The Kimbugwe noun class system and its interaction with semantics
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List of abbreviations

APPL	applicative
AUG	augment
AUX	auxiliary
CAUS	causative
CONN	connective
COP	copula
DEM	demonstrative
DIST	distal
FOC	focus
FUT	future
FV	final vowel
IPFV	imperfective
LOC	locative
MASC	masculine
NARR	narrative past
NEUT	neuter
NMLZ	nominalizer
NP	noun prefix
OBJ	object marker
PFV	perfective
PL	plural
POSS	possessive
PROX	proximal
PRS	present
PST	past
REF	referential
SBJ	subject marker
SBJV	subjunctive
SG	singular

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1. Introduction

This thesis aims to describe the noun class system and its interaction with semantics in the Bantu language Kimbugwe (ISO 639-3). This language is spoken in Tanzania in the area between the southern end of Lake Manyara and Babati (Wilhelmsen 2018:21). It is an under-described language and can be considered endangered according to UNESCO (2003), because it is not an official and written language. This makes it an important language to document and describe. The Mbugwe youth mostly speak KiSwahili, as this is used in schools and is a national language. This is influencing how the Mbugwe people speak their language, as can be seen throughout this thesis. It is likely that the KiSwahili influence will only grow if this situation continues. This is why it is important to document and describe the language as soon as possible. This thesis will add to the existing literature on Kimbugwe, but also on Bantu languages in general, which has typological value, and will show the linguistic diversity of the area the language is spoken in. Why it is relevant to look at the noun class system and its interaction with semantics, can be explained through the research questions that will be answered in this thesis. First of all, it is important to be familiar with the formal noun class system of Kimbugwe before showing how it interacts with semantics. This is why the first research question is 'What does the formal noun class system of Kimbugwe look like?' The second research question is 'Do Kimbugwe noun classes have semantic tendencies?' and will give insight into how nouns are spread across the noun classes. Since the Proto-Bantu noun classes are reconstructed with clear-cut semantic distinctions, the question is how much of this remains in current Kimbugwe, and, if there are specific semantic categories to be found in the classes, how do these relate to each other? This tells us something about how the human brain associates between meanings and how much of an effect this has on grammar. In light of the answer to this question, it is interesting to see how the semantics of the noun classes are used within derivation, and show how the derivations depend on these semantics, which will be the answer to the third research question 'How are nouns derived in Kimbugwe?'. The fourth research question is 'Is number best analyzed as inflection or derivation?' and will contribute to the debate on analyzing number within noun classes. This will add to an understanding of the conceptualization of noun classes, and their semantics, among Kimbugwe speakers. Lastly, the question 'In what ways do semantics overrule the formal noun class system?' will be answered. This answer will show how semantics impose certain structures throughout the agreement system, and will prove that the associative feature of semantics shapes language, and through this, people's view on the world. The combination of the research questions answers the overarching question; 'How does the noun class system of Kimbugwe interact with semantics?' and will thus contribute to the understanding of the human mind. The subquestions are repeated below:

1. What does the formal noun class system of Kimbugwe look like?

2. Do Kimbugwe noun classes have semantic tendencies?

3. How are nouns derived in Kimbugwe?

4. Is number best analyzed as inflection or derivation?

5. In what ways do semantics overrule the formal noun class system?

This thesis consists of a total of 7 sections. After an introduction to the Mbugwe language and people, and previous research on this, Section 2 introduces grammatical gender as a cross-linguistic concept, in order to understand Section 3, which describes the formal noun class system of Kimbugwe (research question 1) and the inherent semantics of the Kimbugwe noun classes (research question 2). Section 4 discusses

derivational processes in this language (research question 3), and Section 5 is concerned with the issue of number within the noun classes and whether this can be analyzed as inflection or derivation in this particular language (research question 4). Section 6 describes the agreement patterns that are triggered by semantics rather than formal features in different parts of the grammar (research question 5). The thesis ends with a discussion of the analyses, how these can be interpreted, and suggestions for further research.

1.1. Language and people

The Kimbugwe language is classified as F34 by the Guthrie classification (Maho 2009:45). According to LOT (2009), it is spoken by approximately 37.000 people, but Wilhelmsen (2011:1) mentions that the number of speakers is around 24.000, and probably less. It is part of the Eastern Branch of Bantu languages within the Niger-Congo language family (Grollemund et al. 2015). It is closely related to the Rangi language (F33). Kimbugwe may also be called Buwe, Kemboowɛ, Kimbugwe, Kiumbugwe, or Mbuwe (Eberhard, Simons, and Fennig 2022). The language is spoken in Northern Tanzania, between Arusha and Babati (Wilhemsen 2011:1), and is surrounded by the non-Bantu languages Iraqw, Gorwaa, Maasai, Sandawe, and Hadza.

1.2. Previous research

Some previous research has been done on Kimbugwe. The earliest works on Kimbugwe are by Baumann (1894), who provides a list of numbers, Seidel (1898), who gives a short word list, Struck (1909), providing notes on Mbugwe, and Dempwolff (1915-1916) who wrote a grammatical overview of the language. Gray (1953, 1955, 1963) has written mostly ethnographic works about the Mbugwe people. Kimbugwe has been included in Masele (2001), who gives an overview of the linguistic history of Bantu zone F languages. Mous (2000) wrote an article on the infinitive-auxiliary order in Kimbugwe, and in 2004 he published a Grammatical Sketch of Mbugwe. More recently, Wilhelmsen (2018) has written 'A Linguistic Description of Mbugwe with Focus on Tone and Verbal Morphology', which has been very helpful in writing this thesis. Lastly, Poole (2021) gave a talk on the noun class 5 prefix in Kimbugwe.

1.3. Methodology and data collection

The data for this thesis were collected on a six-week field trip to Magugu, which is a relatively large town in the Manyara region in Tanzania. On this field trip in January 2022, 25 elicitation sessions were conducted. The elicitation sessions required the language consultant to translate into or from Kimbugwe and judge the grammaticality of Kimbugwe phrases. In addition, some stories were recorded, and transcribed. All of the sessions were recorded on a Zoom H6 recorder and transcribed by hand during the sessions. The files were recorded in a WAV format and saved in several places in order to ensure their durability. The language consultant, Martin Adolph Saamu, is a 30-year-old native speaker of Kimbugwe and studied to become a teacher. Next to Kimbugwe, he also speaks KiSwahili and English. The metalanguage during the elicitation sessions was mostly English, and sometimes KiSwahili. All of the data have been partially digitized and fully analyzed, in order to write this thesis.

1.4. Notes on orthography

Poole's orthography has been adopted in this thesis (p.c. 2022). The phoneme-grapheme correspondences are shown in the table below. These graphemes have been chosen to resemble KiSwahili orthography. Kimbugwe is a tonal language and has two tones; high and low. High surface tone is marked on the examples by means of an acute accent – unmarked vowels can be considered to have a low surface tone. For a description of tone in Kimbugwe, see Wilhelmsen (2018).

Table 1. Mbugwe graphemes (Poole, p.c. 2022)

Phoneme	Grapheme	Consonant cluster	Grapheme	Phoneme	Grapheme
/p/	\<p\>	/mp/	\<mp\>	/a/	\<a\>
/b/	\<b\>	/mb/	\<mb\>	/e/	\<e\>
/t/	\<t\>	/nt/	\<nt\>	/ɛ/	\<ɛ\>
/d/	\<d\>	/nd/	\<nd\>	/i/	\<i\>
/c/	\<ch\>	/ɲc/	\<nch\>	/o/	\<o\>
/d͡ʒ/	\<j\>	/nd͡ʒ/	\<nj\>	/ɔ/	\<ɔ\>
/k/	\<k\>	/ŋk/	\<nk\>	/u/	\<u\>
/g/	\<g\>	/ŋg/	\<ng\>	/aː/	\<aa\>
/f/	\<f\>			/eː/	\<ee\>
/v/	\<v\>			/ɛː/	\<ɛɛ\>
/s/	\<s\>	/ns/	\<ns\>	/iː/	\<ii\>
/ç/	\<sh\>	/ɲç/	\<nsh\>	/oː/	\<oo\>
/h/	\<h\>			/ɔː/	\<ɔɔ\>
/m/	\<m\>			/uː/	\<uu\>
/n/	\<n\>	/nj/	\<ny\>		
/ɲ/	\<ny\>				
/ŋ/	\<ng'\>				
/r/	\<r\>				
/l/	\<l\>				
/j/	\<y\>	/Cj/	\<Cy\>		
/w/	\<w\>	/Cw/	\<Cw\>		

2. Grammatical gender: an introduction

In order to understand the interaction of the noun class system and semantics, it is important to define what a noun class system is. Bantu languages are often said to have noun class systems, which is also called a gender system. As by definition of Hockett, 'genders are classes of nouns reflected in the behavior of associated words' (Hockett 1958, 231). Gender systems exist in languages all over the world. This section discusses variation in gender systems across the world and gender in Bantu languages. Grammatical gender can be found in various languages families. Many Indo-European languages have gender, as well as Dravidian languages, and numerous Afro-Asiatic languages. Three of the four language phyla in Africa (Nilo-Saharan, Niger-Kordofanian (Niger Congo) and Khoisan) have languages with gender systems. Also, in New-Guinea and Australia, many languages occur that make use of gender. Language families that do not have gender systems are mostly found in Asia and the Americas (Corbett 1991:2). Which words are marked for gender agreement varies across languages. English for example only shows agreement on personal pronouns (example 1 and 2) and possessive pronouns (example 3 and 4). Both the noun and the pronouns showing agreement are marked in bold in the examples below.

