	Dental	alveolar	Post-alveolar	Retroflex	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosives	p			t d			c	k			ʔ
Nasals	m			n			ɲ	ŋ			
Trills				r							
Taps/flaps				ɾ							
Fricatives	β		ð				j	ɣ			
Lateral fricatives				l							
Approximants	w						j				
Lateral approximants											

2.1.2 Kimeru Vowel Phonemes

Kimeru has a seven-vowel system, just like many other Bantu languages, as Gacũnkũ (2005) and Marete (1981) observe. Each of the seven short vowels has its long counterpart. The following chart shows the relative positions of the seven basic Kimeru vowels.

Figure 2.1: A chart showing relative positions of the basic Kimeru vowels

Source: Adapted from “A Handbook of International Phonetic Alphabet”



From the above chart, there are two high vowels in Kimeru, that is, (/i/, /u/); two mid-high ones, (/e, o/); two mid-low vowels, (/ɛ, ɔ/); and one low vowel (/a/). The front vowels are /i, e, ɛ, a/, and all are unrounded, while the back vowels, which are all rounded include /u, o, ɔ/.

The following table (table 2.4) presents a list of all the Kimeru vowel sounds (both the short vowels and their long counterparts), their orthographic representation and the key words containing the vowel sounds.

Table 2.4: Kimeru short vowels and their long counterparts

Source: Field data (2012)

IPA Symbol	Orthographic representation	Key word	Transcription	Gloss
/i/	i	ikombe	/ikɔmbe/	cups
/i:/	ii	mariiko	/mari:ko/	jikos
/e/	ĩ	ĩkai	/ekai/	cheek
/e:/	ĩĩ	rĩĩria	/re:rja/	compensate for
/o/	ũ	ũcũrũ	/ocoro/	porridge
/o:/	ũũ	mũũmbi	mo:mbi	childless person
/ɛ/	e	ndene	/ndɛnɛ/	direction
/ɛ:/	ee	ndeene	/ndɛ:nɛ/	inside
/u/	u	muntũ	/munto/	person
/u:/	uu	muurumo	/mu:rumɔ/	depression/valley
/ɔ/	o	ona	/ɔna/	see
/ɔ:/	oo	oonga	/ɔ:ŋga/	praise (verb)
/a/	ɑ	nda	/nda/	stomach
/a:/	ɑɑ	ndaa	/nda:/	louse/lice

2.2 Kimeru Noun-Class System

In this section, we give a survey of the Kimeru noun classes. This information is significant to this study because an observation of our research data reveals that the kind of the derivational affixes that go into forming some of the derived complex naming units in Kimeru are partly determined by the form of the prefix of the relevant nominal class. This is especially so with the derived adjectives because the basic adjectives in Kimeru, which exist as bound morphemes, appear to attract, just like in the other Bantu languages (see Welmers 1973), prefixes identical to those of the nouns they qualify. Consider the forms of the following two Kimeru complex adjectives for evidence:

ũmũtune /omotune/ (of a person, ‘brown/red’), as in:

“*muntũ ũmũtune*”, a brown person, and

kĩtune /ketunɛ/ (of a thing, ‘red’), as in:

“*kĩntũ kĩtune*”, a red thing.

The prefix ‘ũmũ-’ in ‘/omotunɛ/’ is determined by the noun class 1/2 prefix, ‘mũ-’ (singular), while the prefix ‘kĩ-’ in the derived adjective ‘/ketunɛ/’ is determined by the class 7/8 prefix ‘kĩ-’ (singular). This is so because each of the prefixes has to agree with the prefix of the noun that the adjective will qualify. But although ‘ũmũ-’ and ‘kĩ-’ originate as syntactic elements indicating the Noun-Adjective Agreement (NAA) (see Marete 1981), they become integral components in the structural forms of the two derived complex adjectives. This discussion will be picked up and pursued to greater detail in the second part of Chapter Three, in which we discuss the morpho-syntactic aspects in Kimeru word-formation; this section, therefore, lays the foundation for that discussion.

In the meantime, we outline the different noun classes in Kimeru giving samples of their member nouns.

2.2.1 The Kimeru Noun Classes

The classification of Kimeru nouns into different noun classes is, just like with the other Bantu languages, mainly based on morphological gender, though there is partial semantic correlation between some of the class prefixes (see Marete 1981:10); and the observed semantic correlations between the classes indicate the basis of the original noun-class system in the Proto-language (Proto-Bantu). The naming of the classes follows the singular-plural pairs formed by the singular and plural prefixes of the members of the corresponding nominal groups. Welmers (1973) observes that in any Bantu language, a very large number of nouns can be analysed as comprising a noun prefix and a stem. On the basis of the prefixes, he goes ahead to reconstruct twenty-three classes of the Proto-Bantu nouns (see Welmers 1973:165). It is from that set of the Proto-Bantu prefixes that Kimeru, like the other Bantu languages, draws its synchronic set.

The following table shows the Kimeru Noun Classes and key nominal words representing the members of each class.

Table 2.5: Kimeru noun classes and key nominal words representing the class members

Source: Field data (2012)

Noun class		Singular	Plural	Gloss
1/2	mo-a	mo-ʃoŋko	a-ʃoŋko	‘white people’
3/4	mo-me	mo-embɛ	me-embɛ	‘mango trees’
5/6	e/re-ma	e-tunda	ma-tunda	‘fruits’
7/8	e/ge/ke-i	g/e-tanda	i-tanda	‘beds’
9/10	m-m	m-bori	m-bori	‘goats’
11/10	ro-n	ro-tandi	n-tandi	‘thighs’
12/13	ka-to	ka-βoli	to-βoli	‘small goats’
14/6	o- ma	o-ðaka	ma-o-ðaka	‘acts of respect’
15/6	ko-ma	ko-ina	ma-ina	‘singing’
16/17	a-ko/go	a-nto	go/ko-nto	‘place’

2.2.2 The Semantic Basis of Kimeru Noun-class System

As has already been pointed out (under 2.2.1 above), there appears to have been, at least partly, a semantic basis in the original system of noun classes in the Proto-Bantu. This is supported by the fact that even synchronically, nominal prefixes of all the noun classes in Kimeru appear to have an inherent semantic value that is shared by all the nouns that belong to a particular class. This observation concurs with Gacũnkũ’s assertion (Gacũnkũ 2005:60) that the noun prefixes are not just overt formal markers of class membership as earlier proposed, but rather they have semantic dimensions of number, animacy, shape, size and, in some instances, emotive sense. More importantly, this observation is clearly in line with the postulation by the Onomasiological Theory that all affixes are bilateral form-meaning complexes. To

exemplify the above fact, we consider, here below, the general semantic content carried by each of the different Kimeru noun class prefixes.

To begin with, the class 1/2 prefix ‘mu-/a’ carries the general meaning of [+HUMAN]. This is evidenced by the fact that the nouns in this class comprise names of human beings, just like it was in the Proto-Bantu reconstruction, as showed by the table below:

Table 2.6: Examples of naming units in the noun class 1/2 (singular and plural) and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
mu-nto	a-nto	‘person’
mo-remi	a-remi	‘farmer’
mo-teḍja	a-teḍja	‘helper’
mo-ɛŋfi	a-ɛŋfi	‘barber’

The class 3/4 prefix ‘mo-me’ represents trees/plants, i.e., it carries the semantic component of [+ PLANT], hence the class contains names of plants, for example:

Table 2.7: Examples of NUs in the 3/4 noun class (singular and plural) and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
mo-te	me-te	‘tree’
mo-tʃu:nkwa	me-tʃu:nkwa	‘orange tree’
mo-ɛmbe	me-ɛmbe	‘mango tree’

Class 5/6 Prefix (e-ma) indicates names of fruits, i.e, its members exhibit the [+ FRUIT] semantic component, as the table below evidences:

Table 2.8: Examples of noun class 5/6 members (singular and plural) and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
e-tunda	ma-tunda	‘fruit’
e-εmbe	ma-εmbe	‘mango’
e-ndimo	ma-ndimo	‘lemon’

Class 7/8 prefix e/ge/ke-i stands for inanimate things, i.e., [- ANIMATE]. However, it can also indicate augmentative or derogatory sense, as the last example in the table below shows:

Table 2.9: Examples of NUs under class 7/8 (singular and plural) and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
e-te	i-te	Chair
ke-ε:ri	i-ε:ri	‘broom’
ke-rato	i-rato	‘shoe’
ke-munto	i-munto	‘too big, ugly, detestable person’

Class 9/10 prefix ‘m-m’/’n-n’ indicates [+ANIMAL]. Consider the following data:

Table 2.10: Examples of NUs under noun class 9/10, singular and plural, and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
Mbori	mbori	‘goat’
mbo:	mbo:	‘buffalo’
ŋge:re	ŋge:re	‘sheep’
ndeywa	ndeywa	‘bull’

Class 11/10 prefix ‘ro-n/η’ means ‘long, thin, slender’. It can also indicate an uncomplimentary attitude towards what is named, say, due to the ugliness of its long, thin shape, or for being too and hence unwanted. Hence pejoratives also belong to this class (like the first two examples in the table below).

Table 2.11: Examples of NUs in noun class 11/10 and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
ro-tandi	n-tandi	long, thin, ugly thighs
ro-ana	ro-ana	too many, unwanted children
ro-kupo	η-kupo	finger nails, especially long ones

The class 12/13 prefix ‘ka-to’ carries the semantic content of smallness (diminutiveness), i.e., [+ DIMINUTIVE], but may also indicate an approving attitude of endearment or, sometimes, interestingly, the negative attribute of being cunning (especially of small animals or people). Consider the following examples of nouns belonging to this class.

Table 2.12: Sample NUs in noun class 12/13 and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
ka-βoli	to-βoli	‘a small goat’
ka-rɛmbo	to-rɛmbo	‘a beautiful girl’
ka-ito:jo	to-ito:jo	‘hare’(cunning in the folk tales)

Class 14/6 prefix ‘o-ma’ implies abstract things [+ ABSTRACT/IMMATERIAL]. Hence this class mainly contains abstract nouns.

Table 2.13: Sample NUs in noun class 14/6 and their meanings

Source: Field data (2012)

Singular	Plural	Gloss
o-rɔŋgɔ	ma-o-rɔŋgɔ	‘a lie’
o-koro	ma-o-koro	‘an age’
o-omɛ	ma-o:mɛ	‘intelligence’
o-ritani	ma-oritani	‘a teaching’

Class 15/6 prefix ‘ko-ma’ indicates actions or activities [+ ACTION]. Hence most words in this class are names of actions or activities. For example:-

Table 2.14: Sample NUs under class 15/6, singular and plural forms, and their meanings

Source: Field data (2012)

ko-ḍamba (bathe)	-	ma-ḍamba	‘times one bathes’
ko-rema (cultivate)	-	ma-rema	‘times ones cultivates’
ko-ritana (teach)	-	ma-ritana	‘times one teaches’

The class 16/17 prefix ‘a-ko/go’ indicates a place. It is worth noting that this noun class is not based on singular-plural prefix pairing. Rather, it represents the remnantial locative (see Marete 1981). For example:-

Table 2.15: Sample NUs under class 16/17 and their meanings

Source: Field data (2012)

a-nto	_	go/ko-nto	‘place’
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2.3 Conclusion

On the basis of the first part of this chapter, we can generally say that the Kimeru language has a total of twenty-eight consonant segments and fourteen vowels. Of the fourteen vowels, seven are the basic ones and are short, while the other seven are their long counterparts but which are also phonemic. This information will undoubtedly not only help us in the general understanding of our Kimeru data but also in figuring out how these phonological segments interact and affect each other in the process of word-formation to yield the final phonetic forms (and hence orthographic forms) taken by the newly-formed naming units.

And in relation to the second part of the chapter, we draw the conclusion that Kimeru has a total of ten noun-classes, and that each of the noun-class prefixes has a different general semantic value that is distinctively shared by all the naming units belonging to that particular class. This information is, therefore, significant to our study since the noun-class prefixes will affect the forms of the newly-coined NUs that belong to their respective noun-classes as well as other derived NUs that can be used together with members of that noun-class in a sentence. This means that the information will also help us understand the morpho-syntactic aspects in Kimeru WF.

CHAPTER THREE

MORPHOPHONEMIC AND MORPHO-SYNTACTIC ASPECTS OF KIMERU WORD-FORMATION

3.0 Introduction

A study of Kimeru word-formation data reveals that Kimeru word-formation is inextricably intertwined with syntax and phonology. In the first place, Kimeru, being a highly agglutinative language, as Marete (1981:14) observes, exhibits the phenomenon of allowing a wide range of inflectional and derivational affixes to come together in the formation of a complex word-form. Now although the scope of our study restricts us to the domain of the formation of new complex lexemes (not word-forms) through the addition of derivational affixes (among other processes of word-formation), and the above-mentioned phenomenon belongs more to the realm of syntax than to that of word-formation, the information is, nevertheless, useful to this study for more specific reasons such as the following.

One, the Kimeru linguistic data collected points to the presence of quite a number of syntactically-based word-formation processes in Kimeru in which grammatical affixes like agreement morphemes infiltrate into the morphology of new lexemes. Such cases can only be understood fully with the help of morpho-syntactic knowledge.

Another reason for the inclusion of morpho-syntactic information in this study derives from the onomasiological model of word-formation itself, which presupposes that the Lexical Component supplies the Word-formation Component with word-formation bases and affixes together with their morpho-syntactic properties, while the Word-formation Component feeds the Lexical Component with new complex lexemes that bear inherent morpho-syntactic features determined by the lexemes' formal constituent components. Such somewhat symbiotic relationship between Kimeru word-formation and morpho-syntax as pointed out here, therefore, also necessitates the inclusion of morpho-syntactic data or information in our study, if only to aid in the deeper understanding of the whole range of issues surrounding Kimeru word-formation.

On the other hand, an onomasiological study of Kimeru word-formation cannot be complete without highlighting some relevant aspects of Kimeru morphophonemics as such knowledge is obviously necessitated by the demands of the Phonological (Morphophonological) Component of the new-word generation machine of the very Onomasiological Theory model, which directly captures the role of morphophonemic processes in the formation of new lexemes.

Consequently, in the first section of this chapter, we discuss the synchronic morphophonemic processes in Kimeru that influence the phonetic form of a new naming unit, while in the second section we highlight the morpho-syntactic aspects of Kimeru word-formation, pointing out how inflectional affixes from the word-internal paradigms also partly contribute to the determination of the morphological shape of newly-derived naming units.

3.1 Synchronic Morphophonemic Processes Affecting Kimeru Word-Formation

In this section, as specified in the introduction, we briefly outline the synchronic morphophonemic processes in Kimeru with a view to showing how they influence the ultimate phonetic shape of the naming unit being coined during the naming process in the OT.