1. *I see **the boat**. **It** is blue.*
2. *I see **the man**. **He** is tall.*
3. ***The hotel** restored **its** roof.*
4. ***Isabella** is a painter. **Her** paintings are beautiful.*

In Bantu languages, a lot more words are marked for agreement, also outside the determiner phrase (DP), such as subject and object agreement on the verb. Example 5 shows subject agreement in the Bantu language Kami, where the subject agreement of the noun *lwifi* 'door' (class 11) is marked in bold.

5. Kami (Petzell and Aunio 2019:576. Glosses adapted)
   ***Lw**-ifi   lu-fug-uk-a.*
   NP11-door   AP.SBJ11-open-NEUT-FV
   'The door opened.'

Languages also vary in the number of genders that are present. Whereas German has only three genders, some Bantu languages have 23 (Brooks & Kempe 2014:259).

There is a difference between local and non-local agreement patterns of gender. Local agreement patterns (also called concord) show agreement on words within the DP, as in example 6 below in bold. Non-local agreement patterns show agreement between a noun and a pronoun referring to it (Brooks & Kempe 2014:259), as in examples 1 to 4 in English.

6. Swahili (Bantu) (Welmers 1973:171 as cited in Corbett 1991:117)
   ***Ki**-kapu **ki**-kubwa **ki**-moja   ki-li-anguk-a.*
   7-basket 7-large   7-one   7SM-PST-fall-FV
   'One large basket fell.' (glosses adapted)

There is often a phonological cue that a noun belongs to a certain gender. For example, in Spanish, the canonical masculine ending is *-o* most masculine nouns have a suffix *-o* e.g. *el pato* 'the duck', but there are exceptions like *el arroz* 'the rice' (Kroff, Rooijakkers, & Parafita Couto 2019:2). Identical agreement patterns are sometimes triggered by nouns with different phonological cues, and identical marking on nouns does not guarantee an identical agreement pattern. Therefore, phonological cues cannot predict gender (Brooks & Kempe 2014:260). Only the agreement on other elements in the sentence can be used to identify gender.

Gender systems are also called noun class systems (see Corbett 2001 for discussion on these terms). According to Corbett (2001), there is no difference between a 'noun class' and a 'gender', but within Bantu linguistics, 'noun class' is often used to denote a single class, while 'gender' is used to denote a class pair, consisting of the singular and plural form. Since the term 'noun class system' is more commonly used in Bantu, I will use this term from now on. Noun classes are a common feature of Bantu languages, and ancestor Proto-Niger-Congo is reconstructed as having noun classes as well (Hepburn-Gray 2020). Güldemann (2011:12) states the following; 'elaborate systems of gender-number markers on nouns […] can be safely assumed to go back to Proto-Niger-Congo'. According to Di Garbo et al. (2019), Bantu languages have mature and highly grammaticalized noun class systems that have "opaque patterns of assignment" (Di Garbo et al. 2019:255-256). This means that noun class assignment is not based on natural gender. Bantu noun classes are referred to by numbers 1-23. The same numbers for the classes are used across different Bantu languages. The numbering system was first used in Meinhof (1906) in his reconstruction of the Proto-Bantu noun class prefixes. Such a numbering system can be helpful in comparing Bantu languages (Van de Velde 2019:238). The odd class numbers often denote a singular and the even class numbers the corresponding plural, but there are exceptions, as we will also see in Kimbugwe (see Section 3). While 19 noun classes have been reconstructed for Proto-Bantu, as can be seen in the table below (Meeussen 1967:97), the number of noun classes nowadays varies in different Bantu languages.

Table 2. Proto-Bantu noun prefixes

Classes	Noun Prefix
1	*mu
2	*ba
3	*mu
4	*mi
5	*i̧
6	*ma
7	*ki
8	*bi
9	*n
10	*n
11	*du
12	*ka
13	*tu
14	*bu
15	*ku

16	*pa
17	*ku-
18	*mu
19	*pi-

(Meeussen 1967:97; adapted)

Bantu nouns consist of a stem to which the noun class prefix is added (Van de Velde 2019:237), formerly in Proto-Bantu the prefixes in table 1 from Meeussen (1967). Agreement is expressed as a prefix to other parts of speech, as we will see throughout this thesis.

In Bantu languages, the meaning of a noun cannot predict the noun class. However, in many Bantu languages, there are semantic tendencies; nouns with similar meanings are found in the same classes. As said earlier, classes 1 and 2 are often used for nouns referring to humans, as in example 7 of the Bantu language Cuwabo. Liquids can typically be found in class 6 (Van de Velde 2019:242). This is shown in the Bantu language Kami in example 8. Augmentatives are often be created with classes 7 and 8 and diminutives with 12, 13 or 19 (Van de Velde 2019:242). Example 9 shows a diminutive in class 12 in the Bantu language Ndengeleko. The majority of animal nouns are usually in classes 9 and 10, as in Chimpoto in example 10, and class 14 often contains abstract nouns, as in example 11. Class 15 typically contains infinitives. Classes 16 to 18 are used to indicate a location, for example in Kami, where the class 18 marking gives a locative interpretation, as shown in example 12.

7. Cuwabo (Guérois 2015:269. Glosses adapted)
   mw-ááná
   NP1-child
   'child'
8. Kami (Petzell and Aunio 2019:576. Glosses adapted)
   ma-zi
   NP6-water
   'water'
9. Ndengeleko (Ström 2013:195. Glosses adapted)
   ka-pésa   ka-úu
   NP12-hare   AP12-white
   'little white hare'
10. Chimpoto (Botne 2019:715. Glosses adapted)
    m-buhi
    NP9-goat
    'goat'
11. Cuwabo (Guérois 2019:748. Glossed adapted)
    o-zómbwè
    NP14-youth
    'youth'
12. Kami (Petzell and Aunio 2019:585)
    mw-i-biki
    NP18-NP4-tree
    'in the tree'

With this general background of gender and noun classes in Bantu in mind, we now turn to the formal noun class system of Kimbugwe.

3. Noun classes of Kimbugwe

This section discusses the formal noun class system of Kimbugwe. It is important to be familiar with this system before exploring how it interacts with semantics. Kimbugwe has 17 noun classes, as is shown and described in Wilhelmsen (2018) and Mous (2004). Nouns in this languages are marked by a noun prefix indicating its noun class and associated modifiers are marked by an agreement prefix. This section is made up of two subsections; Section 3.1 discusses the noun prefixes, and their agreement, and Section 3.2 discusses whether the noun classes have inherent semantic tendencies.

3.1. Prefixes and agreement

The noun class and agreement prefixes of Kimbugwe are shown in the table below. Forms in light gray areas are taken from Wilhelmsen (2018), and a dark gray area indicates the absence of an agreement prefix; either because they are logically impossible or because they are not found yet. Noun classes 1 to 19 are present in Kimbugwe, with the exception of class 13 and 18. Class 18 is present in the table below because class 18 agreement is sometimes triggered, as will be explained below.

Table 3. Noun class prefixes

Class number	Noun prefix	Adjective	Subject marker	Object marker	Possessive	Numeral	Proximal demonstrative	Demonstrative -ɔ	Distant demonstrative -ra	Connective	Example
1	mɔ- / mw-	mɔ-	a- / ɔ- / w-	mɔ-	w-	ɔ-	o-o	owɔ	ɔ-	w-	mɔ-kɔlɔɔ 'elder'
2	va-	va-	va-	va-	v-	va-	a-va	avɔ	va-	v-	va-kɔlɔɔ 'elders'
3	mɔ-	mɔ-	ɔ-	o-	w-	ɔ-	o-o	owɔ	ɔ-	w-	mɔ-sénsé 'hen'
4	mi-	me-	e-	e-	y-	e-	e-e	eyɔ	e-	y-	mi-sénsé 'hen'
5	∅/ i- / r(i)-	ri-	re-	re-	r-	re-	e-re	erɔ	re-	r-	shéέrɔ 'broom'
6	ma-	ma-	a-	a-	a-	a-	a-a	awɔ	a-	∅	ma-shéέrɔ 'brooms'

8

7	ke- / ch-	ke-	ke-	ke-	ch-	ke-	e-ke / e-che	echɔ	ke-	ch-	kekápu 'basket'
8	vi-	vi-	vi-	vi-	v- / vy-	vi-	i-vi	ivyɔ	vi-	vy-	vikápu 'baskets'
9	N / ∅	∅ / N / nj-	e- / y-	e-	y-	e-	e-e	eyɔ	ɛ-	y- / j-	ng'oombé 'cow'
10	N / ∅	∅ / N / nj-	ji-	ji-	j-	i-	i-ji	ijɔ	ji-	j- / y-	ng'oombé 'cows'
11	lo-	lo-	lo-	lo-	lw-	lo-	o-o	olɔ	o- / lo-	l-	lo-ojé 'river'
12	ka-	ka-	ka-	ka-	ka-	ka-	a-ka	akɔ	ka-	k-	ka-chɔ́rio 'chick'
14	o- / w-	mɔ-	o-	o-	w-	o-	o-o	owɔ	o-	w-	ó-ónga 'flour'
15	o- / kɔ-	kɔ-	ko-	ko-	kw-	ko-	oko	okɔ	ko-	kw-	o-fá-á 'to benifit'
16	fa-	-	fa-	fa-	f-	fa-	a-fa	fafɔ / afɔ	fa-	f-	fáá-nto 'place'
17	kɔ-	kɔ-	kɔ-	ko-	kw-	ko-	oko	kɔko / okɔ	kɔ-	kw-	kɔ-rimɔ́ 'afterworld'
18	X		mɔ-					mumo	mu-		X
19	fi- / fy- / sha-	fi- / sha-	fi-	fi-	fy- / sh-	fi-	ifi	ifyɔ	fi-	fy-	fi-chɔ́rio 'chicks'

Most nouns occur in pairs, with a singular in one noun class and a plural in the other.
See the overview below for the prototypical singular-plural pairings.

Table 4. Singular-plural pairings

Singular	Plural
1	2
3	4
5	6
7	8

9	10
11	10
12	19
14	6

It is important to note that not all the singular-plural pairings are regular. For example, the word for 'insect' is pluralized as follows:

13. *mɔdúúdu*
    mɔ-duudu
    NP1-insect
    'insect'
14. *viidúúdu*
    vi-duudu
    NP8-insect
    'insects'

Class 1 subject marking is interesting because both prefixes *a-* and *ɔ-* can be triggered (Wilhelmsen 2018:138), as is shown in the two examples below. What triggers the different subject markers is a topic for further research.

15. *Mɔ́ntɔ akɛ́ɛ́tíngɔka.*
    mɔ-ntɔ   a-kɛɛ-tingɔk-a
    NP1-person AP.SBJ1-PRS-walk-FV
    'A person walks.'
16. *Mɔkɔ́lɔ   ɔra   ɔkɛ́ɛ́tíngoka   mjíní.*
    mɔ-kɔlɔ   ɔ-ra   ɔ-kee-tingok-a   mji-ni
    NP1-grandfather AP1-DEM.DIST AP.SBJ1-IPFV-walk-FV 3.town-LOC
    'This grandfather walks in town.'

The noun class prefix of class 5 has different allomorphs, which is illustrated in the examples below. This discussed in Poole (2021). Nouns with a *ri-* prefix are a specific subgroup of lexemes that start in [*i*], as in example 17. The zero morpheme (or, lack of marking) is seen when the noun occurs at the beginning of a phonological phrase, as in example 18. Throughout the thesis, this will be glossed as in example 20. The *i-* prefix is used in all other environments, as in example 19. Poole argues the *i-* prefix is possibly an augment, from a historical point of view. Interestingly, this 'augment' has also been observed once in adjective agreement (example 20).

17. *ri-*
    rííso
    ri-iso
    NP5-eye
    'eye'
18. ∅
    Valú ra shúli nkélokéra.
    ∅-valu r-a   shul-i   n-ké-lok-ɛ́r-a
    NP5-side AP5-CONN NP9.school-LOC 1SG.SBJ-PRS-pass-APPL-FV
    'I am walking by the school.'

19. *i-*

   Kↄré ivalú ra shúli nkélokɛ́ra.

kↄ-ré	i-valú	r-a	shul-i	n-ké-lok-ɛ́r-a
AP.SBJ17-COP	NP5-side	AP5-CONN	9.school-LOC	1SG.SM-PRS-pass-APPL-FV

   'I am walking by the school.'

20. *duka irija*

duka	i-ri-ja
5.shop	AUG-AP5-good

   'the good shop'

Class 7 agreement prefixes are either formed with *k* or *ch*. The forms seem to be in free variation, as is shown in the examples below where both demonstratives can be chosen when modifying a noun, the only difference being postnominal (example 21) and prenominal (example 22).

21. *kemáká éké né keve.*

ke-maka	e-ke	ne	ke-ve
NP7-thing	AP7-7.DEM.PROX	COP	AP7-ugly

   'This something or someone is ugly.'

22. *éché kekápu*

e-che	ke-kapu
AP7-7.DEM.PROX	NP7-basket

   'this basket'

Nouns that occur in class 9/10 look identical, but trigger different agreement depending on whether they are singular or plural reference, as is shown in example 23 and 24. Based on derived nominals, it can be proven that a nasal is used as a prefix for these classes. This nasal assimilates to the place of articulation of the first consonant of the noun. This is shown in example 25 where the prefix surfaces as an alveolar nasal because of the alveolar /l/ that follows, which becomes a voiced stop after the nasal. Nouns that do not start in a nasal can also occur in these classes, as in example 26.

23. *éé ng'óómbe*

e-e	ng'oombe
AP9-9.DEM.PROX	9.cow

   'this cow'

24. *íjí ng'ↄ́ↄ́mbe*

i-ji	ng'oombe
AP10-10.DEM.PROX	10.cow

   'these cows'

25. *ndↄ́seki* < *ↄlↄ́seka*

N-lↄsek-i	ↄ-lↄsek-a
NP9-speak-NMLZ	NP15-speak-FV

   'a conversation'   'to speak'

26. *birↄ́ éé*

birↄ	e-e
NP9.warmth	AP9-9.DEM.PROX

   'this heat'

Class 18 is an agreement-only class. So far, no nouns have been found with a class 18 prefix triggering class 18 agreement. However, class 18 subject marking is found as the subject marker of a conditional clause, replacing formal agreement. In example 27, the class 9 subject marking is replaced by class 18 subject marking, where it could

refer to a temporal location ('if/when'). No other dependent clauses have been found. In addition, the class can be used in spatial demonstrative, as in example 28.

27. *Mɔkéétova mbúla ɔwáálá koojé mbɛ́ɔ.*
    mɔ-kee-tov-a   mbula   ɔ-waal-a   koo-je   mbɛɔ
    AP.SBJ18-IPFV-fall-FV 9.rain   NP15-plant-fv   1PL.SBJ-FUT.AUX 10.seed
    'If the rain falls, we can plant seeds.'

28. *múmó náre*
    mu-mo   n-a-re
    AP18-18.DEM.REF   1SG.SBJ-PST-COP
    'I was here.'

3.2. Inherent semantics of noun classes

This section aims to answer research question 2: 'Do Kimbugwe noun classes have semantic tendencies?'. It will illustrate how nouns are spread across the noun classes. If there are semantic categories, how do these relate to each other? There have been several attempts at reconstructing semantic categories of the noun classes in Proto-Bantu. Below, the reconstructions of Creider (1975) and Givón (1971) are given. It is likely that some of the meanings reconstructed for the noun classes of Proto-Bantu are still present in present-day Bantu languages. According to Contini-Morava, no noun class system is fully arbitrary, 'Even the most apparently chaotic systems show some semantic motivation in the assignment of nouns to classes'. She argues that 'the interconnected senses are abstractions over clusters of meanings of lexical stems that all share a common noun class markers' (Contini-Morava 2002:4-5).

Creider (1975:128)

1/2	people
3/4	trees
5/6	paired parts of the body
6	uncountables like liquids, collectives
9/10	wild animals
11	abstracts
14	abstracts, uncountables
15	the 'infinitive'
15/6	paired parts of the body
16	precise, limited, defined place, time at which
17	imprecise, vague, undefined place, direction
18	place in or around edge of, time within which

Givón (1971:33, as cited in Creider 1975)

3/4	plants
5/6	fruits
7/8	inanimates
9/10	animals
11/10	elongated objects
12/13	small objects
14	masses
6	liquids
15/6	paired body parts
15	infinitive nominalizations

12

The inherent semantic tendencies of the Kimbugwe noun classes are shown in this section. Based on a Kimbugwe word list of 1267 nouns, semantic categories of each class or class pair were explored. The classes and the number of nouns in it are listed in the table below. The word list is made up of data from Poole (p.c. 2022), Mous (2004), and data collected during fieldwork. These last data were collected through a questionnaire containing various semantic fields. As will be seen throughout this section, nouns with the same form and similar meaning are sometimes still considered separate lexemes, because they are entered as separate lexemes in the word list.

Table 5. Number of nouns per class

Class	Number of nouns
1/2	192
3/4	149
4	12
5/6	203
6	15
7/8	175
8	2
9/10	300
9/6	32
11/10	40
10	5
11	15
12/19	9
14	91
14/6	5
15/6	3
16	2
17	17

The categories that were found within a noun class can sometimes be linked to each other. In these cases, a semantic network is proposed and visualized. However, it is important to keep in mind that these are merely notes on semantic links, and not hypotheses about the development of the semantics within the noun classes or about the way speakers conceptualize the noun classes. In order to answer those questions, psycholinguistic research is needed.

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3.2.1. Overview class semantics

Class 1/2

The word list contains 192 class 1/2 nouns. All nouns in this class refer to humans. Some of the meanings of class 1/2 nouns are shown in examples 29-38.