Morphophonemic processes refer to the general phonological processes in a language that account for the realisation of phonologically-conditioned allomorphs of morphemes in the language (see Katamba 1993:34).

According to the Onomasiological Theory of Word-formation, the onomasiological structure forming the basis of a new naming unit has to be assigned linguistic units based on the Form-to-Meaning–Assignment Principle, FMAP, variously called Morpheme-to-Seme-Assignment Principle [MSAP], which operates at the Onomatological Level of the theory’s general naming procedure. Hence this is the stage at which individual members of the Onomasiological structure, that is, selected semes, are linguistically expressed by word-formation bases of naming units, or affixes, drawn from the repertoire of the available material in the system of the language stored in the Lexical Component. And after the concrete morphemes are selected and matched with or assigned to the corresponding semes (components of

meaning), the forms have to be actually combined at the phonological level (more precisely, morphophonological level) of the naming model, during which stage the forms are subjected to the phonological rules of the language, potentially resulting in morphophonemic alternations. This is what determines the actual phonetic shape and, by extension, the actual orthographic form of the newly-coined naming unit.

The Kimeru morphophonemic processes in question include homorganic nasal assimilation, velar consonant dissimilation, nasal devoicing, identical consonant deletion, identical vowel deletion, height assimilation, continuant hardening, glide formation and compensatory vowel lengthening (see Gacũnkũ 2005). The following are the highlights of each of the processes, including information on how each process influences word-formation in its respective area of operation.

3.1.1 Homorganic Nasal Assimilation in Word-formation

Homorganic Nasal Assimilation is a type of regressive assimilatory process in which a morphophonemic nasal segment is influenced by a following non-nasal consonant. This morphophonemic process affects the form of derived naming units that fall under noun-class 9/10. These include animal agentive nouns, derived by adding the prefix ‘n-’ to a verb. Consider the data in the following table:

Table 3.1: The effect of homorganic nasal assimilation in word-formation

Source: Field data (2012)

Prefix	Verb	Gloss	Derived noun	Gloss
/n/-	toŋg-a	‘to gore’	n-toŋg-i	‘animal that gores’
/n/-	βa:nda	‘inseminate’	m-ba:ndi	‘an animal that inseminates’
/n/-	kaβa	‘to break with teeth’	ŋ-kaβi	‘an animal that crushes with the teeth’
/n/-	tɔrɔka	‘to escape’	n-tɔrɔki	‘animal that runs fast’
/n/-	ða:mba	‘to bathe’	n-ðambi	‘an animal that ‘bathes’

/n/- cɔ:ka 'retreat' ɲ-cɔ:ki 'an animal that retreats'

Hence the following morphophonemic rules apply:-

$$/N/ \longrightarrow m/ - \left\{ \begin{array}{l} b \\ p \end{array} \right\}$$

$$/N/ \longrightarrow \eta/ - \left\{ \begin{array}{l} k \\ g \end{array} \right\}$$

$$/N/ \longrightarrow n/ - \left\{ \begin{array}{l} t \\ d \\ \partial \end{array} \right\}$$

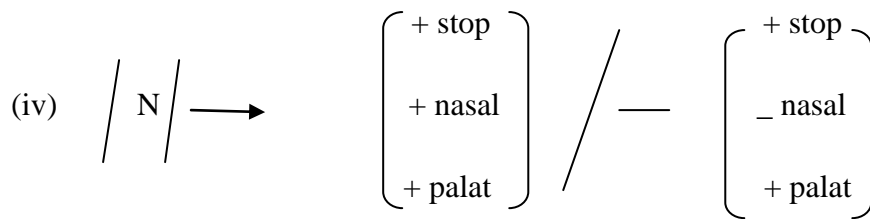
$$/N/ \longrightarrow \eta/ - \left\{ \begin{array}{l} c \\ f \\ j \end{array} \right\}$$

The above rules can be formalised as follows:

$$(i). \ /N/ \longrightarrow \left(\begin{array}{l} + \text{ stop} \\ + \text{ nasal} \\ + \text{ bilab} \end{array} \right) / \text{---} \left(\begin{array}{l} + \text{ stop} \\ _ \text{ nasal} \\ + \text{ bilab} \end{array} \right)$$

$$(ii). \ /N/ \longrightarrow \left(\begin{array}{l} + \text{ stop} \\ + \text{ nasal} \\ + \text{ velar} \end{array} \right) / \text{---} \left(\begin{array}{l} + \text{ stop} \\ _ \text{ nasal} \\ + \text{ velar} \end{array} \right)$$

$$(iii). \ /N/ \longrightarrow \left(\begin{array}{l} + \text{ stop} \\ + \text{ nasal} \\ + \text{ alveo} \end{array} \right) / \text{---} \left(\begin{array}{l} + \text{ stop} \\ _ \text{ nasal} \\ + \text{ alveo} \end{array} \right)$$



From the above data, it is clear that morphophonemic knowledge is crucial in understanding the final (actual) physical shape of each of the above products of word-formation process, because the ultimate phonological form of the derived naming unit will dictate the spelling of that new naming unit.

3.1.2 Continuant Hardening in Word-formation

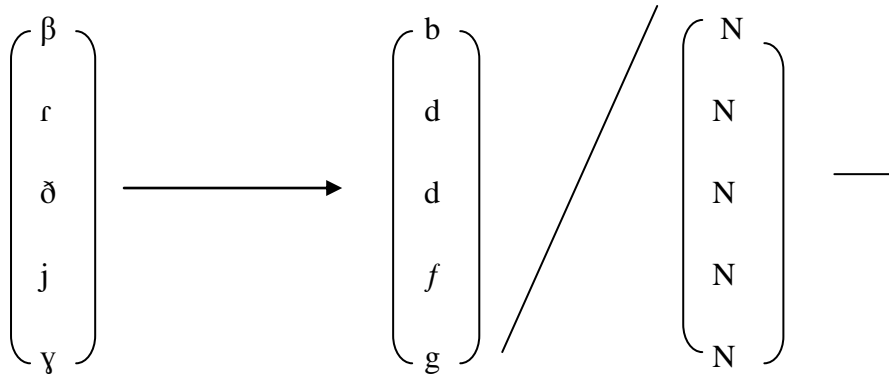
Continuant hardening is the phonological process by which liquids and fricatives become phonetically stronger when they occur after a nasal. Hence when a prefixal nasal precedes a stem-initial consonant that is [+ continuant], the consonant hardens to a stop. This sound change affects the spelling of derived nouns that fall under class 9/10 and 11/10 in Kimeru. For example, consider the data in the table below:

Table 3.2: The effect of continuant hardening in word-formation

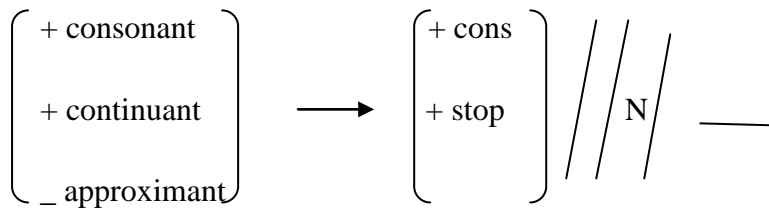
Source: Field data (2012)

Verb	Gloss	Derived Noun	Gloss
Bɔ:ra	produce a bleating sound	m-bɔ:ri	animal that bleats
jerera	float	ɲ-fɛrɛri	a kind of insect that floats in water
ɣora	buy	ɲ-gori	(figurative) money that is used to buy something
ro:ŋga	trim nails	n-donɣi	razor blades
ði: ŋga	to mud	n-di:ŋgi	it that muds

The following general morphophonemic rule summarizes the above phonological behaviour.



The above general rule can be formally stated thus:



3.1.3 Consonant Dissimilation in Word-formation

Consonant dissimilation is the phonological process through which voiceless consonant segments are voiced when they appear before other voiceless consonants to make them less similar. For example, the process accounts for the allomorphy of the derivational prefixes /ke, ɣe/ used to derive augmentatives, pejoratives and other class 7/8 derived nouns. It also accounts for the morphophonemic alternations affecting the forms of class 12/13 derived nouns such as the diminutives. The table below illustrates how this morphophonemic process influences the spelling of newly-formed NUs.

Table 3.3: The effect of consonant dissimilation in word-formation

Source: Field data (2012)

cati (‘shirt’) + ke- → ke-cati →ɣe-cati (‘an oversize/ugly shirt’) _

Augmentative/pejorative

cati + ka- → ka-cati →ɣa- cati (‘a small/beautiful shirt’) _ Diminutive/complimentary

kete (‘chair’) + ke- →ke-ɣete (‘a too big/ugly chair’) _ Augmentative/pejorative

kete + ka- → ka-ɣete → (‘a small/beautiful chair’) _ Diminutive/complimentary

The above data exemplifies the fact that the /k/ sound in the prefix ‘ke-‘ that is employed in the derivation of augmentative or pejorative naming units is realized as /ɣ/ (represented by letter “g” in spelling) when it is attached to a root that begins with another voiceless (hence similar) consonant sound like /c/ or /k/ (above). Similarly, the prefix ‘ka-‘ (/ka/) that is used to derive naming units that indicate diminutiveness or a complimentary attitude will be realized as “ga-“ (/ɣa/) if it is attached to a root that begins with a voiceless consonant, otherwise, it will remain as “ka-“. Therefore, in this case, the initial consonant of the prefix becomes dissimilar, in terms of the voice parameter, to the initial consonant of the stem, accounting for the difference in spelling of the respective derived NUs.

The rule can be formalised as follows:

$$\left[\begin{array}{c} + \text{ cons} \\ _ \text{ voic} \end{array} \right] \longrightarrow \left[\begin{array}{c} + \text{ cons} \\ + \text{ voic} \end{array} \right] / _ \text{ V } \left[\begin{array}{c} + \text{ con} \\ _ \text{ voic} \end{array} \right]$$

3.1.4 Height Assimilation and Word-formation

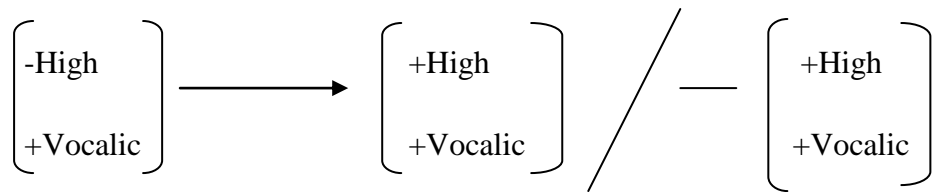
Height assimilation is the phonological process that involves a low vowel becoming similar to the high vowel that follows it; for example, when the noun class 3/4 prefix ‘mo-‘ is attached to a stem starting with a high vowel like /u/, the /o/ in the prefix assimilates to /u/, as shown in table 3.4 below.

Table 3.4: Effect of height assimilation in WF

Source: Field data (2012)

Verb	Gloss	Derived noun		Gloss
uma	'to sprout'	mo-uma	→	mu:ma
	'newly-sprouts'			
ura	'to rain'	mo-urɔ	→	mu:rɔ
				'river'

The above rule can be formalised as follows:-



3.1.5 Identical Vowel Deletion in Word-formation

The process involves deletion of one of the vowels in a sequence (in Kimeru, a sequence of more than two vowels). This morphophonemic process also affects some forms of derived naming units under noun class 1/2 in Kimeru, as shown in the table below.

Table 3.5: The effect of identical vowel deletion in WF.

Source: Field data (2012)

Verb	Derived noun
Aambja →	mo-aambja → mo- a:mbja
'to woo'	'the wooer'

The following rule applies:

$$V \longrightarrow \emptyset / VV _$$

3.1.6 Compensatory vowel lengthening in Word-formation

The process involves lengthening a vowel to compensate for another that has been deleted especially for ease of articulation. Consider the example below:

uma ('sprout', verb) + mo- → mo-uma ('newly-sprouts', noun) → mu:ma

In the example above, the vowel sound /u/ in the word /mu:ma/ is longer than average to compensate for the lost 'o' that was in the initial spelling of the derivative 'mouma'. The lengthened vowel sound is then indicated in spelling by doubling the vowel in question, hence the new coinage will be spelt as "muuma".

The rule can be stated as:

$$\left[\begin{array}{c} + \text{Vowel} \\ _ \text{Length} \end{array} \right] \longrightarrow \left[\begin{array}{c} + \text{Vowel} \\ + \text{Length} \end{array} \right] / \emptyset \text{ —}$$

3.1.7 Glide Formation in WF

In Kimeru, the glides, /w/ and /j/, are formed in an environment where a rounded vowel is immediately followed by another vowel, and when an unrounded vowel is immediately followed by another vowel, respectively. It is a case of dissimilation, and a general process that affects all derived words in Kimeru no matter their class, provided they meet the relevant phonological environment requirement. For example in Tables 3.6 (a) and 3.6 (b) below:

Table 3.6 (a): Effect of glide formation on the spelling of derived words involving prefixation

Source: Field data (2012)

endja	→	mo-endja	→	mw-endja
'sell'		'seller'		
erja	→	ko-erja	→	kw-erja
'try'		'to try/a trial'		

itja	→	mo-itja	→	mw-itja
‘climb’		‘climber’		
εχερα	→	ke-εχερι	→	kj-εχερι
‘sweep’		‘a broom’		

Table 3.6 (b): Effect of glide formation on the spelling of derived words involving suffixation

Source: Field data (2012)

kjɔŋɔ	→	kjɔŋɔ-ενε	→	kjɔŋgw-ενε
‘head’		‘in the head’		
kaɔa	→	kaɔa-ενε	→	kaowene
‘coffee’		‘in coffee/ in a coffee plantation’		

The above phenomenon, in Table 3.6 (a) and (b), can be captured by the two formal rules below:

$$\left[\begin{array}{l} + \text{Vowel} \\ + \text{Rounded} \end{array} \right] \rightarrow \left[\begin{array}{l} + \text{Approximant} \\ + \text{Bilabial} \end{array} \right] / _ \text{V}$$

$$\left[\begin{array}{l} + \text{Vowel} \\ _ \text{Round} \end{array} \right] \rightarrow \left[\begin{array}{l} + \text{Approximant} \\ + \text{Palatal} \end{array} \right] / _ \text{V}$$

3.1.8 Consonant Weakening in WF

According to Hyman (1975:164), a segment X is said to be weaker than a segment Y if Y goes through an X stage on its way to zero.

In Kimeru language, this morphophonological process involves a strong consonant becoming a weaker one when it appears between vowels. The effects of this morphophonological process will, just like the others discussed above, definitely be reflected in the spelling of the relevant derived NUs as evidenced by the data in the table below, containing NUs from the Kimeru derived class of the diminutives.