29. *mo-baatisi*
    NP1-baptiser
    'baptiser'
30. *va-dima*
    NP2-fool
    'fools'
31. *mw-eembererwa*
    NP1-student
    'pupil, student'
32. *va-ana*
    NP2-child
    'sons, children'
33. *mw-aanga*
    NP1-doctor
    'healer, doctor'
34. *v-eemi*
    NP2-builder
    'builders'
35. *mo-fyɔɔmi*
    NP1-foreigner
    'foreigner'
36. *va-iretu*
    NP2-daughter
    'girls, daughters'
37. *mw-aivi*
    NP1-thief
    'thief'
38. *va-ka*
    NP2-wife
    'wifes'

There are 40 nouns that do not have the regular class 1/2 prefixes, but do trigger class 1/2 agreement. These nouns are considered class 1a/2a. Some of the meanings of class 1a/2a nouns are illustrated in examples 39-48. Many kinship terms are in this subclass.

39. *maamey*
    1a.ancestor
    'ancestor'
40. *maawe*
    1a.mother
    'mother, aunt'
41. *fiyaane*
    1a.sister.in.law
    'sister-in-law'
42. *marafi*
    1a.friend
    'friend'
43. *baaba*
    1a.father
    'father'
44. *nyinakolo*
    1a.mother.in.law
    'mother-in-law'
45. *maange*
    1a.brother.in.law
    'brother-in-law'
46. *hamu*
    1a.glutton
    'glutton'
47. *ijova*
    1a.lord
    'Lord'
48. *kiristu*
    1a.christ
    Christ'

Class 3/4

In the word list, class 3/4 consists of 149 nouns. The largest category in this noun class is Nature. Within this category, several subcategories were found, such as nouns relating to trees, areal surroundings, water, plants, weather and fire. Although nouns referring to trees and plants do occur in this noun class, they only make up 12% of the total. This is different from the reconstructed meanings in Proto-Bantu (Creider 1975; Givón 1972). Other large categories in this class are nouns relating to the Human body and Elongated objects. The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 149 nouns in this class are given in brackets.

Nature (35 - 23%):

   Tree (14 - 9%):

49. *me-te*
    NP4-tree
    'trees'
50. *mɔɔ-tii*
    NP3-fig.tree
    'fig tree'
51. *mo-gomba*
    NP3-wild.fig.tree
    'wild fig tree'
52. *mo-pira*
    NP3-rubber.tree
    'rubber tree', etc.
53. *me-siinkɔ*
    NP4-tamarind.tree
    'tamarind trees'

54. *mo-suufi*
    NP3-kapok.tree
    'kapok tree'
55. *mo-sofwaa*
    NP3-kapok.tree
    'kapok tree'
56. *mw-iindee*
    NP3-ebony.tree
    'ebony tree'
57. *mo-vulee*
    NP3-teak.tree
    'teak tree'
58. *mo-gomba*
    NP3-banana.tree
    'banana tree'

   Areal (6 - 4%):

59. *mw-eembe*
    NP3-mountain
    'mountain'
60. *mo-giingitɔ*
    NP3-slope
    'slope'
61. *mu-sangaa*
    NP3-sand
    'sand'

62. *mo-kɔwa*
    NP3-region
    'region'
63. *mɔ-ɔ*
    NP3-crack
    'crevice, crack'
64. *me-tate*
    NP4-crevice
    'crevices'

   Water (5 - 3%):

65. *me-fulɔ*
    NP4-river
    'rivers'
66. *mo-onkanana*
    NP3-stream
    'ditch, stream, river'
67. *mɔ-kɔndɔ*
    NP3-current
    'current'

68. *mw-ainá*
    NP3-water.source
    'water source'
69. *me-nyinyinyinyi*
    NP4-drizzle
    'drizzles'

   Plant (5 – 3%):

70. *mo-teete*
    NP3-reed
    'reed'
71. *me-saabibu*
    NP4-vine
    'vines'

72. *mo-tɛrɛrɛko*
    NP3-slime
    'slime'
73. *mw-iiwa*
    NP3-thorn
    'thorn'

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74. *mo-nyoonyo*
NP3-castor.plant
'castor plant'

Weather (3 - 2%):

75. *mo-layɔ*
NP3-lightning
'lightning'

76. *mo-o*
NP3-sunshine
'sunshine'

Fire (2 - 1%):

77. *mo-oki*
NP3-smoke
'smoke'

78. *my-ɔɔtɔ*
NP4-fire
'fires'

Human body (21 - 14%):

79. *mo-loonde*
NP3-shin.bone
'shin bone'

84. *me-vere*
NP4-body
'bodies'

80. *me-shumaari*
NP4-nail
'nails'

85. *mo-twɛ*
NP3-head
'head'

81. *mo-kɔnɔ*
NP3-arm
'arm, hand'

86. *mɔ-ɔngɔ*
NP3-back
'back'

82. *mo-nwɛ*
NP3-finger
'finger'

87. *mo-merɔ*
NP3-throat
'throat, larynx'

83. *mo-mbero*
NP3-skin.of.man
'skin of man'

88. *mo-kɔva*
NP3-womb
'womb'

Elongated objects (21 - 14%):

89. *mw-airɛrɛryɔ*
NP3-stairs
'ladder, stairs'

93. *mo-ri*
NP3-rope
'rope'

90. *mo-naara*
NP3-tower
'tower'

94. *me-enkinya*
NP4-toothbrush
'toothbrushes'

91. *me-kufa*
NP4-needle
'needle'

95. *mo-tiikɔ*
NP3-spoon.for.cooking
'spoon for cooking'

92. *me-rɛɛsa*
NP4-stick
'stick'

96. *mo-oyé*
NP3-arrow
'arrow'

97. *mo-onse*
    NP3-pestle
    'pestle'

98. *mo-konkojo*
    NP3-stick.for.walking
    'stick for walking'

Time (8 - 5%):

99. *mw-eeri*
    NP3-moon
    'moon, month'
100. *my-aaka*
    NP4-year
    'years'
101. *mo-chwee*
    NP3-dawn
    'dawn'
102. *mo-namɔ*
    NP3-season
    'season'

103. *mo-onsé*
    NP3-afternoon
    'afternoon, daytime'
104. *mo-onsekate*
    NP3-midday
    'midday'
105. *mo-tɔɔndɔ*
    NP3-morning
    'morning'
106. *mo-nanoongo*
    NP3-dusk
    'dusk'

Hollow objects (7 - 5%):

107. *mw-ɛɛva*
    NP3-area.for.storing
    'area for storing'
108. *mo-rigɔ*
    NP3-luggage
    'luggage'
109. *mo-riinga*
    NP3-manger
    'manger'
110. *me-ruungu*
    NP4-tube
    'tubes'

111. *mo-riinga*
    NP3-small.canoe
    'small canoe'
112. *me-sɛmɛ*
    NP4-big.canoe
    'big canoes',
113. *mu-uwɔ*
    NP3-bellows
    'bellows'

Skin-like objects (5 - 3%):

114. *mw-ɛɛnda*
    NP3-tunic
    'tunic, cloak'
115. *mw-ɛɛnda*
    NP3-sheet
    'sheet'
116. *me-fukɔ*
    NP4-bag
    'bags'

117. *mo-fɔtɔ*
    NP3-wrink
    'wrinkle, crease, fold'
118. *me-seemperere*
    NP4-cloth.strip
    'cloth strips'

Areal human creation (2 - 1%):

119. *mo-oye*
NP3-city
'city'

120. *mu-naada*
NP3-market
'market'

Abstract (16 - 11%):

121. *mo-fakɔ*
NP3-offering
'offering'

122. *mo-koombe*
NP3-verse
'verse'

123. *mo-paka*
NP3-boundary
'boundary'

124. *mw-aikalɔ*
NP3-life
'life'

125. *mw-aanjɔ*
NP3-love
'love'

126. *mi-iro*
NP4-taboo
'taboos'

127. *mw-airɔ*
NP3-law
'law'

128. *mo-rɛrɔ*
NP3-peace
'peace, happiness'

129. *mo-saanan'ya*
NP3-example
'example'

130. *mw-endaa*
NP3-inheritance
'inheritance'

Animal (related) (9 - 6%):

131. *mw-aina*
NP3-hippopotamus
'hippopotamus'

132. *me-enkuti*
NP4-puppy
'puppies'

133. *mo-sowa*
NP3-termite
'termite'

134. *me-kuunga*
NP4-eel
'eels'

135. *mo-nyoo*
NP3-intestinal.worm
'intestinal worm'

136. *mo-sense*
NP3-hen
'hen'

137. *mo-kera*
NP3-tail
'tail'

138. *mo-koombe*
NP3-animal.track
'animal track'

139. *mo-rume*
NP3-roar
'roar'

Other (8 - 5%):

140. *mo-fene*
NP3-handle
'handle'

141. *mo-fɛfɔ*
NP3-shadow
'shadow'

142. *mo-ririmo*
NP3-shadow.of.person
'shadow of person'
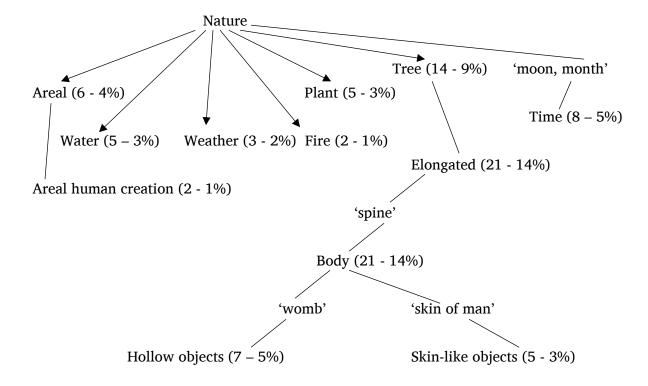
143. *mo-fɛtɔ*
NP3-trap
'trap'

144. *me-gɔnɔ*
    NP4-fish.trap
    'fish traps'
145. *mo-lori*
    NP3-whistle
    'whistle'
146. *mo-kuunjɔ*
    NP3-curve
    'curve'

147. *mo-pira*
    NP3-rubber
    'rubber'
148. *mo-taabaayi*
    NP3-stopper.for.gourd
    'stopper for gourd'

The meanings of the categories can be linked to each other. Below a semantic network of class 3/4 is shown. An arrow indicates a subcategory and a line indicates a link between the semantic categories. Three of the categories were not included (Abstract, Animal, and Other), as they could not be linked to the other categories. Individual nouns make the links between several categories. The category of Nature can be linked to the category of Time through the word 'moon, month', because its meaning relates to both domains. The category of Tree can be linked to Elongated, because trees are generally made up of elongated shapes. Also, a 'spine' is elongated, but also a body part, so it can link those two categories. Then, from Body related nouns, we can link to Hollow objects through the noun for 'womb', since it fits both categories. Lastly, there is a category of Skin-like objects, which can be linked to Body related nouns through the word for 'skin of man'.

Figure 1. Semantic network class 3/4

Class 4

Class 4 is made up of 12 nouns in the word list that was used. It seems that 6 of them are nominalizations:

149. *me-kiindo*
    NP4-trampling
    'trampling'
150. *me-yaati*
    NP4-sneeze
    'sneeze'
151. *me-yɔɔnɔ*
    NP4-snore
    'snore'

152. *me-sɛɛrɛryɔ*
    NP4-temptation
    'temptation'
153. *me-toongererya*
    NP4-introduction
    'introduction'
154. *me-toongererya*
    NP4-start
    'start, beginning'

2 of the nouns seem to be nouns that would fit into class 3/4; they have plant-like semantics, which corresponds to the 'plant' category in class 3/4. In addition, the noun 'plants, seedlings' refers to a plural entity, which is what is expected of a plural of class 3.

155. *me-mɛra*
    NP4-plant
    'plants, seedlings'

156. *mi-imbi*
    NP4-bud
    'bud'

The remainder of the nouns in class 4 were not recognized for category:

157. *me-ryoongo*
    NP4-miracle
    'miracle'
158. *me-nyɔrɔɔrɔ*
    NP4-chain
    'chains'

159. *my-oongo*
    NP4-chaff
    'chaff'
160. *me-rɔɔngɔ*
    NP4-group.of.ten
    'group of ten'

Class 5/6

In the word list, class 5/6 consists of 203 nouns. The largest category in this noun class are words for Objects. Other big categories were nouns relating to Nature, and nouns with a augmentative or pejorative connotation. The reconstructed meaning for class 5/6 by Givón (1971), 'fruits', does exist in present-day Kimbugwe, but only concerns 2% of all the nouns in this noun class. The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 203 nouns in this class are given in brackets.

Object (39 - 19%):

161. *turi*
    5.peg
    'peg'
162. *i-tala*
    NP5-platform
    'platform'
163. *fɛɛngɛrɛ*
    5.window
    'window'

164. *baambarisa*
    5.sign
    'sign, board'
165. *ma-jaambi*
    NP6-mat
    'mats'
166. *pɛɛsɛ*
    5.coin
    'coin'

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167. *tuumbe*
5.chair
'chair, stool'
168. *yuu*
5.ash
'ash'

Nature (34 - 17%):

171. *ma-wɛ*
NP6-stone
'stones'
172. *duundɛ*
5.cloud
'cloud'
173. *feende*
5.wave
'wave'
174. *saka*
5.grassland
'grassland'
175. *tuumbe*
5.dust
'dust'

Bad/big (31 - 15%):

181. *juulɔ*
5.chaos
'chaos, disturbance',
182. *ra*
5.punishment
'punishment'
183. *ma-girira*
NP6-bad.egg
'bad eggs'
184. *tɔmwa*
5.sour.milk
'sour milk'
185. *fwere*
5.rash
'rash'

Abstract (29 - 14%):

191. *kiimereryɔ*
5.acceptance
'acceptance'
192. *riyo*
5.voice
'voice'

169. *kaafii*
5.paddle
'paddle'
170. *kala*
5.charcoal
'charcoal'

176. *i-yolo*
NP5-sky
'sky'
177. *i-bonde*
NP5-valley
'valley'
178. *ma-toondo*
NP6-shady.tree
'shady trees'
179. *tofɛ*
5.mud
'mud'
180. *raambɔ*
5.poole
'poole, puddle'

186. *korogoto*
5.giant
'giant'
187. *joomba*
5.palace
'palace'
188. *serera*
5.sickness
'sickness'
189. *raango*
5.disaster
'disaster, catastrophe'
190. *rɛkɔ*
5.divorce
'divorce'

193. *saabu*
5.number
'number'
194. *mofakɔ*
5.offering
'offering, sacrifice'

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195. *yaambɔ*
    5.revenge
    'revenge'
196. *kalɔ*
    5.custom
    'custom, habit'
197. *ririkanɔ*
    5.idea
    'thought, idea'

198. *i-yori*
    NP5-price
    'price'
199. *r-ika*
    NP5-age
    'age'
200. *ri-ina*
    NP5-name
    'name'

Human body (27 - 13%):

201. *ri-isɔ*
    NP5-eye
    'eye'
202. *tooma*
    5.cheek
    'cheek'
203. *tɔɔmbɔ*
    5.breast
    'breast'
204. *ma-gaang'a*
    NP6-skull
    'skulls'
205. *buure*
    5.stomach
    'abdomen, stomach'

206. *y-aanja*
    NP5-palm.of.hand
    'palm of hand, forearm'
207. *y-aɔ*
    NP5-tooth
    'tooth'
208. *faaterɔ*
    5.foot
    'foot'
209. *foofo*
    5.lung
    'lung'
210. *nɔ*
    5.toe
    'toe'

Food (20 - 10%):

211. *i-taantɛ*
    NP5-porridge
    'porridge'
212. *y-oori*
    NP5-vegetable
    'vegetable'
213. *y-aae*
    NP5-egg
    'egg'
214. *limaɔ*
    5.lemon
    'lemon'
215. *ma-rino*
    NP6-mushroom
    'mushrooms'

216. *i-sho*
    NP5-millet.drink
    'millet drink'
217. *rusu*
    5.alcohol
    'alcohol'
218. *tɔnyɔ*
    5.salt
    'salt'
219. *vɛrɛ*
    5.bullrush.millet
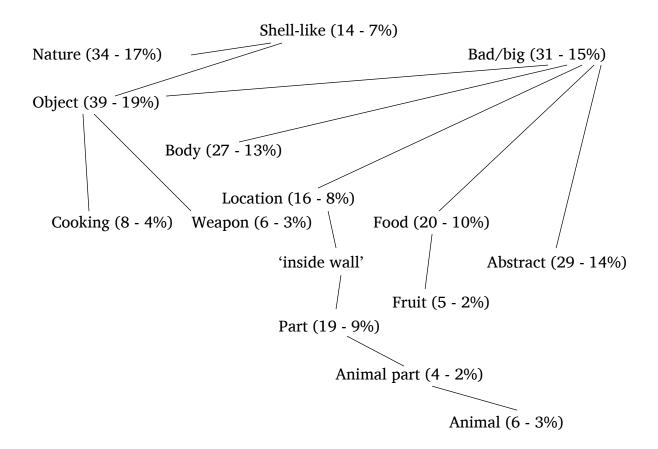   'bullrush millet'
220. *konde*
    5.corncob
    'corncob'

Part (19 - 9%):

221. *fuungɔ*
    5.part
    'portion, part'
222. *baɔ*
    5.piece
    'piece'
223. *kwaatɔ*
    5.side
    'corner, side'
224. *tina*
    5.stem
    'stem, trunk of tree'
225. *tiiti*
    5.group
    'group'

226. *i-yolo*
    NP5-top
    'top'
227. *kuuku*
    5.hump
    'hump'
228. *fɛra*
    5.half
    'half'
229. *bɛɛrya*
    5.piece.of.paper
    'piece of paper'
230. *faala*
    5.splinter
    'splinter'

Location (16 - 8%):

231. *y-oonda*
    NP5-field
    'field, farm'
232. *sɔkɔ*
    5.marker
    'market'
233. *turi*
    5.village
    'village, rural area'
234. *i-ture*
    NP5-town
    'town'
235. *lango*
    5.doorway
    'doorway'