Table 3.7: Effect of consonant weakening in WF

Source: Field data (2012)

Mbori	→	ka-mbori	→	ka-bori	→	ka-βori /ka-βoli
‘Goat’						‘a small goat’
ngoko	→	ka-ngoko	→	ka-goko	→	ka-ɣoko → ka-oko
‘chicken’						‘a small chicken’

The formal rules governing the above phonological behaviour are:

$$\left[\begin{array}{l} + \text{consonant} \\ + \text{stop} \\ + \text{prenasalized} \end{array} \right] \longrightarrow \left[\begin{array}{l} + \text{consonant} \\ + \text{stop} \\ _ \text{prenasalized} \end{array} \right] / \text{V} \text{---} \text{V}$$

$$\left[\begin{array}{l} + \text{Consonant} \\ _ \text{Continuant} \end{array} \right] \longrightarrow \left[\begin{array}{l} + \text{consonant} \\ + \text{continuant} \end{array} \right] / \text{V} \text{---} \text{V}$$

$$\left[\begin{array}{l} + \text{Consonant} \\ + \text{Continuant} \end{array} \right] \longrightarrow \emptyset / \text{V} \text{---} \text{V}$$

In the first example, in the data above, /mb/ weakens to /b/ then to /β/, as /t/ also weakens to /l/.

In the second example, /ŋg/ weakens progressively to /g/ then to /ɣ/ and then eventually it is deleted (/ŋg → g → ɣ → Ø/). Note that the eventual deletion of a fricative (weakening further to a zero-morph) will depend on whether or not doing so will lead to another different Kimeru word with a different meaning. If it does, then the progressive weakening will be stopped at the fricative stage.

Expectedly, the final spelling of each of the derived NUs in question will be a reflection of the final phonetic form of each of them, i.e., after the operations of the Morphophonological Level of the OT.

3.1.9 Consonant Strengthening/Hardening in WF

Consonant strengthening refers to the reinforcement of a consonant segment (Hyman, M. 1975:164). The morphophonological process is the reverse of consonant weakening (see 3.1.8 above).

In Kimeru language, consonant strengthening appears to accompany homorganic nasal assimilation, hence it affects the phonological shapes of Kimeru words derived by the addition of a nasal prefix. Consider the following data:

Table 3.8: The effect of consonant strengthening in WF

Source: Field data (2012)

rja	→	n-dja
‘eat’		‘the eater/pasture’
rɛma	→	n-dɛmi
‘be stubborn’		‘a stubborn/difficult animal or person’
ruma	→	n-dume
‘curse’ (verb)		‘a cursed person/animal’

βɔ:ra → m-bɔ:ri

‘bleat’ ‘an animal that bleats’

ɣɔra → ŋ-gori

‘buy’ ‘the animal that “buys” or the money used to buy sth’

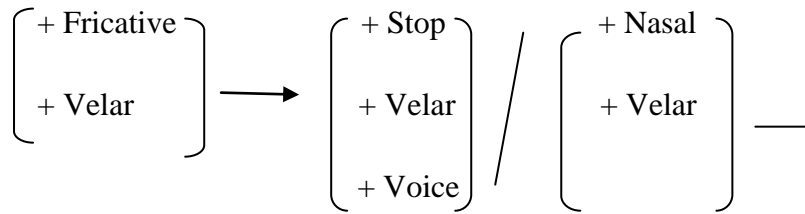
From the above examples, /t/ hardens to /d/; /β/ hardens to /b/; /ɣ/ hardens to /g/, and so on.

Generally, a fricative or flap hardens to a corresponding plosive with which it shares the point of articulation. The following formal rules apply:

$$\left[\begin{array}{l} + \text{Fricative} \\ + \text{Bilabial} \end{array} \right] \rightarrow \left[\begin{array}{l} + \text{Stop} \\ + \text{Voice} \\ + \text{Bilabial} \end{array} \right] / \left[\begin{array}{l} + \text{Nasal} \\ + \text{Bilabial} \end{array} \right] _$$

$$\left[\begin{array}{l} + \text{Flap} \\ + \text{Alveolar} \end{array} \right] \rightarrow \left[\begin{array}{l} + \text{Stop} \\ + \text{Voice} \\ + \text{Alveolar} \end{array} \right] / \left[\begin{array}{l} + \text{Nasal} \\ + \text{Alveolar} \end{array} \right] _$$

$$\left[\begin{array}{l} + \text{Fricative} \\ + \text{Palatal} \end{array} \right] \rightarrow \left[\begin{array}{l} + \text{Stop} \\ + \text{Voice} \\ + \text{Palatal} \end{array} \right] / \left[\begin{array}{l} + \text{Nasal} \\ + \text{Palatal} \end{array} \right] _$$



Meanwhile, it is clear that homorganic nasal assimilation has also come into play in dictating both the phonetic and morphological forms of the newly-coined NUs in the same data.

3.2 Morpho-Syntactic Aspects in Kimeru Word-Formation

Generally, although the Word-formation Component is an independent component in the system of linguistic components (Stekauer, P. 2001:4), the word-formation process is influenced to an appreciable degree by the operations of the other linguistic components, one of which is the Syntactic Component. The Syntactic Component exerts its influence on the word-formation process through the mediation of the Lexical Component which stores all the words and affixes of a language together with information on their morpho-syntactic features. Those bilateral units (words and affixes) serve as the raw materials to the Word-formation Component for the formation of new complex lexemes in the language. The Lexical Component will dictate, for example, which derivational affix can combine with which word-formation base to form the required new NU on the basis of the combinability restrictions specified in the entry of the particular affix as contained in the LC, and such restrictions partly depend on grammatical category.

It is also worth noting that although morphosyntactic features of words belong to the field of inflectional morphology as opposed to derivational morphology which is the main concern of this study, they play a key role in the word-formation process in that the morphological rules that come into play in the process of word-formation at the morphophonological level of the OT naming process depend on the morphosyntactic information regarding the naming unit to be coined when shaping the form of the new lexeme. Such important information includes the word class of the new lexeme and the related morphosyntactic features (like number, case, possessiveness, gender, etc., with respect to a nominal word class).

With respect to Kimeru word-formation, some morphosyntactic knowledge is clearly necessary for a deeper understanding of it as some of the Kimeru word-formation processes appear to be syntactically-based; meaning that both morphological and syntactic rules appear to come into play during the word-formation processes in question. To bear this out is the fact that sometimes in Kimeru inflectional affixes representing different morpho-syntactic features get incorporated into the morphology of a new complex lexeme. A classic example is the derivational process of the complex adjectives in Kimeru in which noun-adjective agreement morphemes find their way into the structure of the complex adjective. For illustration, consider the following table that shows the different inflectional prefixes representing the inflectional categories of number and agreement (noun-adjective agreement) in Kimeru and how the prefixes get infused into the very morphology of the resultant complex adjective_ bearing in mind that the basic adjective (like “-tune”, meaning ‘red’, in the example below) is a bound morpheme. Note that the form of each of the inflectional prefixes is determined by the noun-class prefix with which it agrees depending on the inflectional categories. Consider the table below (table 3.9) for illustration.

Table 3.9: Showing inflectional prefixes representing noun-adjective agreement and how they get into the morphology of the complex adjective.

Source: Field data (2012)

Class	Singular	Plural
1/2	mu-nto omo-tune ‘ a brown/red person’	a-nto βa-tune ‘brown / red people’
3/4	‘mo-εmbe jomo-tune ‘a red mango tree’	me-εmbe eme-tune ‘red mango trees’
5/6	e-tunda re-tune ‘a red fruit’	ma-tunda jama-tune ‘red fruits’

7/8	e/ke/xe-tanda ke/ge-tune ‘a red bed’	i-tanda βi-tune ‘red beds’
9/10	m-bori e-ntune ‘a red goat’	m-bori i-ntune ‘red goats’
11/10	ro-tandi ro-tune ‘a brown thigh’	n-tani i-ntune ‘brown thighs’
12/13	ka-βoli ka-tune ‘a red small goat’	to-βoli to-tune ‘red small goats’
14/6	o-đaka βo-tune “a red respectful act”	ma-o-đaka jama-tune “red respectful acts” (figurative)
15/6	ko-ina ko-tune “a red singing”	ma-ina jama-tune “red singings” (figurative)
16/17	a-nto a-tune ‘a red place’	ko-nto/gonto ko/go-tune ‘a red place/ red places’

From the above table, we can extract the table below that shows number (singular and plural) prefixes and agreement (noun-adjective agreement) prefixes for the different noun classes.

Table 3.10: Number and noun-adjective agreement prefixes for the different Kimeru noun-classes.

Class	Number Prefixes (Singular and Plural)	Noun-Adjective Agreement Prefixes
1/2	mo-, a-	omo-, βa-
3/4	mo-, me-	Jomo-, eme-
5/6	e-, ma-	re-, jama-
7/8	e/ɣe/ke-, i-	ke/ge, βi
9/10	m-, m-/n-. n-	e-,i-
11/10	ro-, n-/m-	ro-,i-
12/13	ka-, to-	ka-,to-
14/6	o-, ma-	bo-, jama-
15/6	ko-, ma-	ko-, jama-
16/17	a-, ko-	a-, go-/ko-

Now considering that in Kimeru, the basic adjectives exist as bound morphemes that are always attached to noun-adjective agreement prefixes, the combination can arguably be regarded as a derived complex lexeme whose formation is syntactically-based. To support this argument, consider the way the ‘complex adjectives’ inflect for the comparative and superlative forms, just like normal gradable adjective-lexemes (see table 3.10 below):

Table 3.11: Comparison in Kimeru complex adjectives

Source: Field data (2012)

Adjectives	Gloss	Comparative	Superlative
omo-nene	‘big (person)’	omo-nene-nene [bigger (person)]	omo-nene buru [biggest (person)]
ke-nene	‘big (thing)’	ke- nene-nene [bigger (thing)]	ke- nene buru [biggest (thing)]
jomo-nene	‘big (tree)’	Jomo-nene-nene [bigger (tree)]	jomo-nene buru [biggest (tree)]

The above data, coupled with the immediately preceding discussion, serves to illustrate how grammatical forms (inflectional affixes) from the syntactic domain can sometimes infiltrate into the word-formation domain in Kimeru. However, due to the limited scope of our study, we will not discuss all the inflectional forms and all the inflectional paradigms involving all the inflectional categories in Kimeru language (as that would fall under a syntactic study), but we do hope that what we have discussed so far suffices to, at least, draw attention to the morphosyntactic side of Kimeru word-formation. However, this issue will be revisited, and pursued to some greater detail, in the next chapter under the heading of “syntactically-based word-formation”.

3.3 Conclusion

In conclusion, it is clear that at least some knowledge of both Kimeru morphophonemics and morpho-syntax is necessary for a fuller understanding of the range of issues surrounding Kimeru word-formation.

For one, our discussion in this chapter has established that both morphological and syntactic rules can come into play during the formation of some of the new Kimeru NUs, that is, the syntactically-formed NUs, and that inflectional affixes from the syntactic domain can find their way into the morphology of a new complex lexeme. Moreover, the morpho-syntactic features of existing words and affixes, from the lexicon of a language, have a role to play in the determination of the morphosyntactic features of new NUs, i.e., through the particular “head” that functions as the “onomasiological base” in a particular “onomasiological structure” that yields a new NU.

Secondly, we have established that morphophonemic processes, on the other hand, account for the ultimate phonological shape and spelling of newly-coined lexemes.

CHAPTER FOUR

WORD-FORMATION PROCESSES IN KIMERU

4.0 Introduction

In this chapter, we carry out an onomasiological investigation of the different processes by which new naming units are formed in Kimeru language. Using empirical data/evidence, we will attempt to place each of the Kimeru word-formation processes within the Onomasiological Theory of Word-formation by working backwards to the possible naming procedure employed during the coining of the new naming units in each category under the different word-classes in Kimeru language. Then we will attempt to formulate general word-formation rules or, rather, establish the different word-formation types in each case, based on the particular kind of ‘onomasiological structure’ used in the coining of the respective naming units. In addition, we will attempt to make a judgement regarding the productivity and regularity of the individual word-formation rules or clusters of word-formation types, as the case may be, within their conceptual-semantic field of operation.

4.1 Formation of Nouns

4.1.1 Agentive Nouns

This group of naming units includes the nouns that refer to agents of actions/activities either as the direct doers, as in the case of human executors of actions, or as instruments/tools facilitating the execution of the action/activity. From our investigation, we found out that Kimeru agentive nouns are derived by addition of a semantically relevant prefix to a verb. The following is a discussion of the various prefixes used in the derivation of different types of agentive nouns.

4.1.1.1. Agentive Nouns Referring to a Human Agent of an Action or Activity

Kimeru nouns referring to human agents of actions/activities are derived by adding the prefix ‘mũ-/mw-’ (/mo-, mw- /) to a verb that refers to the corresponding action or activity, as shown in the data below:

Table 4.1: Formation of nouns referring to human agents

Source: Field data (2012)

Verb		Gloss	Noun		Gloss
rĩm-a	/rema/	‘dig’	mũ-rĩm-i	/moremi/	‘farmer’
ru-a	/rua/	‘cook’	mũ-ru-i	/morui/	‘cook’
ĩt-a	/eta/	‘travel’	mw-ĩt-i	/mweti/	‘traveller’
itia	/itja/	‘climb’	mw-itia	/mwitja/	‘climber’
koob-a	/kɔ:βa/	‘borrow money’	mũ-koob-i	/mokɔ:βi /	‘debtor’

But how does the coiner arrive at the new naming units for the new ‘objects’ (agents of the respective actions) and what determines the choice of the prefix ‘mũ-’ / ‘mw-’? To answer these questions, we retrace the onomasiological naming paths that led to the realisation of the newly-coined names for each of the extra-linguistic realities in question in the above data. We begin by coining the naming unit for the person whose job is to farm.

Based on the Onomasiological Theory of Word-formation, we start the naming process at the Conceptual Level where we conceptually analyse the object in terms of the most general conceptual categories as follows:

Conceptual Level:

It is SUBSTANCE

SUBSTANCE is Human

The Human performs Action

Action is the Human’s occupation

Action involves farming

In the second step, the individual logical predicates of the supra-linguistic level are captured by means of semantic components (semes) to arrive at the semantic structure as shown below:

Semantic Level:

[+MATERIAL] [+ANIMATE] [+HUMAN] [+ADULT]
[+OCCUPATION] [+FARMING]

Then at the onomasiological level, we make SUBSTANCE and ACTION the polar members of the onomasiological structure, on the basis of the conceptual analysis, as follows:-

SUBSTANCE_ ACTION

The SUBSTANCE is the ‘onomasiological base’ on which our naming act is based since it represents the general class of the object we are naming, while ACTION is the ‘determined constituent’ of the ‘onomasiological mark’. Hence we choose the Onomasiological Type II (OTII) since the ‘determining constituent’ of the onomasiological mark is left linguistically unexpressed. We then express the onomasiological connective, that is, the logical-semantic relationship between the base and the determined constituent of the onomasiological mark as follows:

Ag – Act

Then at the Onomatological Level, we assign linguistic units from the Lexical Component to the selected semes of the onomasiological structure on the basis of the Form-to-Meaning-Assignment Principle (FMAP). To do this, we first search through the Kimeru lexicon for the morphemes, free and/or bound, that can represent the respective semes (‘Agent’ and ‘Action’) of the onomasiological structure. Then accordingly, we select the prefixal morpheme /mo-/ that symbolises a human agent in Kimeru and assign it to the ‘Ag’ of the particular onomasiological structure, while we choose the verbal free morpheme, /rema/, that represents the farming act/activity and assign it to the ‘Act’ of the Onomasiological structure. This results in the following provisional formal structure:

Ag - Act
mo - rema

The above form is then taken to the next and the final level, the phonological/morphophonological level, where it undergoes the relevant phonological

and morphological rules of the Kimeru language. In particular, there appears to be, on the basis of the data, a morphological rule in Kimeru that removes the epenthetic ‘a’ of the constituent verbal root and replaces it with the ‘-i’ ending that characterises agentive nouns in Kimeru. Hence:

mo + rema → mo-remi (farmer)

The above naming procedure can be used to explain the derivation of the other nouns in the same conceptual-semantic field, as can be seen below:

Derivation of the naming unit “mũrui”, /mo-rui/, (‘cook’):

At the conceptual level:

The object is SUBSTANCE

SUBSTANCE is Human

The Human performs Action

Action is the Human’s occupation

Action involves cooking

At the Semantic Level:

[+MATERIAL] [+ANIMATE] [+HUMAN]
 [+OCCUPATION] [+COOKING]

At the Onomasiological Level:-

SUBSTANCE – ACTION

Ag – Act

At the Onomatological Level:-

Ag – Act

mo - rua

At the Morphophonological Level:-

/mo-rua → mo-ru-i/ (mũrui).

Note that the above final form of the naming unit is a product of a morphologically-conditioned rule in Kimeru that applies on agentive nouns.

Derivation of the naming unit “mwitia” /mwitja/ (climber):

Conceptual level:

It is SUBSTANCE

SUBSTANCE is Human

Human performs Action

Action involves climbing mountains, trees, etc.

Semantic level:

[+MATERIAL] [+ANIMATE] [+HUMAN]
[+OCCUPATION] [+HOBBY] [+CLIMBING]

Onomasiological level:

SUBSTANCE – ACTION

Ag – Act

Onomatological level:

Ag – Act

mo - itja

Phonological level:

/mo-itja/ → /mw-itja/ (mwitia)

Refer to chapter three for the phonological rule of glide-formation that applies above to change /mo-/ to /mw-/. Also notice that the final sound of the derived noun is not /i/, like the other members of the group, because the root verb's word-final /a/ is preceded by the vowel 'i'.

From the above discussion, we can conclude that all derived human agentive nouns in Kimeru are coined using the onomasiological structure type two (OT2) and are, therefore, Incomplete Complex Structure L (ICSL) naming units, where 'L' refers to the expressed left-hand constituent of the onomasiological mark.

4.1.1.2 Nouns Referring to Inanimate Agents of Actions (instruments/Tools /gadgets)

In Kimeru, new nouns referring to tools or instruments used to carry out certain actions/tasks are formed by adding the prefix 'kĩ-/gi-' to the verb denoting the action/task/activity as the data below illustrates.

Table 4.2: Formation of nouns referring to inanimate agents

Source: Field data (2012)

Verb	Gloss	Derived Noun	Gloss
Eera /ε:r-a/	'sweep'	kĩ-eeri /keε:ri /	'broom'
Muunya	'suck'	kĩ-muunyi /kemu:ɲi/	'sucker'
chuunka	'sieve'(V)	gĩ-chuunki /ɣetʃu:ŋki/	'sieve'(N)

Let us now look at the naming procedure responsible for the formation of the naming units in this conceptual-semantic field. First, let us suppose the need arises to coin a name for a tool that is used to sweep floors. We can follow the procedure below:

Conceptual level:

It is SUBSTANCE

SUBSTANCE is INANIMATE

It has bristles

It is hand-held

It is used to perform an ACTION

The action involves sweeping dirt/litter off floors

Semantic level:

[+Material] [-Animate] [+hand-held] [+sweeping floors], etc

Onomasiological Level:

The analysis at the Onomasiological Level will make the ‘Substance’ the onomasiological base while the ‘Action’ is made the determined constituent of the onomasiological mark. Then the onomasiological structure type will be OTII since the determining constituent of the onomasiological structure is left unexpressed. Furthermore, the logical-semantic relationship between the base and the determined constituent is an agent-action one. Hence the onomasiological structure will be:

SUBSTANCE - ACTION

Ag - Act

Onomatological level:

From the Kimeru lexicon, we choose the prefixal morpheme /ke-/ that represents the class of inanimate agents, while we select the morpheme /ε:ra/ that expresses the action of sweeping. Hence:

Ag - Act

ke - ε:ra

Phonological level:

ke- + ε:ra → keε:ri

The word-final epenthetic /a/ sound on the verb changes to /i/ upon undergoing the relevant morphological rule in Kimeru (already mentioned). Other examples in this conceptual-semantic field include ‘ke-mu:pi’ (sucker) and ‘xe-tfu:ŋki’ (sieve), which also use the OTII structure in their derivation.

4.1.2 Nouns Referring to Names of Plants

Derived nouns in this conceptual-semantic field are formed by prefixation of ‘mũ- /mw-’ to a noun referring to a fruit or other plant product, as shown in the table below:

Table 4.3: Formation of nouns referring to names of plants

Source: Field data (2012)

Name of fruit / product		Gloss	The plant		Gloss
ĩembe	/eembe/	‘mango’	mũ-embe	/moembe/	‘mango tree’
nthoroko	/ŋðɔɾɔkɔ/	‘bean’	mũ-tholoko	/moðɔɾɔkɔ/	‘bean plant’
mbakĩ	/mbake/	‘tobacco’	mũ-bakĩ	/moβake/	‘tobacco plant’
ĩndimũ	/endimo/	‘lemon’	mũ-ndimũ	/mondimo/	‘lemon tree’
ngarrama	/ŋgarama/	‘a wild fruit’	Mwa-rrama	/mwarama/	‘mwarrama tree’
mbarĩki	/mbareki/	Castorseed	Mw-arĩki	/mwareki/	‘castor tree’
mbaũ	/mbao/	‘timber’	Mũ-bau	/moβao/	‘timber tree’ (eucalyptus)

As can be seen from the above examples, new naming units in this field are based on the OT3 onomasiological structure hence they are ICSR naming units. This is because in their structure the determined constituent of the onomasiological mark is not

formally expressed and the expressed constituent of the onomasiological mark, the determining constituent is on the right. Consider the example below showing the process of formation of the naming unit 'mũembe' /moembe/ (mango tree):

Conceptual level:

It is SUBSTANCE₁

SUBSTANCE₁ is Plant

The plant performs Action

Action is bearing fruit/reproduction

Action produces SUBSTANCE₂

SUBSTANCE₂ is FRUIT

The FRUIT is known as 'iembe'

Semantic Level:-

[+MATERIAL] [-ANIMATE] [+PLANT];

[+MATERIAL] [-ANIMATE] [+FRUIT] [+IEMBE], etc.

Onomasiological level:-

The polar members of the onomasiological structure will be SUBSTANCE₁ and SUBSTANCE₂ since the action cannot be precisely delimited; hence:

SUBSTANCE – SUBSTANCE

Accordingly, the onomasiological connective will be as follows:

Ag – (Act) – fact

Where 'Ag' stands for Substance₁ (onomasiological base), '(Act)' for the formally unexpressed Action, the determined constituent of the onomasiological mark, and 'fact' for SUBSTANCE₂, the determining constituent of the onomasiological mark.

Onomatological level:-

Ag – (act) – Fact
mo eembe

Phonological level:-

At the phonological level, the new naming unit undergoes vowel deletion that is, the /e/ is deleted.

mo-eembe → moembe (mango tree)

Notice the effect of morphophonemic processes on the forms of the naming units in this conceptual-semantic field, as the following examples further reveal.

mo + nðɔɾɔkɔ → mɔðɔɾɔkɔ ‘bean plant’
(mo-nðɔɾɔkɔ → mo-ðɔɾɔkɔ → mo-ðɔɾɔkɔ)

In the example above, the phenomenon of consonant weakening is clearly evident; /nð/ weakens to /ð/ while /ɾ/ becomes /l/. For further illustration, see below:

mo + mbake → mo-mbake → mo-βake ‘tobacco plant’
mo + mbao → mo-mbao → mo-βao “timber tree” (blue gum tree)
mo + ηgarrama → mo-ηgarrama → mo-garrama → mo-ɾarrama →
mw-arrama

In the last example, above, /ηg/ weakens to /g/ then /ɾ/, and then it finally disappears completely after which a glide is formed, hence the newly-coined naming unit ends up as ‘mwarrama’.

4.1.3 Concrete nouns with the meaning: ‘person/thing having the quality specified by an adjective’

They are the nominal NUs referring to people or things with the quality or attribute specified by the adjective.

The naming units in this category are formed on the basis of OT IV structure since they belong to the group of simple structure (SS) NUs (Stekauer, 2001:15), because their onomasiological mark cannot be analysed into the determining and the determined parts. They are formed by adding to the adjective a prefixal morpheme identical to the nominal prefix of the noun class to which the new naming unit will naturally belong. Consider the data below consisting of different concrete nouns formed from the Kimeru adjective ‘-omε’. (Remember that the basic adjectives in Kimeru are bound morphemes):

Table 4.4: Formation of concrete nouns referring to ‘a person/thing having the quality specified by the adjective’

Source: field data (2012)

Derived Noun	Gloss
mo:mε (mo-+-omε)	intelligent person
ηfomε (η-+-omε)	intelligent animal
kjomε (ke-+-omε)	intelligent thing

From an OT perspective, the derived noun /mo:mε/ (‘intelligent person’), for instance, would be coined on the basis of the following conceptual analysis:

Conceptual Level:-

It is SUBSTANCE
 The SUBSTANCE is Human
 The Human has a QUALITY
 The QUALITY is Intelligence, etc

Semantic level:-

[+MATERIAL] [+ANIMATE] [+HUMAN] [+QUALITY]
 [+INTELLIGENT], etc.

Onomasiological level:-

The polar members of the onomasiological structure can be established by relating QUALITY to SUBSTANCE:

SUBSTANCE – QUALITY

Onomatological level:-

SUBSTANCE – QUALITY

mo ome

Phonological level:-

mo - + -ome → mo:me

The other naming units in this category will follow the same rule in their derivation.

4.1.4 Abstract nouns referring to the state/fact/quality of being what is specified by the adjective.

These abstract nouns are based on adjectives and are formed by adding the prefix ‘ũ/w-‘ to an adjective. They can be classified as ICSL NUs generated using the OTII onomasiological structure, as the following examples suggest:

Table 4.5: Formation of abstract nouns referring to ‘state/fact/quality of being what is specified by the adjective’

Source: field data (2012)

Adjective	Gloss	Abstract Noun	Gloss
-nũru /noru/	‘fat/fertile’	ũ-nũru /onoru/	‘fatness/fertility’
-tune /tunε/	‘red/brown’	ũ-tune /otunε/	‘redness/brownness’
-nini /nini/	‘small’	ũ-nini /onini/	‘smallness’
-raya /raja/	‘long/tall’	ũ-raya /oraja/	‘length/tallness’

A reconstruction of the naming process that gives rise to such NUs would look like the one below. Let us take ‘ũ-nũru’ (fatness/fertility), for an example:

Conceptual Level:-

It is SUBSTANCE

The substance is abstract

It constitutes a STATE

The STATE involves having a QUALITY

The QUALITY is being fat/ fertile

Semantic level:-

[-MATERIAL] [-ANIMATE] [+STATE];

[-MATERIAL] [-ANIMATE] [+QUALITY], etc.

Onomasiological level:-

Taking STATE and QUALITY as the polar members of the structure, we get:

STATE	<u>fact</u>	QUALITY
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Onomatological level:

STATE	<u>fact</u>	QUALITY
-------	-------------	---------

ũ-		nũru
----	--	------

/o/		/noru/
-----	--	--------

Phonological level:

ũ- + -nũru → ũnũru

4.1.5 Abstract Nouns based on verbs, referring to ‘state/fact/act/process indicated by a verb’

As the data below indicates, the derived naming units in this category, are formed by adding the prefix ‘ũ-/w-‘ (/o, w/) to a verb.

Table 4.6: Formation of abstract nouns referring to ‘state/fact/act/process indicated by the verb’

Source: Field data (2012)

Verb	Gloss	Abstract Noun	Gloss
ritana /ritana/	‘teach’	u-ritani /oritani/	‘teachings’
leba /leβa/	‘get drunk’	u-lebi /oleβi/	‘alcoholism’
nywa /ɲwa/	‘drink’	u-nyui /oɲui/	‘capacity to drink’
ongela /ɔŋgela/	‘add’	wongeli /wɔŋgeli/	‘addition’

Onomasiologically, such NUs are coined on the basis of OTII structure. We here below analyse one of the above NUs, ‘ũ-lebi’ (drunkenness/intoxication), for exemplification.

Conceptual level:-

It is a QUALITY

The QUALITY is habitual

It involves a habitual ACTION

The Action is taking alcohol in excess, etc.

Semantic level:-

[+IMMATERIAL] [-ANIMATE] [+QUALITY] [+HABIT]
 [+DRINKING ALCOHOL] [+OVER-INDULGENCE], etc.