236. *ma-maangɔ*
    NP6-pillar
    'pillars'
237. *ekalu*
    5.temple
    'temple'
238. *joomba*
    5.palace
    'palace'
239. *kanisa*
    5.church
    'church'
240. *poopa*
    5.inside.wall
    'inside wall'

Shell-like (14 - 7%):

241. *kɔkɔ*
    5.shell
    'bark of tree, coconut shell, shell'
242. *sɛɛngi*
    5.gourd
    'gourd'
243. *kalukalu*
    5.coconut.shell
    'coconut shell'
244. *yɛɛma*
    5.tent
    'tent'

245. *fulɔ*
    5.bubble
    'foam, bubble'
246. *soongo*
    5.abscess
    'abscess, boil'
247. *joola*
    5.bark.of.tree
    'bark of tree'
248. *ma-kɔkɔ*
    NP6-shell
    'shells'

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249. *sengi*
    5.churn
    'churn, gourd'

250. *ma-uye*
    NP6-big.gourd
    'big gourds'

Cooking (8 - 4%):

251. *fiya*
    5.cooking.stone
    'cooking stone'

252. *r-iikɔ*
    NP5-cooking.fire
    'cooking fire'

253. *r-iirɔ*
    NP5-bundle.of.firewood
    'bundle of firewood'

254. *sɛɛngi*
    5.gourd
    'gourd'

255. *y-auye*
    NP5-big.gourd
    'big gourd'

256. *ma-saare*
    NP6-plate
    'plates'

257. *riko*
    5.spoon
    'spoon'

Weapon (6 - 3%):

258. *buuntoka*
    5.gun
    'gun'

259. *daangu*
    5.sheath
    'sheath'

260. *vano*
    5.arrow.shaft
    'arrow shaft'

261. *panga*
    5.machete
    'machete'

262. *jaambiya*
    5.machete
    'machete'

263. *timo*
    5.spear
    'spear'

Animal (6 - 3%):

264. *ma-sɛsɛɛyɔ*
    NP6-rooster
    'roosters'

265. *hɔɔndi*
    5.ram
    'ram'

266. *kɔmaambori*
    5.gecko
    'gecko'

267. *keenda*
    5.chick
    'chick'

268. *duudu*
    5.jigger
    'jigger'

269. *y-aangi*
    NP5-type.of.bird
    'type of bird'

Animal part (4 - 2%):

270. *ma-baava*
    NP6-wing
    'wings, fins'

271. *kɔnɔ*
    5.trunk.of.elephant
    'trunk of elephant'

272. *turya*
    5.gizzard
    'gizzard'

273. *yeembe*
    5.flock.of.birds
    'flock of birds'

Fruit (5 - 2%):

274. *chuungwa*
    5.orange
    'orange'
275. *tiini*
    5.fig
    'fig'
276. *papaya*
    5.papaya
    'papaya'

277. *ma-pɛɛra*
    NP6-guava
    'guavas'
278. *bayi*
    5.calabash
    'calabash'

Other (5 - 2%):

279. *baraanda*
    5.horn
    'horn (instrument)'
280. *fɔɔmbɔlɔ*
    5.bell
    'bell'
281. *ma-saambo*
    NP6-fish.trap
    'fish traps'

282. *faa*
    5.right
    'right'
283. *naaru*
    5.south
    'south'

Interestingly, there seem to be some semantic overlays within the categories in this class (see the semantic network below). For example, the categories Object, Body, Location, Food, and Abstract all included nouns relating to the augmentative or pejorative meaning of (derivation to) class 5/6. In addition, the categories Nature and Object both contained some nouns that refer to entities with Shell-like shape. The categories Location and Part are linked through the word for 'inside wall', as this noun can be considered part of a location. Nouns relating to parts can be linked to Animal body parts, which in turn can be linked to a separate category of Animals.

Figure 2. Semantic network class 5/6

Shell-like (14 - 7%)

Nature (34 - 17%)

Bad/big (31 - 15%)

Object (39 - 19%)

Body (27 - 13%)

Location (16 - 8%)

Cooking (8 - 4%) Weapon (6 - 3%) Food (20 - 10%)

'inside wall'

Abstract (29 - 14%)

Fruit (5 - 2%)

Part (19 - 9%)

Animal part (4 - 2%)

Animal (6 - 3%)

Class 6

This class contained 15 nouns in the word list. Most of the nouns (12) refer to liquids:

284. *ma-ta*
NP6-saliva
'saliva'
285. *ma-soso*
NP6-fresh.milk
'fresh milk'
286. *ma-tamwa*
NP6-curds
'curds'
287. *ma-ngure*
NP6-beer.of.sorghum
'beer of sorghum'
288. *ma-suumaa*
NP6-urine
'urine'

289. *ma-kutaa*
NP6-oil
'oil'
290. *ma-firaa*
NP6-pus
'pus'
291. *ma-miraa*
NP6-mucus
'mucus'
292. *ma-aje*
NP6-water
'water'
293. *ma-sii*
NP6-milk
'milk'

However, there are 3 words that do not fit into this category, as shown in the examples below. Example 296 could refer to a collective, which is also said to be characteristic of class 6 (Creider 1975).

294. *ma-alii*
     NP6-brideprice
     'brideprice'
295. *ma-vee*
     NP6-mourning
     'mourning'

296. *ma-vere*
     NP6-eleusine
     'eleusine'

Class 7/8

Class 7/8 is made up of 175 nouns. Just as in class 5/6, nouns for Objects make up the largest category in this noun class. However, also many Abstract nouns and nouns referring to the Human body were found. The reconstructed meaning of this class is by Givón (1971) is 'inanimates', which largely fits the Kimbugwe data. However, a category of Small animals can be seen, which makes up 13% of all the nouns in this class. There is even a category of 3% that contains nouns referring to People. All of the categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 175 nouns in this class are given in brackets.

Object (59 nouns - 34%):

297. *ke-kapu*
     NP7-basket
     'basket'
298. *vi-ikɔ*
     NP8-spoons
     'spoons'
299. *ke-nyaalo*
     NP7-bracelet
     'bracelet'
300. *ch-ooma*
     NP7-axe
     'axe'
301. *vi-raato*
     NP8-shoe
     'shoes'

302. *ke-soojo*
     NP7-dish
     'bowl, dish'
303. *ke-taabu*
     NP7-book
     'book'
304. *ke-teree*
     NP7-bed
     'bed'
305. *ke-lɛɛnge*
     NP7-cloth
     'cloth'
306. *ke-siinga*
     NP7-bead
     'bead'

Abstract (39 - 22%):

307. *ch-ɛɛrɔ*
     NP7-amount
     'amount'
308. *ke-rɛɛru*
     NP7-need
     'need'
309. *ch-aanɔ*
     NP7-story
     'story'

310. *ke-rume*
     NP7-praise
     'praise'
311. *ch-eembɔ*
     NP7-teaching
     'teaching'
312. *ch-ɛɛra*
     NP7-measure
     'measure'

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313. *ke-seembe*
NP7-initiation
'initiation'
314. *ke-soongo*
NP7-sorrow
'sorrow'

315. *ke-rɔɔtɔ*
NP7-dream
'dream'
316. *ke-valɔ*
NP7-respect
'respect'

Human body (24 nouns - 14%):

317. *ke-sho*
NP7-forehead
'forehead'
318. *vi-jaanga*
NP8-ankle
'ankles'
319. *ch-iikɔ*
NP7-shoulder.blade
'shoulder blade'
320. *ke-vɛrɔ*
NP7-thigh
'thigh'
321. *ke-kɔkɔla*
NP7-elbow
'elbow'

322. *ke-ru*
NP7-knee
'knee'
323. *ke-dɛdu*
NP7-chin
'chin'
324. *ke-sumɛɛrɔ*
NP7-bladder
'bladder'
325. *ke-vero*
NP7-upper.leg
'upper leg'
326. *ke-dolee*
NP7-finger
'finger'

(small) Animal (23 nouns - 13%):

327. *ke-dakɔ*
NP7-duck
'duck'
328. *ch-eemi*
NP7-rabbit
'rabbit'
329. *ke-kɔɔkwi*
NP7-insect
'insect'
330. *ke-romi*
NP7-bedbug
'bedbug'
331. *vy-oora*
NP8-frog
'frogs'

332. *ke-rɔbɔtɔ*
NP7-flea
'flea'
333. *ke-riseense*
NP7-lizard
'lizard'
334. *ke-riinga*
NP7-wasp
'wasp'
335. *ke-ritimo*
NP7-bat
'bat'
336. *ke-niyoniyo*
NP7-dragonfly
'dragonfly'

Food (14 nouns - 8%):

337. *ke-ensaare*
NP7-meal
'meal'
338. *ch-a-kora*
NP7-CONN-food
'food'

339. *ke-loongoloongo*
NP7-corn
'corn'
340. *ke-raasi*
NP7-potato
'potato'

341. *vi-rɔ*
NP8-millet
'millet'
342. *ke-toongoro*
NP7-onion
'onion'
343. *ke-tunguu saumu*
NP7-onion ?
'garlic'

344. *ke-bundu*
NP7-banana.dish
'dish of bananas'
345. *ke-roombo*
NP7-type.of.sauce
'type of sauce'
346. *ch-iungo*
NP7-relish
'relish'

Nature (11 nouns - 6%):

347. *ke-bola*
NP7-spring
'spring'
348. *ke-titima*
NP7-earthquake
'earthquake'
349. *ke-toontoori*
NP7-flower
'flower'
350. *ke-fuufu*
NP7-hurricane
'hurricane'
351. *ke-makaa*
NP7-plants
'plants'

352. *ke-tiko*
NP7-time.before.harvest
'time before harvest'
353. *ke-sampɔ*
NP7-cassava.leaves
'cassava leaves'
354. *vi-tɛɛtɛ*
NP8-bamboo
'bamboo'
355. *ke-laangala*
NP7-rock
'rock'
356. *ke-rangaasii*
NP7-dry.season
'dry season'

People (5 - 3%):

357. *ke-tino*
NP7-giant
'giant'
358. *vi-tuutu*
NP8-messenger
'messengers'
359. *ke-rɔɔngosii*
NP7-guide
'guide'

360. *ke-foo*
NP7-crowd
'crowd'
361. *ke-tiiti*
NP7-small.crowd
'small crowd'

Class 8

This class contained only 2 words in the word list, and it is likely that these nouns have a singular in class 7, especially example 362, since ir has a plural meaning.