Onomasiological level:-

Based on the conceptual analysis, the polar members of the onomasiological structure will be QUALITY (the onomasiological base) and ACTION (the determined constituent of the onomasiological mark) as represented below:

QUALITY – ACTION

Onomatological level:-

QUALITY	→	ACTION
ũ		leba
/o/		/lɛβa/

Phonological level:-

Ũ- + leba → ũ-leba → ũ-lebi (alcoholism)

4.1.6 Formation of Pejorative Nouns

A pejorative is a naming unit that expresses disapproval or criticism. The pejorative nouns in Kimeru are formed by adding the prefix ‘rũ-/rw-‘ or ‘kĩ-‘ to a noun. ‘Rũ-/rw-‘ in this usage has the sense of ‘too many in number/too much in quantity, hence unwanted’ or ‘too thin and undesirable’, or of low quality; while ‘kĩ-‘ is used to mean ‘too big and ugly’. That is illustrated by the data below:

Table 4.7: Formation of pejorative nouns

Source: field data (2012)

Noun	gloss	pejorative noun	gloss
caai	/ca:e/ tea	rũ-caai/roca:i/	too thin and tasteless tea.
mwana	/mwana/ child	rw- ana /rwana/	too many and undesirable children
mntũ	/monto/ person	rũ-munto /romunto/	too many and unwanted people
mũka	/moka/ woman	kĩ-mũka /kemoka/	too big and ugly woman

Structurally, such NUs in Kimeru are coined on the basis of Onomasiological Type IV (OT IV) which applies where the onomasiological mark cannot be analysed into the determining and the determined parts. They are, therefore, SS NUs. For example:

Table 4.8: Formation of augmentative nouns

Source: field data (2012)

Noun	gloss	augmentative noun	gloss
ng'ombe /ŋɔmbɛ/	cow	kĩ/ĩ-ng'ombe /keŋɔmbɛ/	a big cow
mũtĩ /mote/	tree	kĩ/ĩ-mũtĩ /kemotɛ/	a big tree
mwana /mwana/	baby/child	kĩ/ĩ-ana /kjana/	a big baby/ child

As evidenced by the data above, such naming units are coined by prefixation of 'kĩ/ĩ-' to a noun. Their coinage is based on OT IV, so they are SS NUs in Kimeru.

As an example, supposing we wanted to coin a name for a bigger-than-average and /ugly person, i.e., kĩmuntũ/ĩmuntũ. We would do it thus:

Conceptual level:-

It is SUBSTANCE

The SUBSTANCE is Human

The Human has a QUALITY

The QUALITY is being too big and ugly

The QUALITY is undesirable

Semantic level:-

[+MATERIAL][+ANIMATE][+HUMAN][+QUALITY] [+SIZE][+BIGGER-THAN- AVERAGE][+UGLY][+UNDESIRABLE], etc.

Onomasiological level:-

QUALITY _____ SUBSTANCE

Onomatological level:-

QUALITY → SUBSTANCE

kĩĩ

muntũ

Phonological level:-

ke/e- + munto → kemunto

4.1.8 Formation of Diminutive Nouns

A diminutive form of a naming unit is the form used to convey a slight degree of the root meaning, smallness of the object or quality named, intimacy or endearment. The NUs in the table below serve as examples:

Table 4.9: Formation of diminutive nouns

Source: Field data (2012)

Noun :	Gloss	Diminutive noun	Gloss
nyumba /ɲumba/	house	ka-nyumba /kaɲumba/	a small house
metha /mɛða/	table	ka-metha /kamɛða/	a small table
Ĩrinda /erinda/	dress	ka-linda /kalinda/	a small dress

From the above data, it follows that the diminutive nominal NUs in Kimeru are formed by prefixing ‘ka-’ to a noun. The NUs in this conceptual-semantic field fall under OT IV as illustrated by the following analysis that shows the possible cognitive

process involved in the coinage of ‘ka-nyumba’ (a small house or a beautiful, likeable house), for instance.

Conceptual level:-

It is SUBSTANCE

The SUBSTANCE is Inanimate

It is a type of house

The house is smaller than the average size (QUALITY)

Semantic level:-

[+MATERIAL] [-ANIMATE] [+HOUSE] [+QUALITY] [+SIZE]
[+SMALLER-THAN-AVERAGE], etc.

Onomasiological level:-

QUALITY _____ SUBSTANCE

Onomatological level:

Quality – Substance

Ka- nyumba

Phonological level:-

Ka + numba → kaɲumba

4.1.9 Formation of nouns referring to an inhabitant of a place or a citizen of a country or a member of a social grouping

The new naming units in this category are formed by prefixation of ‘mũ-/mw-’ to a proper noun that refers to the specific place or social grouping or institution as shown below:

Table 4.10: formation of nouns referring to names of inhabitants of a place/ citizens/members of specified social grouping

Source: Field data (2012)

Proper noun	gloss	Derived proper noun	gloss
Kenya /kɛŋa	a country	mũ-Kenya /mokeŋa/	a kenyan
Imenti /imenti/	a place/region	mw-Imenti /mwimenti/	a person from imenti
Kanisa /kanica/	the church	mũ-kanisa /mokanica/	church-goer
Kiama /kjama/	council/party	mũ-kiama /mokjama/	a member of council

In the onomasiological approach, the NUs are formed on the basis of OT3 structure, hence they are ICSR NUs. Consider the following example of ‘mũ-kenya’ (a Kenyan).

Conceptual level:-

It is SUBSTANCE,

The SUBSTANCE is Human

The Human comes from/is a citizen of a certain country

The country’s name is Kenya.

Semantic level:-

[+MATERIAL][+ANIMATE][+HUMAN][+NATIONALITY][+COUNTRY]
[+KENYA], etc.

Onomasiological level:-

SUBSTANCE – SUBSTANCE

Substance – (Stative) - Substance

Onomatological level:-

FMAP: substance – (stative) - substance

Mũ- Ø Kenya

Phonological level:-

mo + keŋa → mokeŋa

4.1.10 Formation of Nouns Referring to Son’s Names

The conservative traditional Kimeru names of sons are derived by the addition of the prefix ‘M’ - ‘ (that is written using a capital ‘M’ followed by an apostrophe and pronounced as /ntɔ-/) to the father’s name. The prefix has the meaning of ‘son of’. Look at the data below:

Table 4.11: Formation of nouns referring to names of sons of specific persons

Source: Field data (2012)

Father’s name:	Derived son’s name:
Mwenda /mwɛnda/	M’mwenda /ntɔmwɛnda/
Mübwika /moβweka/	M’mübwika /ntɔmoβweka/
Kurranja /kuraŋfa/	M’kurranja /ntɔkuraŋfa/

The process of formation of the above NUs can also be categorized as falling under OT3. For instance, the analysis of the derivation of ‘M’Mwenda’ would appear as follows, after the application of FMAP at the onomatological level of the naming process:

SUBSTANCE - SUBSTANCE

FMAP: obj – (Act) - Ag

M’- Ø Mwenda

Phonological level:

M' + Mwenda → M' Mwenda

/ntɔ/ + /mwɛnda/ → /ntɔmwɛnda/

4.1.11 Nouns Referring to Names of Daughters

The naming units constituting the conservative, traditional names of daughters in Kimeru are formed by adding the prefix ‘cio-/mwo-’, which means “daughter of”, to the father’s name as evidenced by the data that follows:

Table 4.12: Formation of nouns referring to names of daughters of specific persons

Source: field data (2012)

Father’s name:	Derived daughter’s name:
Mĩtheya /meðɛja/	Mwomĩtheya, ciomĩtheya /mwɔmeðɛja/, /cjɔmeðɛja/
Mwenda /mwɛnda/	Mwomwenda/ciomwenda

The NUs fall under OT3 just like their masculine counterparts (above). For example, the derivation of ‘Cio-Mwenda’ (name of Mwenda’s daughter) would be as shown below, after the application of FMAP:-

SUBSTANCE - SUBSTANCE

FMAP: Obj – (Act) - Ag

Cio- Ø Mwenda

At the phonological level, it will be:-

cjɔ + mwenda → cjɔmwɛnda (Ciomwenda)

4.1.12 Nouns referring collectively to ‘somebody’s people’ or the family members of a given person

The NUs in this field are coined by adding the prefix ‘ba-‘ to a [+HUMAN] noun, and they are usually plural. The prefix generally carries the meaning of ‘somebody’s people’ or ‘the family members of a given family head’. Consider the following data:

Table 4.13: formation of nouns with the notion of ‘somebody’s people’ or the family members of a specific person

Source: Field data (2012)

Noun	Gloss	Derived noun	Gloss
muka /moka/	‘wife’	ba- mūka /βamoka/	‘the wife’s people/relatives’
mwĩyĩ /mweje/	‘boy’	ba-mwiyi /βamweje/	boy’s people/relatives
Taitumu /taitumu/	Taitumu(name)	ba-Taitumu /βataitumu/	‘the Taitumus(as a family)’

The NUs above fall under the OT III category as the following analysis of ‘ba-Taitumu’ (the Taitumus) indicates:

Conceptual level:-

It is SUBSTANCE₁

SUBSTANCE₁ is Human

The Human is plural

It is Family members

The family members belong to SUBSTANCE₂

SUBSTANCE₂ is Head of the family

His name is Taitumu

Semantic level:-

[+MATERIAL][+HUMAN][+FAMILYMEMBER][+PLURAL][+STATE][+
BELONGING TO][+HEAD][+TAITUMU], etc.

Onomasiological level:

SUBSTANCE - SUBSTANCE

Obj – (Act) – (Ag)

Onomatological level:

Obj – (Act) - Ag

Ba- Ø - Taitumu

Phonological level:-

Ba- + Taitumu → Ba-Taitumu

/βa + taitumu → βataitumu/

4.2 Formation of Adverbs

From the data collected, it appears that the only Kimeru adverbs that can be derived are the adverbs of manner. They are formed by prefixation of ‘kĩ’ /ke/ onto a relevant noun, as revealed by the data below:

Table 4.14: Formation of adverbs of manner

Source: field data (2012)

Noun	Gloss	Derived Adverb	Gloss
ngeerre /ŋge:rɛ/	‘sheep’	kĩ-ngeerre /keŋge:rɛ/	‘sheepishly’
matharau/maðarao/	‘provocation’	kĩ-matharau /kemaðarao/	‘provocatively’
icima /icima/	‘respect’	kĩ-icima /keicima/	‘respectfully’

waana /wa:na/ 'childishness' kī-waana /kewa:na/ 'childishly'

The naming units in this group are formed on the basis of OT3. Take, for example, the cognitive process involved in the coining of the adverb of manner 'kī-ngeerre' (sheepishly) below:-

Conceptual level:-

The object is CONCOMITANT CIRCUMSTANCE

The Concomitant Circumstance accompanies an Action

It involves the Manner of doing the Action

The manner is typical of a certain SUBSTANCE

The Substance is sheep

Sheep is foolish

Hence the Manner is foolish... etc.

Semantic level:-

[+CONCOMITANT CIRCUMSTANCE] [-MATERIAL] [+MANNER]
[+PATTERN] [+SHEEP] [+FOOLISH]

Onomasiological level:-

CIRCUMSTANCE	-	SUBSTANCE
Manner	_ (Act) _	Pattern

Onomatological level:-

Manner	_ (Act) _	Pattern
kī	∅	ngeerre

Phonological level:-

/ke/ + /ŋge:re/ → /keŋge:re/

4.3 Formation of Verbs

4.3.1 Formation of to-infinitives

Kimeru to-infinitives are formed by adding the prefix ‘ku-/kw-’ to the root form of the verb as the following data reveals.

Table 4.15: Formation of to-infinitives

Source: Field data (2012)

Verb	Gloss	Infinitive Form	Gloss
endia /ɛndja/	‘sell’	kwendia /kwɛndja/	‘to sell’
ũra /ora/	‘buy’	kwũra /kwora/	to ‘buy’
romba /rɔmba/	‘beg/pray’	kũ-romba /korɔmba/	‘to beg/ pray’

The to-infinitive NUs fall under OT4, that is, the simple structure (SS) type since their onomasiological mark cannot be analysed into the determining and the determined constituents. Let us consider the following OT analysis of the formation of ‘kwɛndja’ (to sell):

Conceptual level:-

It is ACTION

The Action is a Process

The Process has a QUALITY of Infinitiveness

The Process involves exchanging goods/services for money, etc.

Semantic level:

[+ACTION] [+PROCESS] [+QUALITY] [+TO-INFINITIVE] [+TO
SELL]

Onomasiological level:

QUALITY	–	ACTION
Infinitiveness	–	Action

Onomatological level:-

Infinitiveness	–	Action
Kũ-		endia

Phonological level:-

/ko/ + /ɛndia/ → /koɛndja/ → /kwɛndja/

4.3.2 Formation of verbs with the meaning: ‘to do something on behalf of or for somebody’

These verbs are formed through suffixation of the morpheme ‘-ria/-ra’ to another verb as the data below indicates:

Table 4.16: Verbs with the meaning: ‘do something on behalf of or for somebody’.

Source: Field data (2012)

Verb:	Gloss	New Verb	Gloss
okethia /ɔkɛðja/	oversee building of building on behalf of	okethi-ria/ɔkɛðirja	‘oversee
thomithia /ðɔmiðja/	teach of	thomithi-ria/ðɔmiðirja/	‘teach on behalf of’
ĩĩthia /eteðja/	drive	ĩĩthi-ria/eteɾja/	‘drive on behalf of’

The naming units in this category are Simple Structure NUs whose derivation is based on OT4 onomasiological structure. For illustration, let us coin the naming unit ‘oketheria’ (‘supervise the building of a house on behalf of somebody’).

Conceptual level:

It is ACTION₁

The Action is a Process

The Process involves doing ACTION₂ on somebody’s behalf

ACTION₂ is another process

The ACTION₂ is supervising the building of a structure ... etc.

Semantic level:

[+ACTION]	[+PROCESS]	[+SUPERVISING]	[+BUILDING]
[+STRUCTURE]	[+ON BEHALF OF], etc.		

Onomasiological level:-

ACTION	—	ACTION
Process	-	Process

Onomatological level:-

Process	—	process
okethia		—ria

Phonological level:-

/ ɔkɛðja + rja → ɔkɛðjarja → ɔkɛðerja/

Notice that in Kimeru, when two glides follow each other, as is the case above (/ðja/ and /rja/), the first one is reduced to a single vowel sound and then harmonised with the vowel in the immediately preceding syllable, probably for ease of articulation. Furthermore, from the above data, it is evident that some other morphological rule has

come into play: notice that when the stem ends with ‘-ia’, it will take the suffix ‘-ria’, but if it ends with a single vowel, it will take ‘-ia’.

4.3.3 Formation of verbs with the meaning of ‘to be done/completed’ (of an activity/action)

Such verbal NUs are formed through the addition of the suffix ‘-ĩka ’ to another verb as shown below:

Table 4.17: Verbs that mean: “to be done/completed” (of an activity/action)

Source: Field data (2012)

Verb	Gloss	New verb	Gloss
baanga /Ba:ŋga	‘organise’	baang-ĩka /Ba:ŋgeka/	‘get organised’
thia /ðia/	‘grind’	thi-ĩka /ðieka/	‘be ground’
romba /rɔmba	‘pray’	romb-eka /rɔmbeka/	‘get prayed’
kaatha /ka:ða/	‘praise’	kaath-ĩka /ka:ðeka/	‘be praised’

After the application of FMAP at the onomatological level, an NU like ‘thiĩka’ (‘be ground’) would be formed as follows:

FMAP: Process	<u>factitive</u>	State
thia		-ĩka

phonological level:-

/ðia + eka → ðiaeka → ðieka/

4.3.4 Formation of verbs that mean ‘to undo or to reverse an action’

They are coined by adding the suffix ‘-ũkia’ to a relevant verb, on the basis of OT4. Consider the following table:

Table 4.18: Verbs that mean: “to undo or reverse an action”

Source: Field data (2012)

Verb	Gloss	New Verb	Gloss
ethia /ɛðja/	do	eth-ũkia’ /ɛðokja/	undo
tongethia /tɔŋgɛðja/	touch	tongeth-ũkia /tɔŋgɛðokja	stop touching
kiamā /kjamā/	bend	kiam-ũkia /kjamokja/	straighten

After the application of FMAP, the process of forming ‘ethukia’, for example, would end as follows:

FMAP: Act – Neg Act

ethia -ukia

4.3.5 Verbs with the general meaning of ‘to prolong or to hurry a specified action/ activity up’

These NUs are coined by adding the suffix ‘-nga’ to a verbal stem, on the basis of OT4, as the data below indicates:

Table 4.19: Verbs with the meaning: “to prolong or to hurry a specified activity up”

Source: Field data (2012)

Verb	Gloss	Derived Verb	Gloss
rua /rua/	‘cook’	ru-anga /ruanga/	‘cook faster/ for longer’
ona /ɔna	‘watch’	on-anga /ɔnanga/	‘watch for longer/ see quickly’

Upon the application of FMAP, the coining of such a member of this category as ‘rua-nga’ (‘to cook faster/for longer’) would be as follows:

FMAP:	ACTION	CONCOMITANT
CIRCUMSTANCE		
	Act	Manner
	Rua	-nga

Phonological level:-

$$/rua + \eta ga \longrightarrow ru\eta ga/$$

4.3.6 Verbs that generally mean ‘make or have somebody/something do something’

The formation of such NUs involves adding the suffix ‘-ethia’ to a relevant verb. The NUs also fall under the category of OT4 Simple Structure NUs. The following are examples of such verbs:

Table 4.20: Verbs with the meaning: “to make or have somebody/something do something”

Source: Field data (2012)

Verb	Gloss	New Verb	Gloss
eera /ε:ra/	‘sweep’	eere-thia /ε:reðja/	‘make somebody sweep’
onka /ɔŋka/	‘suck/suckle’	onke-thia /ɔŋkeðja/	‘Make/have somebody suck or suckle’
wata /wata/	‘hold’	watĩ-thia /wateðja/	‘make somebody hold’

Picking ‘onkenthia’ /ɔŋkeðia/ (‘make somebody/something suck something), for example, and beginning the naming process from the Onomatological Level, we coin the naming unit as follows:

ACTION - ACTION

Act - Process

onka -ethia

Phonological level:-

/ɔŋka +ɛðja → ɔŋka-ɛðja → ɔŋkɛðja/

From the foregoing analysis of data involving different categories of verbs, it is apparent that all derived verbs in Kimeru are simple structure NUs falling under OT4 onomasiological structure, and that they are coined through suffixation, i.e., by adding the appropriate suffix that would qualify the verbal stem by passing onto it the suffix's inherent semantic content to give the derived verb its intended meaning.

4.4 FORMATION OF COMPOUNDS

A compound is a lexeme that is made of two or more potential stems (Bauer, L 1984: 28). There are, broadly-speaking, two types of compounds: primary compounds (sometimes called root compounds) and secondary (sometimes called synthetic/verbal) compounds. A root compound is a compound whose head is not deverbal or whose non-head does not have the function of argument of the embedded verb, whereas a synthetic compound has a head that is deverbal and its non-head is an argument of the embedded verb.

According to the data collected, most of the Kimeru newly-coined naming units formed through the process of compounding are synthetic compounds and are all nouns. However, there is also a small fraction of nouns that falls under the so-called root/primary compounds.

Moreover, apart from the above-mentioned types of compound naming units whose formation process fits neatly within the confines of word-formation, there are others like those formed by combining a derived adjective with a noun, e.g., 'muntu-umunene'(an adult) and 'kaana-kanini'(a baby), and others like 'ngari-entiiri'(donkey cart) and 'mwari-o-cukuru'(school-girl), whose formation is

syntactically-based: these will be discussed under the ‘Syntactically-based Word-formation’ heading.

The following discussion (4.4.1) illustrates how members of each of the named categories are coined.

4.4.1 Formation of Primary (Root) Compounds

As pointed out above, the only primary/root compounds formed in Kimeru are nouns and they are few in number. Those nominal root compounds in Kimeru are coined on the basis of OT3, whereby the determined element of the onomasiological structure is not linguistically expressed. What is included in their onomasiological mark is only the determining constituent. In Kimeru, the resultant Incomplete Complex Structure will be labelled ICSR, since in Kimeru as opposed to English, the linguistically expressed constituent of the onomasiological mark is on the right-hand side (hence the letter ‘R’). At this juncture, it is worth remembering that the OT3 can also have a sub-type whose determining constituent of the onomasiological mark is structured into the ‘specifying’ and the ‘specified’ elements (Stekauer, P. 2001:14), as Kimeru has nominal naming units that also fall under that sub-category, for example, ‘muntu-mũka-ntũrũtũ’ (a difficult woman).

According to the data collected, some of the Kimeru nominal root compounds are, on the basis of semantically-oriented classification criteria, endocentric while others are exocentric. An endocentric compound is a compound in which the compound itself is a hyponym of its grammatical head (Bauer, L. 1984:30), e.g., ‘mũka-ntomũrũme’ and ‘ĩtonga-nkia’. In this regard, ‘mũka-ntomũrũme’ is a type of ‘mũka’ and ‘ĩtonga-nkia’ is a type of ‘nkia’. An exocentric compound, on the other hand, is not a hyponym of the grammatical head, but rather, a hyponym of some unexpressed semantic head, e.g., ‘kinda-kinene’(a pot-bellied man) and “kini-kiiru“ (a person with too conspicuously black gums). Let us now consider the formation of each of the two categories of nominal root compounds in greater detail:

4.4.1.1 Endocentric Nominal Root Compounds

As already mentioned, the majority of Kimeru endocentric nominal root compounds is formed by joining a noun to a derived adjectival stem (e.g., ‘kaana + kanini → kaana-kanini’), and this type of naming units will be discussed under the heading of syntactically-based word-formation that is yet to come in later parts of this chapter. However, a small number of the endocentric nominal root compounds are formed by joining a noun to another noun as shown in the table below.

Table 4.21: Formation of endocentric root compounds

Source: Field data (2012)

Noun:	Noun:	→	New Compound Noun
mũka +	ntomũrũme		mũka-ntomũrũme
/moka	ntomorome		mokantomorome/
‘woman’	‘man’		‘a man-like woman’
 ĩtonga /etŋga/ +	 nkia /ŋkja/ →		 ĩtonga-nkia /etŋgaŋkja/
‘tycoon’	‘pauper’		‘a miserly tycoon’

Let us consider the coinage of the naming unit ‘mũka-ntomũrũme’, from the above table, as an example:

Conceptual level:-

It is SUBSTANCE₁

SUBSTANCE₁ is Human

The Human is female/a Woman

The Woman has a QUALITY different from a typical woman’s

Her QUALITY is rather typical of that of SUBSTANCE₂

SUBSTANCE₂ is the male Human/man, etc.

Semantic level:-

[+MATERIAL] [+ANIMATE] [+HUMAN] [+FEMALE] [+ADULT]
[+QUALITY] [+PATTERN] [+MAN-LIKE];

Onomasiological level:

SUBSTANCE	-	QUALITY
Patient	- (state) -	Pattern

The above logical-semantic relation indicates that the QUALITY of SUBSTANCE₁ is patterned on the behaviour or quality of SUBSTANCE₂, hence the onomatological level will yield the following form:

Onomatological level:-

FMAP:	Patient	- (state)-	Pattern
	muka	∅	
	ntomūrūme		

Phonological level:-

Moka + ntomorme → mokantomorome

4.4.1.2 Exocentric Compounds

These are the compounds which have zero “determinatum”, i.e., one lying outside the compound (Marchand 1960:11). From an onomasiological perspective, an exocentric compound is one which, on the basis of its meaning, has an onomasiological base or head that is not linguistically expressed, but can only be inferred from the meaning of the compound. Consider the following examples:

Table 4.22: Formation of Exocentric Compounds

Source: Field data (2012)

ngũlũ-ntune ‘guinea-fowl’(literally, “red legs”)

kĩnda-kinene ‘pot-bellied man’(literally, “big stomach”)

The OT posits that the formation of such exocentric compound naming units follows a two-step process: first, the formation of an auxiliary, onomasiologically-complete naming unit which is endocentric; and second, an elliptical shortening step in which the onomasiological base or the head of the endocentric compound is deleted, resulting in the exocentric compound (see Pavol, S. 2001:31). For exemplification, let us try to reconstruct the cognitive process responsible for the formation of the word “Ngũlũ-ntune” (above) which is used to refer to the guinea-fowl, but which literally translates to “red legs”.

Conceptual Level:

It is SUBSTANCE₁

SUBSTANCE₁ is animate

It is a wild bird/fowl

It is characterised by having SUBSTANCE₂

SUBSTANCE₂ is the red-coloured legs

Semantic Level:

[+SUBSTANCE] [+MATERIAL] [+ ANIMATE] [+ BIRD] [+WILD] [+ RED LEGS]

Onomasiological Level:

From the conceptual analysis, it follows that the seme “bird/fowl” is to be taken as the onomasiological base of the new naming unit since it ‘identifies’ the “object” to be named with a whole, general class of objects, i.e., “birds”. Then the seme indicating the colour of legs is a “specification” seme, hence the onomasiological mark.

Therefore, the conceptual analysis leads us to the following onomasiological structure:

SUBSTANCE_ SUBSTANCE

Still in line with our conceptual analysis, we will choose to do our naming on the basis of the subtype of OT3 structure which has the determining constituent of the onomasiological mark structured into the specifying and the specified elements. In our case, “Ngũlũ” is the ‘specified’ element while “ntune” is the ‘specifying’ element. The onomasiological connective will, therefore, appear thus:

SUBSTANCE _ SUBSTANCE

Patient Stative

Onomatological Level:

Upon the application of the FMAP, we get:

Patient _ Stative

nyoni ngũlũ ntune

Note that the auxiliary naming unit so far formed, i.e., “Nyoni Ngũlũ- ntune” (“red-legs fowl”), is an endocentric compound since “Nyoni Ngũlũ- ntune” is a kind of “Nyoni”.

Morphophonological Level:

nyoni + ngũlũ-ntune → nyoni ngũlũ-ntune

At this juncture, we now apply the process of elliptical shortening, by deleting the ‘base’ member of the structure (the ‘head’ of the endocentric compound), “nyoni”, thereby leaving “Ngũlũ- ntune”, the exocentric compound, as a kind of clipping. This is represented as follows:

nyoni ngũlũ-ntune → [nyoni] ngũlũ-ntune ◀
 └──────────┬──────────┘

Upon clipping, the clipped version inherits the lexical and grammatical features of the full auxiliary naming unit that gave birth to it, as is typical of all clippings.

4.4.2 Synthetic/Secondary Compounds

As already mentioned in the introductory part of the topic on compounds, a synthetic compound has a head that is deverbal and its non-head functions as an argument of the embedded verb. In Kimeru, a synthetic compound exists as a noun-noun compound in which the second element is interpreted as the object of the verb contained within the first, as in the data below.

Table 4.23: Formation of synthetic/secondary compounds

Source: Field data (2012)

Word:	Gloss:
Mwĩĩthia-ngarĩ /mweteðjangare/	vehicle driver
mũwati-mwana /mowatimwana/	babysitter
mũbandi-ngómbe /moβandiŋɔmbe/	cow-inseminator

Synthetic Compounding is a fully productive word-formation process in Kimeru, as one can form any Kimeru synthetic compound using this process, hence they are very common in Kimeru as the research data suggests. But what or how is the cognitive process behind the formation of such compounds, from an onomasiological viewpoint? Let us investigate the formation of the naming unit “mũwati-mwana” (babysitter), as an example:

Conceptual Level:

It is SUBSTANCE₁

SUBSTANCE₁ is Human

The Human performs ACTION

ACTION is the Human’s profession

ACTION entails looking after SUBSTANCE₁SUBSTANCE₂ is a baby

Semantic Level:

[+ MATERIAL] [+ ANIMATE] [+ HUMAN] [+ ADULT] [+ PROFESSION];

[+ MATERIAL] [+ ANIMATE] [+ HUMAN] [+YOUNG-ONE] [+ BABY], etc.

Onomasiological Level:

Informed by the conceptual analysis, we make SUBSTANCE₁ and SUBSTANCE₂ the polar members of the onomasiological structure, with the link between the two SUBSTANCES being the actional relation between them, which is important with regard to the naming intention. Hence we get:

SUBSTANCE_ SUBSTANCE

We then express the Onomasiological Connective as shown below, on the basis of CCS type (OT1):

Ag - Act - (Logical) Obj

Where:

Ag (Agent) stands for SUBSTANCE₁, the onomasiological base; Act (Action) stands for ACTION, the determined constituent of the onomasiological mark; and Obj (Object) for SUBSTANCE₂, the determining constituent of the onomasiological mark.

Onomatological Level:

After the application of FMAP, we get:

Ag - Act - (Logical) Obj

mũ- wata mwana

Morphophonological Level:

/mo + wata + mwana / → /mowatimwana/

4.5 Syntactically-based Word-Formation

From our research data, it turns out that a considerable number of the Kimeru new naming units are coined through another process that does not neatly fit in the definition of word-formation; rather, their formation appears to be syntactically-based. This is because, for instance, the naming units make use of typical syntactic elements like articles, prepositions, conjunctions, etc., and grammatical morphemes such as agreement and number morphemes and so on, elements whose combinability is governed by syntactic rules rather than word-formation rules. Some of those syntactically-formed naming units are phrase-based while others are sentence-based as shown below.

4.5.1 Phrase-based Word -formation

The phrase-based Kimeru naming units identified in our research include some compound nouns and all the derived adjectives. Let us discuss each of the two at a time.

4.5.1.1 Phrase-based Compound Nouns

The data below shows some examples of phrase-based compound nouns:

Table 4.24: Formation of phrase-based compound nouns.