362. *vi-rio*
NP8-ankle.bell
'ankle bells'

363. *vi-sugerio*
NP8-bellows
'bellows'

Class 9/10

Class 9/10 consists of 300 nouns in the word list. Nouns relating to Animals make up the largest category in this noun class. This is consistent with the reconstructions of Creider (1975) and Givón (1971); (wild) animals. However, the category Abstract is almost just as large. The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 300 nouns in this class are given in brackets.

Animal (81 nouns - 27%):

364. *mbaava*
    NP9.cockroach
    'cockroach'
365. *mbɛɛva*
    NP9.rat
    'rat'
366. *ndakɔ*
    NP9.donkey
    'donkey'
367. *ndakɔ* ya miserere
    NP9.donkey AP9-CONN ?
    'zebra'
368. *ndalaama*
    NP10.wild.cat
    'wild cats'

369. *diila*
    NP9.lion
    'lion'
370. *nduuna*
    NP9.aardvark
    'aardvark'
371. *ngere*
    NP9.wild.pig
    'wild pig'
372. *njoke*
    NP10.bee
    'bees'
373. *nkulu*
    NP9.tortoise
    'tortoise'

Abstract (76 nouns - 25%):

374. *nkishankisha*
    NP9.comfort
    'comfort'
375. *numa*
    NP9.glory
    'glory'
376. *asira*
    NP9.anger
    'anger'
377. *nsaala*
    NP9.spread
    'spread'
378. *mbari*
    NP9.honor
    'honor'

379. *mbuwɔ*
    NP9.proverb
    'proverb'
380. *nkɔma*
    NP9.prophecy
    'prophecy'
381. *ngulala*
    NP9.danger
    'danger'
382. *ntokumi*
    NP9.punishment
    'punishment'
383. *mpɔniwa*
    NP9.salvation
    'salvation'

Object (58 nouns - 19%):

384. *alitaare*
    NP9.altar
    'altar'

385. *ndere*
    NP9.mat
    'hide, mat'

386. *niinga*
    NP9.drum
    'drum'
387. *ngɔ*
    NP9.clothes
    'clothes'
388. *nyoongo*
    NP9.cooking.pot
    'cooking pot'
389. *nkɔfiyo*
    NP9.hat
    'hat'

390. *meeli*
    NP9.boat
    'boat'
391. *ntɔtɔ*
    NP9.bead
    'bead'
392. *ntuulɔ*
    NP9.club
    'club'
393. *nkɛɛndii*
    NP9.amulet
    'amulet'

Food (32 nouns - 11%):

394. *aradaali*
    NP9.mustard
    'mustard'
395. *nkalaanga*
    NP9.peanut
    'peanut'
396. *ndiisi*
    NP9.banana
    'banana, plantain'
397. *piripiiri*
    NP9.chili
    'chili'
398. *nyinyi*
    NP9.relish
    'relish'

399. *langalanga*
    NP9.white.sorghum
    'white sorghum'
400. *birenganyaa*
    NP9.eggplant
    'eggplant'
401. *nkunde*
    NP9.red.beans
    'red beans'
402. *tambo*
    NP9.cucumber
    'cucumber'
403. *nkaandá*
    NP9.ugali.for.journey
    ugali for journey'

Nature (31 nouns - 10%):

404. *nsheeri*
    NP9.small.rock
    'small rock'
405. *kuseense*
    NP10.plants
    'plants'
406. *nyeeka*
    NP9.grassland
    'grasslands'
407. *njaawɛɛro*
    NP9.world
    'world, universe'
408. *nsalo*
    NP9.soil
    'soil, clay'

409. *nsɔɔla*
    NP9.well
    'well'
410. *ntiindɛ*
    NP9.log
    'trunk of tree, log'
411. *nchaamure*
    NP9.fruit.of.any.plant
    'fruit of any plant'
412. *mbula*
    NP9.rain
    'rain'
413. *njɔta*
    NP9.star
    'star'

Human body (17 nouns - 6%):

414.*nchiingɔ*
NP9.neck
'neck'

415.*nchooryo*
NP9.bicep
'bicep'

416.*nkoosankoosa*
NP9.kidney
'kidney'

417.*nyɛɛngɔ*
NP9.joint
'joint'

418.*nda*
NP9.stomach
'stomach'

419.*mpoola*
NP9.nose
'nose'

420.*ntʉtʉnya*
NP9.heel
'heel'

421.*bandama*
NP9.spleen
'spleen'

422.*ncho*
NP9.back.of.head
'back of head'

423.*ntɔɔkɛ*
NP9.hip
'pelvis, hip'

People (5 nouns - 2%):

424.*ndoo*
NP9.clan
'clan'

425.*njɔlɔɔlɔ*
NP9.young.person
'young person'

426.*njɔlɔɔlɔ*
NP9.newborn
'newborn'

427.*kaa*
NP9.family
'household, family'

428.*ndoova*
NP9.newborn
'newborn'

Class 9/6

Class 9/6 contains 32 nouns in the word list. Just as in class 9/10, the largest category contains nouns referring to Animals. This class also has a large amount of nouns referring to Objects. Class 9/6 is not reconstructed by either Creider (1975) or Givón (1971). The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 32 nouns in this class are given in brackets.
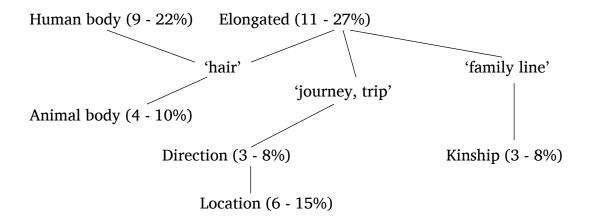
Animal (14 nouns - 43%):

429.*ma-kɔlɔɔma*
NP6-buffalo
'buffalos'

430.*muʉnjo*
NP9.fox
'jackal, fox'

431.*ma-arise*
NP6-sheep
'sheep'

432.*diyo*
NP9.dog
'dog'

433.*ma-wii*
NP6-wasp
'wasps'

434.*tiití*
NP9.butterfly
'butterfly'

435. *m-palaala*
NP9-ox
'ox'

436. *n-gulaata*
NP9-male.goat
'male goat'

437. *n-yaamba*
NP9-bull
'bull'

438. *dɔɔmu*
NP9.grasshopper
'grasshopper'

Object (10 nouns - 31%):

439. *gaamboda*
NP9.shield
'shield'

440. *kɔrɔbɔɔy*
NP9.oil.lamp
'oil lamp'

441. *paanga*
NP9.sword
'sword'

442. *ma-apiingu*
NP6-handcuff
'handcuffs'

443. *gaala*
NP9.barn
'barn'

444. *ma-abarabaara*
NP6-road
'roads'

445. *siribi*
NP9.type.of.jar
'type of jar'

446. *sufuriya*
NP9.large.bowl
'large bowl'

447. *n-swaala*
NP9-rag
'rag'

448. *ma-tɛɛmbɛ*
NP6-flat.clay.roofed.house
'flat, clay roofed houses'

Food (3 nouns - 9%):

449. *biriinganya*
NP9.aubergine
'aubergine'

450. *ma-abɔɔfulɔ*
NP6-bread
'breads'

451. *nanaasi*
NP9.pineapple
'pineapple'

Abstract (3 nouns - 9%):

452. *shaageeda*
NP9.fever
'fever'

453. *ma-ajuuma*
NP6-week
'week'

454. *saa*
NP9.hour
'hour'

Other (2 nouns - 6%):

455. *kalakala*
NP9.palate
'palate'

456. *ma-adaawa*
NP6-medicine
'medicines'

Class 11/10

This class contains 40 nouns in the word list. The semantic network of the categories that are found in this class is shown in the figure below. All of the categories can be linked, mostly through individual nouns. For example, the noun for 'hair' is both a Human body part and Elongated, and extends into Animal body parts, such as the words for 'fur' and 'lion mane'. In addition, a 'journey, trip' can be considered as long or elongated, either in time, distance or as visualization of the path. This links to nouns referring to direction, which can in turn be linked to nouns referring to locations. In the same way, the noun for 'family line' can be considered linear, and therefore long and thin, but also links to kinship nouns. Below the semantic network, examples of the categories in this noun class are given. The number of nouns and the percentage of the total of the 40 nouns in this class are given in brackets.