Source: Field data (2012)

a) mūkomunto /mōkōmunto/ (mūka + wa+ muntū)

‘somebody’s wife’ (wife of somebody)

(b) mwariocukuru /mwareɔcukuru/ (mwari + wa + cukuru)

‘school-girl’ (girl of school)

(c) karamu-ka-rangi /karamukaraŋgi/ (karamu + ka + rangi)

‘ink-pen’ (pen of ink)

(d) iti-bia-kanica /iteβjakanica/ (iti + bia + kanica)

‘chairs of the church’

The naming units in examples (a_d) above clearly began as noun Phrases as can be deduced from an examination of their constituent components: in each case, a head noun being described (modified) by a prepositional phrase, e.g.:

“wa muntũ” modifies “mũka”

“wa cukuru” modifies “mwari”

“ka rangi” modifies “karamu”.

Therefore, the words were initially coined in the form of mere descriptive phrases, and examples like (a) and (b) were then collapsed into single words, probably, first in speech and then later in written form. Note that the ‘-a’ preposition that introduces the prepositional phrase, which but only loosely has a genitive meaning, has a form that must agree with the head noun depending on the noun-class.

Having confirmed that these naming units are formed through a syntactically-oriented process, then a pertinent question arises: How well does their formation process auger with our Onomasiological Theoretical framework? Let us try to answer this question by attempting to onomasiologically trace the coinage of one of them, ”mwari-wa-cukuru/mwariocukuru”, as an example.

Conceptual Level:

It is SUBSTANCE₁

The SUBSTANCE₁ is Animate

It is Human

It is a female human

The female Human is of school-going age

She ‘belongs to’ (attends) a school, etc.

Semantic Level:

[+ MATERIAL] [+ ANIMATE] [+ HUMAN] [+ FEMALE] [+ ACTION(STATE)]
[+ BELONGING TO] [+ SCHOOL], etc.

Onomasiological Level:

From the conceptual analysis, “mwari” is the onomasiological base while “wa cukuru” is the onomasiological mark. We then choose OT2 for the structure, and make SUBSTANCE and STATE the polar members of the onomasiological structure. Hence the onomasiological connective will be:

SUBSTANCE - STATE

Obj – Act (state)

Onomatological Level:

Obj – Act (state)

FMAP → mwari _ ?

Note that a problem arises at this stage: we are unable to apply the FMAP principle to the onomasiological mark (“wa-cukuru”) of the onomasiological structure, hence the question marks above, due the fact that it contains a syntactic element, “wa”, which cannot be sourced from the Lexical Component (since it cannot be found there) by the Word-formation Component. Therefore, here the Onomasiological Theory of Word-formation falls short. However, at least, the basic principle of the theory is complied with, that is, these naming units are also generated by productive rules, but which, arguably, as Pavol, S. (2001:27) suggests, might result in a partly irregular structure. With regard to this problem, perhaps the saving grace for the theory is to assume that the Word-formation Component will, through the mediation of the Lexical Component, source the problematic syntactic element from the Syntactic Component together with the relevant syntactic rules. Otherwise if this particular hurdle is overcome, the process of formation of the naming unit in question will continue smoothly through the Morphophonological Level till the end product, i.e., “mwariocukuru” is obtained.

4.5.1.2 Phrase-based Adjectives

Consider the following data:

Table 4.25: Formation of phrase-based adjectives

Source: Field data (2012)

- (a). ũmũtune /omotune/ (ũmũ- + -tune) ‘a brown (person)’
- (b). ũmũraya /omoraja/ (ũmũ- + -raya) ‘a tall (person)’
- (c). bũmatu /βũmatu/ (bũ- + matu) ‘thick (porridge)’
- (d). ĩmiingĩ /emi:ŋge/ (ĩmi- + ingĩ) ‘many (trees)’

The naming units in examples (a_d) above are all derived adjectives formed by adding a grammatical morpheme, a noun-adjective agreement morpheme, to a relevant adjectival root. These adjectival roots are the basic adjectives in Kimeru which normally exist as bound morphemes. The noun-adjective agreement morphemes vary depending on the different noun-class prefixes and the inflectional category of number, and their combinability with the adjectival bound stems during the derivation of the longer derived adjective is dictated by syntactic rules. For example, the agreement morpheme “ũmũ-“ is used to derive adjectives that modify singular members of the noun-class 1/2 which comprises nouns referring to people; and “ ĩmi-“ is used to derive adjectives that are used to modify plural nouns that fall under the class 2/4, i.e., those referring to trees. Although “ũmũ-“ and “ ĩmi-“ are inflectional morphemes, they end up being part and parcel of the morphology of the derived adjective since the corresponding basic adjective’s form is not a free morpheme.

To further clarify the point that the derived Kimeru adjective is phrase-based, consider the fact that its very existence presupposes the existence of a given corresponding noun with which it formally agrees and modifies. That means, then, that the derived adjective can be said to be initially formed within a relatively specific noun-phrase after which the noun that it modifies is ellipted leaving the adjective, e.g., “ũmũtune“ was initially formed as, say, “muntũ ũmũtune” (brown person) after which the noun “muntũ” was removed.

From an Onomasiological Theory perspective, the formation of this type of naming units is even harder to explain than the phrase-based compound noun because of the fact that the FMAP of the Onomatological Level cannot be applied to the onomasiological base, which conceptually appears to be the morpheme [mũ-] in “ũmũ-“, without leaving the grammatical element “ũ” unaccounted for. This is because the grammatical element can only be accounted for by the Syntactic Component and not the Word-formation Component. That handicap notwithstanding, the formation process that gives rise to the Kimeru derived adjective can still be seen as constituting a productive process although it only partly conforms to the tenets of the Onomasiological Theory of word-formation.

4.5.2 Sentence-based Word-formation (Nouns)

Consider the form of the following naming units (table 4.26):

Table 4.26: Sentence-based word-formation (nouns)

Source: Field data (2012)

(i) ba-nkaimba-rũũyũ /βaŋkaimbaro:jo/

‘those-who-say-I-will-thatch-tomorrow’ (the procrastinators)

(ii) ba-ngai-ntethia /βaŋgainteðja/

‘those-who-merely-say-God-help-me’

(iii) wamparirwa /wamparerwa/

‘Don’t-diarrhoea-on-me’ (a type of plastic open shoes, popularly known, in short, as “wampa”)

(iv) ngwatira-nthoni-mwana-athome /ŋwatiranðonimwana:ðomε/

‘Respect-me-so-my-child-may-continue-schooling’ (a type of poor man’s rubber sandals)

(v) kanini-utimeria /kani:niotemεrja/

‘A small-but-you-cannot-swallow thing’

Informal Kimeru can have a considerable number of such constructions that are clearly sentential syntactically-generated units but which function like single naming units. Most of them are used as nouns, as the meanings of the above examples reveal. Now, are such units, which are formally complete sentences in their own right, formed through the same cognitive process as the ordinary naming units? Let us pick on one of them, example (i) above, and try to fit it in the OT model of word-formation.

Conceptual Level:

It is SUBSTANCE

The SUBSTANCE is Animate

It is Human

The Human has a characteristic QUALITY

The QUALITY is a Habit

The Habit involves an ACTION

The ACTION is postponing doing things /postponing thatching to ‘tomorrow’, etc.

Semantic Level:

[+ MATERIAL] [+ ANIMATE] [+ HUMAN] [+ PLURAL] [+ QUALITY] [+ HABIT] [+ POSTPONING] [+ TO TOMORROW] [+ THATCHING], etc.

Onomasiological Level:

Following the OT II, as per the logical conceptual analysis, we get:

SUBSTANCE - ACTION

Obj (plural) - Act

Onomatological Level:

Obj (plural) - Act

FMAP → ba-?

Again at this stage, just like the other cases (above) of syntactically-based word-formation, the FMAP cannot be applied to one of the constituents of the onomasiological structure, in this case, the onomasiological mark, for the same reason as explained above. Therefore, we can generally say that the OT cannot fully explain the syntactically-based word-formation phenomenon as exhibited by the Kimeru language.

4.6.0 Conclusion

Generally, from our discussion in this chapter, we conclude that the different processes by which new NUs are formed in kimeru depend on the conceptual-semantic field to which the new coinage will belong. We have also found out that there may be sub-fields within the larger conceptual-semantic fields, in which case there will be specific WFRs operating within them. It then follows that the productivity of the word-formation processes/word-formation rules only obtains within the confines of their individual conceptual-semantic fields or sub-fields of operation.

Furthermore, the semantic facet of the bilateral units that serve as the raw material in the WF processes appears to be a basic consideration in each WF process.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter comprises a general summary of the findings of our research, the conclusions drawn based on the findings as well as some suggestions for further research on related areas. The findings will constitute the basis upon which to test our hypotheses with a view to validating or invalidating them.

5.1 Summary of the Findings

To begin with, our analysis of the research data revealed four types of Onomasiological Structures, variously referred to as Onomasiological Types (OTs) in this research, as the general word-formation processes that facilitate the coinage of new naming units in Kimeru language, and further revealed that the particular ‘onomasiological structure’ employed in each case depends on the conceptual-semantic field to which the naming unit to be coined belongs as well as the prerequisite conceptual analysis of the “object” to be named. We also found out that the said OTs, formed the bases for more specific and regular word-formation rules (WFRs) that operate within specific different conceptual-semantic fields to yield new NUs in the respective fields as the need arises. The following are the different OTs and the corresponding WFRs in the different conceptual-semantic fields in Kimeru.

5.1.1 Onomasiological Type I

This onomasiological structure type is used in the formation of Kimeru synthetic compound nouns that are formed by ‘compounding’ a deverbal noun with another noun. Hence we may formulate the WFR thus:

OT I: Agent - Action – Object

mũ-/ki- + verb + noun

The above word-formation rule (WFR) is one hundred percent productive as it can be applied in the coinage of any Kimeru synthetic compound noun, as the need arises,

and it is also regular. This is evidenced by the fact that synthetic compound nouns are very common in Kimeru and are relatively easy to form.

5.1.2 Onomasiological Type II

It is employed in the formation of new NUs in the following conceptual-semantic fields:

1. Agentive nouns:

These include two sub-categories:

a) Agentive nouns referring to a human agent of an action/activity.

These are formed using the WFR below:

OT II: Agent - Action

mũ- + verb

b) Agentive nouns referring to an inanimate agent of an action/activity, i.e., an instrument/a tool/a gadget.

They are formed using the following WFR:

OT II: Agent – Action

ki- + verb

2. Abstract nouns formed from adjectives:

All these nouns have the general meaning: ‘the state/fact/quality of being what is specified by the adjective’. The WFR:

OT II: State – Quality

ũ- + Adjective

3. Abstract nouns formed from verbs:

They all have the general meaning of: ‘the state/act/process/fact of what is indicated by the verb’.

They are coined using the WFR that follows:

OT II: State – Action

ũ- + verb

4. Syntactically-formed NUs:

We found out that a remarkable portion of new Kimeru NUs is formed through a process that is syntactically-based. The NUs fall under two broad categories, i.e.:

a) The Phrase-based ones, and

b) The Sentence-based.

The phrase-based syntactically-formed NUs in Kimeru include the compound nouns formed by linking a noun to a noun phrase that is constructed using the noun-class-specific noun-genitive agreement prepositional morpheme, and the derived adjectives formed by adding a corresponding noun-adjective agreement prefix to an adjectival bound morpheme root. The former may, tentatively, be said to be products of the WFR below:

OT II: Object – State

noun + ‘-a’-linked genitive prepositional phrase

The Kimeru derived adjectives, on the other hand, may be said, tentatively, to be formed using the following WFR:

OT II: Object – Quality

noun-adjective agreement prefix + basic form of adjective

For the sentence-based NUs, we found out that Kimeru has some NUs of variable full-sentence lengths and their usage is functionally mostly nominal. They appear to be products of productive WFRs although the resultant structures are irregular, thus they partly obey OT’s basic principle. For such Kimeru NUs, we tentatively propose the following WFR:

OT II: Object (plural) – Quality

ba- + Sentencial construction

Note that we have used the word ‘tentatively’ when formulating the WFRs relating to the syntactically-based NUs because, remember, we encountered a problem at the Onomatological Level of OT when trying to explain the formation of this category of NUs since the WFC could not get phrasal or sentential linguistic forms to march with the semes of the onomasiological mark directly from the LC.

5.1.3 Onomasiological Type III

The OT III structure is used to form the following Kimeru NUs:

1. Nouns referring to names of plants:

OT III: Agent – (Action) – Obj

mũ-/mw- + Name of plant product

The prefix ‘mw-’ is attached to a name beginning with a vowel sound

2. Nouns referring to inhabitants of a place/citizens of a country/members of a social grouping.

OT 3: Ag – (Act) – Obj

mu-/mw- + Proper noun

3. Proper nouns referring to son’s names.

Ag – (Act) - Obj

M’- + Father’s name

4. Proper nouns referring to daughter’s names.

Ag _ (Act) – Obj

Cio-/Mwo- + Father’s name

5. Proper nouns referring collectively to: ‘the family members of a certain head’ or informally and jokingly, “somebody’s people”. The following rule applies:

OT III: FMAP: Obj – (Act) – Ag

ba- + Ø + family head's name

6. Adverbs of manner based on nouns:

OT III: FMAP: Manner – (Act) – Pattern

ki- + Ø + noun

7. Primary (root) compound nouns:

We found out that the only primary compounds in Kimeru that are coined are nouns, and they are formed by joining a noun to another noun in accordance with the WFR given below.

OT III: FMAP: Patient – (state) – Pattern

noun + Ø + noun

5.1.4: Onomasiological Type IV (OT IV)

This onomasiological structure is employed in the formation of the following NUs:

1. Concrete nouns formed from adjectives, with the general meaning: ‘person or thing having the quality specified by the adjective’.

They are formed by adding to an adjective a prefix identical to the noun-class prefix (singular or plural as the case may be) of the noun class to which the new naming unit will belong based on OT IV structure:

OT IV: FMAP: Substance – Quality

Noun-class prefix + basic form of adjective

2. Pejorative nouns:

They are formed based on OT IV by adding the prefixes ‘ru-/rw-’ or ‘ki-’ to a noun as captured by the WRF below:

OT IV: FMAP: Quality – Substance

ru-/rw- or ki- + Noun

‘Ru-/rw-‘ means ‘too many hence unwanted’ or ‘too thin hence undesirable’, while ‘ki-’ has the sense of ‘too big and ugly’.

Moreover, ‘ru-’ goes with stems beginning with a consonant while ‘rw- goes’ with stems that begin with a vowel.

3. Augmentative nouns.

They are formed by adding the prefix ‘ki-/i-’, used interchangeably except if the stem begins with an ‘i’ in which case it has to take ‘ki-’.

The WFR that applies:

OT IV: FMAP: Qual – Subst

ki-/i- + noun

4. Diminutive nouns.

They are formed by adding the prefix ‘ka-’ to a noun in line with OT IV structure, as captured by the WFR below:

OT IV: FMAP: Qual – Subst

ka- + noun

5. Verbs:

We found out that many verbal NUs are formed on the basis of OT IV. They include the following:

i). To-infinitives.

They are formed as per the following WFR:

OT IV: FMAP: Qual – Act

ku-/kw- + verb

‘Ku-’ is added to stems beginning with a consonant while ‘kw-’ is added to stems beginning with a vowel.

ii). Verbs with the meaning: ‘to do something on behalf of or for somebody’.

They are formed by adding the suffix ‘-ria/-ra’ to a verb as per the WFR below:

OT IV: FMAP: Process – Process

verb + -ria

iii). Verbs with the meaning: ‘(of an activity or action) to be done or completed’.

OT IV: FMAP: Process – State

verb + -ika

iv). Verbs with the general meaning of: ‘to undo or reverse an action’.

They are coined by adding the suffix ‘-ukia’ to a verb:

OT IV: FMAP: Act – Neg Act

verb + -ukia

V). Verbs with the meaning: ‘to prolong or hurry up a specified activity or action’.

Formed by adding the suffix ‘-nga’ to a verbal stem:

OT IV: FMAP: Act – Manner

verb + -nga

vi). Verbs with the general meaning of: ‘to make or have somebody/something do something’:

They are formed by adding the suffix ‘-ethia’ to a verb according to the WFR below:

OT IV: FMAP: Act – Process

verb + -thia

In relation to Kimeru verb formation, we also discovered that the only verbal NUs formed by a process involving prefixation are the infinitives; all the others are produced by suffixation.

5.2 CONCLUSIONS

From our analysis of our research data and the subsequent findings, we can draw the following conclusions:

One, that Kimeru word-formation can be handled from an onomasiological perspective and the research data accounted for using the Onomasiological Theory of Word-formation. However, the theory fails to adequately and conclusively explain the syntactically-based word-formation processes in Kimeru.

The second is that all the Kimeru word-formation processes are one hundred percent productive and regular, but their productivity and the degree of it only obtains within their specific conceptual-semantic fields or sub-fields of operation. This observation concurs with what Stekauer, P. (2001:7) observes with regard to WF processes.

The third conclusion that we can draw from our findings is that, contrary to Stekauer's claim (Stekauer, P. 2001:6) that there are no productive syntactically-based word-formation processes in natural languages. Kimeru appears to have some that are clearly productive, though their structures, especially for the sentence-based ones, are not regular.

5.3 RECOMMENDATIONS

We recommend that more studies on Kimeru word-formation be carried out using other theories of word-formation, such as the Generative theories, for comparative purposes, since this study only restricted itself within the confines of an onomasiological approach to word-formation. More research is needed on especially the cases of syntactically-based word-formation in Kimeru language since the Onomasiological Theory tools employed in our research could not adequately and conclusively account for the phenomenon. In the same vein, we would like to suggest that more research be conducted on Kimeru morpho-syntax if only to make clearer the relationship between Kimeru word-formation (morphology) and Kimeru syntax.

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APPENDIX

Research Data (2012)

On Kimeru Word-Formation Processes

1. Formation of Nouns:

i). Formation of nouns referring to human agents

Verb		Gloss	Noun		Gloss
rĩm-a	/rema/	‘dig’	mũ-rĩm-i	/moremi/	‘farmer’
ru-a	/rua/	‘cook’	mũ-ru-i	/morui/	‘cook’
ĩt-a	/eta/	‘travel’	mw-ĩt-i	/mweti/	‘traveller’
Itia	/itja/	‘climb’	mw-itia	/mwitja/	‘climber’
koob-a	/kɔ:βa/	‘borrow money’	mũ-koob-i	/mokɔ:βi /	‘debtor’

ii). Formation of nouns referring to inanimate agents

Verb	Gloss	Derived Noun	Gloss
eera /ε:r-a/	‘sweep’	kĩ-eeri /keε:ri /	‘broom’
muunya	‘suck’	kĩ-muunyi /kemu:ɲi/	‘sucker’
chuunka	‘sieve’(V)	gĩ-chuunki /ɣetʃu:ŋki	‘sieve’(N)

iii) Formation of nouns referring to names of plants

Name of fruit / product		Gloss	The plant		Gloss
ĩembe	/eembe/	‘mango’	mũ-embe	/moembe/	‘mango tree’
nthoroko	/ŋðɔɾɔkɔ/	‘bean’	mũ-tholoko	/moðɔɾɔkɔ/	bean plant’
mbakĩ	/mbake/	‘tobacco’	mũ-bakĩ	/moβake/	‘tobacco plant’
ĩndimũ	/endimo/	‘lemon’	mũ-ndimũ	/mondimo/	‘lemon tree’
ngarrama	/ŋgarama/	‘a wild fruit’	mwa-rrama	/mwarama/	‘mwarrama tree’
mbarĩki	/mbareki/	castorseed	mw-arĩki	/mwareki/	‘castor tree ’
mbaũ	/mbao/	‘timber’	mũ-bau	/moβao/	‘timber tree’(eucalyptus)

iv). Formation of concrete nouns referring to ‘a person/thing having the quality specified by the adjective’

Derived Noun	Gloss
mo:mε (mo-+-omε)	intelligent person
ŋɬomε (ŋ-+-omε)	intelligent animal
kjomε (ke-+-omε)	intelligent thing

v). Formation of abstract nouns referring to ‘state/fact/quality of being what is specified by the adjective’

Adjective	Gloss	Abstract Noun	Gloss
nũru /noru/	‘fat/fertile’	ũ-nũru /onoru/	‘fatness/fertility’
tune /tunε/	‘red/brown’	ũ-tune /otunε/	‘redness/brownness’
nini /nini/	‘small’	ũ-nini /onini/	‘smallness’
raya /raja/	‘long/tall’	ũ-rayya /oraja/	‘length/tallness’

vi). Formation of abstract nouns referring to ‘state/fact/act/process indicated by the verb’

Verb	Gloss	Abstract Noun	Gloss
ritana /ritana/	‘teach’	u-ritani /oritani/	‘teachings’
leba /leβa/	‘get drunk’	u-lebi /oleβi/	‘alcoholism’
nywa /ɲwa/	‘drink’	u-nyui /oɲui/	‘capacity to drink’
ongela /ɔŋgela/	‘add’	wongeli /wɔŋgeli/	‘addition’

vii). Formation of pejorative nouns

Noun	gloss	pejorative noun	gloss
caai /ca:e/	tea	rũ-caaĩ/roca:i/	too thin and tasteless tea.
mwana /mwana/	child	rw- ana /rwana/	too many and undesirable children
muntũ /monto/	person	rũ-munto /romunto/	too many and unwanted people
m ũka /moka/	woman	kĩ-mũka /kemoka/	too big and ugly woman

viii): Formation of augmentative nouns

Noun	gloss	augmentative noun	gloss
ng'ombe /ŋɔmbɛ/	cow	kĩ/ĩ-ng'ombe /keŋɔmbɛ/	a big cow
mũtĩ /mote/	tree	kĩ /ĩ-mũtĩ /kemotɛ/	a big tree
mwana /mwana/	baby/child	kĩ/ ĩ-ana /kjana/	a big baby/ child

ix). Formation of diminutive nouns

Noun :	Gloss	Diminutive noun	Gloss
nyumba /ɲumba/	house	ka- nyumba / kaɲumba/	a small house
metha /mɛða/	table	ka-metha /kamɛða/	a small table
Ĩrinda /erinda/	dress	ka-linda /kalinda/	a small dress

**x).Formation of nouns referring to names of inhabitants of a place/
citizens/members of specified social grouping**

Proper noun	gloss	Derived proper noun	gloss
Kenya /keɲa	a country	Mũ-kenya /mokeɲa/	a kenyan
Imenti /imenti/	a place/region	Mw-imenti /mwimenti/	a person from imenti
kanisa /kanica/	the church	mũ-kanisa /mokanica/	church-goer
kiama /kjama/	council/party	mũ-kiama /mokjama/	a member of council

xi). Formation of nouns referring to names of sons of specific persons

Father's name:

Derived son's name:

Mwenda /mwɛnda/

M'mwenda /ntɔmwɛnda/

Mūbwika /moβweka/

M'mūbwika /ntɔmoβweka/

Kurranja /kuraŋʃa/

M'kurranja /ntɔkuraŋʃa/

xii). Formation of nouns referring to names of daughters of specific persons

Father's name:

Derived daughter's name:

Mītheya /meðɛja/

Mwomītheya, ciomītheya /mwɔmeðɛja/, /cjɔmeðɛja/

Mwenda /mwɛnda/

Mwomwenda/ciomwenda

xiii). Formation of nouns with the notion of 'somebody's people' or the family members of a specific person

Noun	Gloss	Derived noun	Gloss
Muka /moka/	'wife'	ba- mūka /βamoka/	'the wife's people/relatives'
mwīyī /mweje/	'boy'	ba-mwiyi /βamweje/	boy's people/relatives
Taitumu /taitumu/	Taitumu(name)	ba-Taitumu /βataitumu/	'the Taitumus (as a family)'

2. Formation of Adverbs (adverbs of manner)

Noun	Gloss	Derived Adverb	Gloss
ngeerre /ŋgɛ:rɛ/	‘sheep’	kĩ-ngeerre /kɛŋgɛ:rɛ/	‘sheepishly’
matharau/maðarao/	‘provocation’	kĩ-matharau /kemaðarao/	‘provocatively’
icima /icima/	‘respect’	kĩ-icima /keicima/	‘respectfully’
waana /wa:na/	‘childishness’	kĩ-waana /kewa:na/	‘childishly’

3. Formation of Verbs

i). To-infinitives

Verb	Gloss	Infinitive Form	Gloss
endia /ɛndja/	‘sell’	kwendia /kwendja/	‘to sell’
Ũra /ora/	‘buy’	kwūra /kwora/	to ‘buy’
romba /rɔmba/	‘beg/pray’	kũ-romba /korɔmba/	

ii). Verbs with the meaning: ‘do something on behalf of or for somebody’.

Verb:	Gloss	New Verb	Gloss
okethia /ɔkɛðja/	oversee building of	okethi-ria/ɔkɛðirja	‘oversee building on behalf of’
thomithia /ðɔmiðja/	teach of	thomithi-ria/ðɔmiðirja/	‘teach on behalf of’
Ītīthia /eteðja/	drive	ītīthi-ria/eterja/	‘drive on behalf of’

iii). Verbs that mean: “to be done/completed” (of an activity/action)

Verb	Gloss	New verb	Gloss
baanga /βa:ŋga	‘organise’	baang-ĩka /βa:ŋgeka/	‘get organised’
thia /ðia/	‘grind’	thi-ĩka /ðieka/	‘be ground’
romba /rɔmba	‘pray’	romb-eka /rɔmbeka/	‘get prayed’
kaatha /ka:ða/	‘praise’	kaath-ĩka /ka:ðeka/	‘be praised’

iv). Verbs that mean: “to undo or reverse an action”

Verb	Gloss	New Verb	Gloss
ethia /ɛðja/	do	eth-ũkia’ /ɛðokja/	undo
tongethia /tɔŋgɛðja/	touch	tongeth-ũkia /tɔŋgɛðokja	stop touching
kiamia /kɟama/	bend	kiam-ũkia /kɟamokja/	straighten

v). Verbs with the meaning: “to prolong or to hurry a specified activity up”

Verb	Gloss	Derived Verb	Gloss
rua /rua/	‘cook’	ru-anga /ruaŋga/	‘cook faster/ for longer’
ona /ɔna	‘watch’	on-anga	‘watch for longer/ see quickly’

vi). Verbs with the meaning: “to make or have somebody/something do something”

Verb	Gloss	New Verb	Gloss
eera /ɛ:ra/	‘sweep’	eere-thia /ɛ:rɛðja/	‘make somebody sweep’
onka /ɔŋka/	‘suck/suckle’	onke-thia /ɔŋkɛðja/	‘Make/have somebody suck or suckle’
wata /wata/	‘hold’	watī-thia /wateðja/	‘make somebody hold’

4. Formation of Compound Words (Nouns)

a). Root/Primary Compounds

i). Endocentric root compounds

Noun:	Noun:	New Compound Noun
mũka + /moka	ntomũrũme ntɔmorome	mũka-ntomũrũme mokantɔmorome/
‘woman’	‘man’	‘a man-like woman’

ĩtonga /etɔŋga/ + nkia /ŋkja/ → ĩtonga-nkia /etɔŋgaŋkja/
 ‘tycoon’ ‘pauper’ ’a miserly tycoon’

ii). Exocentric compounds

ngũlũ-ntune ‘guinea-fowl’(literally, “red legs”)

kĩnda-kinene ‘pot-bellied man’(literally, “big stomach”)

b). Formation of synthetic/secondary compounds)

Word:

mwĩtĩthia-ngarĩ /mweteðjaŋgare/

mũwati-mwana /mowatimwana/

mũbandi-ngómbē /moβandiŋɔmbɛ/

Gloss:

vehicle driver

babysitter

cow-inseminator

c). Syntactically-based Word-formation

1. Formation of phrase-based compound nouns.

i) mũkomunto /mokɔmunto/ (mũka + wa+ muntũ)

‘Somebody’s wife’ (wife of somebody)

(ii) mwariocukuru /mwareɔcukuru/ (mwari + wa + cukuru)

‘School-girl’ (girl of school)

(iii) karamu-ka-rangi /karamukaraŋgi/ (karamu + ka + rangi)

‘Ink-pen’ (pen of ink)

(iv) iti-bia-kanica /iteβjakanica/ (iti + bia + kanica)

‘chairs of the church’

2. Formation of phrase-based adjectives

(a). ũmũtune /omotune/ (ũmũ- + -tune) ‘a brown (person)’

(b). ũmũraya /omoraja/ (ũmũ- + -raya) ‘a tall (person)’

(c). bũmatu /βũmatu/ (bũ- + matu) ‘ridge’

(d). Imiingĩ /emi:ŋge/ (ĩmi- + ingĩ) ‘many (trees)’

3. Sentence-based word-formation (nouns)

(i) ba-nkaimba-rũũyũ /βaŋkaimbaro:jo/

‘Those-who-say-I-will-thatch-tomorrow’ (the procrastinators)

(ii) ba-ngai-ntethia /βaŋgainteðja/

‘Those-who-merely-say-God-help-me’

(iii) wamparirwa /wamparerwa/

‘Don’t-diarrhoea-on-me’ (a type of plastic open shoes, popularly known, in short, as “wampa”)

(iv) ngwatira-nthoni-mwana-athome /ŋgwatiranðɔnimwana:ðɔmɛ/

‘Respect-me-so-my-child-may-continue-schooling’ (a type of poor man’s rubber sandals)

(v) kanini-utimeria /kani:niotemɛɾja/

‘A small-but-you-cannot-swallow thing’