Figure 3. Semantic network class 11/10

Human body (9 - 22%)   Elongated (11 - 27%)

'hair'   'family line'

        'journey, trip'

Animal body (4 - 10%)

Direction (3 - 8%)   Kinship (3 - 8%)

Location (6 - 15%)

Elongated (11 - 27%):

457. *lo-foosɔ*
    NP11-whisk
    'whisk'
458. *lo-ko*
    NP11-firewood
    'firewood'
459. *lo-saama*
    NP11-branch
    'branch'
460. *n-jalɔ*
    NP10-beam
    'beams'
461. *lo-sho*
    NP11-knife
    'knife'
462. *n-di*
    NP10-twisted.rope
    'twisted ropes'

463. *lo-gaali*
    NP11-stinger
    'stinger'
464. *lo-nyɛɛnjɛ*
    NP11-hair.of.maize
    'hair of maize'
465. *nyɛɛnjɛ*
    NP10-frayed.thread
    'frayed threads'
466. *lw-aau*
    NP11-fishing.net
    'fishing net'
467. *lo-jeere*
    NP11-hair
    'hair'

Human body (9 - 22%):

468. *m-balʊ*
  NP10-rib
  'sides of body, ribs'
469. *lo-fere*
  NP11-bicep
  'upper arm, bicep'
470. *lo-sɛku*
  NP11-calf.of.leg
  'calf of leg'
471. *lo-jala*
  NP11-finger.nail
  'finger nail'
472. *lo-kaasa*
  NP11-cheek
  'cheek, jaw, molar tooth'

473. *lo-reme*
  NP11-tongue
  'tongue'
474. *lo-reme*
  NP11-eyelash
  'eyelash, eyelid'
475. *lo-sarɛ*
  NP11-cut
  'cut, tattoo'
476. *lo-jeere*
  NP11-hair
  'hair'

Location (6 - 15%):

477. *lo-taanga*
  NP11-faraway.place
  'faraway place'
478. *lo-ova*
  NP11-fence
  'enclosure, fence'
479. *ntumɔ*
  NP10-hem
  'hems'

480. *lɔ-kɔlɔ*
  NP11-valley
  'valley'
481. *lo-koko*
  NP11-hill
  'hill'
482. *lo-kaanganyeeka*
  NP11-desert
  'desert, wilderness'

Animal body (4 - 10%):

483. *lo-buʊye*
  NP11-feather
  'feather'
484. *lo-buʊye*
  NP11-fur
  'fur'

485. *lo-fɛɛmbɛ*
  NP11-horns
  'horns, antlers, ivory'
486. *lo-nyɛɛnjɛ*
  NP11-lion.mane
  'lion mane'

Direction (3 - 8%):

487. *lw-ɛɛndɔ*
  NP11-movement
  'movement, distance'
488. *ntaambyɔ*
  NP10-step
  'steps'

489. *lo-taambɔ*
  NP11-trp
  'journey, trip'

Kinship (3 - 8%):

490. *lo-kachwa*
NP11-newborn
'newborn'
491. *njaalɔ*
NP10-descendant
'descendants'

492. *lo-kɔrɛ*
NP11-family.line
'family line'

Other (10%):

493. *lo-simɔ*
NP11-miracle
'miracle, wonder'
494. *lo-piya*
NP11-money
'money'

495. *mpiya*
NP10-coin
'coins'
496. *lo-nyinyi*
NP11-pumpkin
'pumpkin, relish'

Class 10

Class 10 contains 5 nouns in the word list. These are nouns that did not seem to have a singular in class 9 or 11. Examples 497-499 are abstract nouns, and could be similar to the abstract nouns in class 11/10. Examples 500 and 501 cannot be fitted in the abstract category, but might be plurals of undiscovered class 9 nouns. It would be interesting to ask a Kimbugwe speaker whether the nouns in this class have singular counterparts.

497. *ngulu*
NP10-authority
'authority'
498. *ngulu*
NP10-strength
'strength, power'
499. *ndɛɛva*
NP10-drunkenness
'drunkenness'

500. *mbarɛ*
NP10-broken.up.stone
'broken up stone'
501. *mbuulɔ*
NP10-beard
'beard'

Class 11

Class 11 contains 15 nouns. These nouns do not seem to have a plural in class 10. The largest category is Abstract. This fits with the reconstruction of Givón (1971). The categories in this noun class do not seem to be directly linked to each other. It is likely that some of these nouns have a plural in class 10, which has not been found yet. This seems especially likely for the noun 'movement', as it would fit in the 11/10 category Direction and for the nouns referring to a horn, as these would fit in the category Elongated. The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 300 nouns in this class are given in brackets.

Abstract (5 nouns - 33%):

502. *lo-ori*
NP11-war
'war, conflict'
503. *lo-vi*
NP11-war
'war, quarrel'
504. *lo-taanga*
NP11-movement
'movement'

505. *lo-verɔ*
NP11-fast.speed
'fast speed'
506. *lo-loo*
NP11-dusk
'dusk'

Mass (4 nouns - 27%):

507. *lo-oje*
NP11-flood
'flood'
508. *lo-ome*
NP11-dew
'dew'

509. *lɔ-ɔta*
NP11-slime
'slime'
510. *lo-riyo*
NP11-peas
'peas'

Food (4 nouns - 27%):

511. *lo-shoro*
NP11-banana.dish
'banana dish'
512. *lo-ngɔngo*
NP11-calabash.plant
'calabash plant'

513. *lo-kundu*
NP11-beer.container
'beer container'
514. *lo-riyo*
NP11-peas
'peas'

Horn (3 nouns - 20%):

515. *lo-sombo*
NP11-horn
'horn'
516. *lu-famba*
NP11-horn
'horn'

517. *lo-fanofa*
NP11-horn.for.sucking.blood
'horn for sucking blood'

Class 12/19

In the word list, this class contains 9 nouns. These nouns were analyzed as inherently class 12/19. The class can also be used derivationally, as is shown in Section (4.1.1). The main semantic connotation of this class is smallness. Almost all nouns in this class can be said to have this smallness This is illustrated in the examples below:

518. *ka-faala*
NP12-chicken
'small chicken'
519. *ka-nyau*
NP12-cat
'kitten'

520. *ka-bɛɛva*
NP12-mouse
'mouse'
521. *ka-kuufee*
NP12-dward
'dwarf'

522. *ka-tombo*
NP12-bush
'bush'

523. *sha-mefulɔ*
NP12-stream
'stream'

There is one noun where the category of Small is not very apparent (example 524). However, it could be that this noun refers to a relatively small bracelet, which needs to be investigated.

524. *ka-sepe*
NP12-bracelet.of.metal
'bracelet of metal'

Class 14

This class is made up of 91 nouns. The largest category that was found is Abstract. This fits with the reconstruction of Creider (1975), which is 'abstracts, and uncountables'. Givón (1971) reconstructs 'masses', which can be said to resemble the second largest category; Viscous liquids. The categories that were found are listed below, including a range of examples from the word list. The number of nouns and the percentage of the total of the 91 nouns in this class are given in brackets.

Abstract (66 - 73%):

525. *o-fafu*
NP14-hard
'hardness'
526. *o-didi*
NP14-small
'childhood'
527. *w-aambe*
NP14-help
'help, assistance'
528. *o-dima*
NP14-ignorance
'ignorance'
529. *w-eekinaandi*
NP14-patience
'patience'

530. *w-eemereri*
NP14-responsibility
'responsibility'
531. *o-faatu*
NP14-disobedience
'disobedience'
532. *o-fɛtɛru*
NP14-grace
'grace'
533. *o-fɔlɔ*
NP14-gentle
'gentleness, humility'
534. *w-eeketi*
NP14-violence
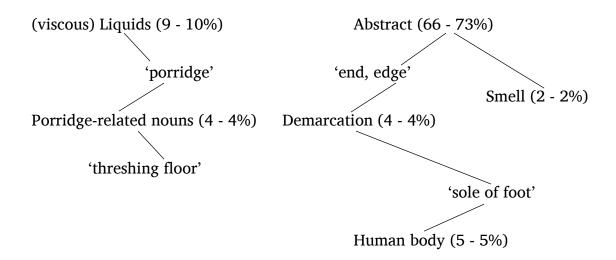'violence'

(viscous) Liquids (9 - 10%):

535. *w-ɛɛda*
NP14-juice
'juice'
536. *o-foola*
NP14-beeswax
'beeswax'
537. *o-miromiro*
NP14-mucus
'mucus'

538. *w-ooke*
NP14-honey
'honey'
539. *w-ooke*
NP14-sap.of.tree
'sap of tree'
540. *o-rɛɛmbɔ*
NP14-substance.to.catch.birds
'substance to catch birds'

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541. *o-soongo*
NP14-poison
'poison'
542. *o-chuunkuna*
NP14-yolk
'yolk'

543. *w-are*
NP14-porridge
'porridge'

Human body (5 - 5%):

544. *o-la*
NP14-sole.of.foot
'sole of foot'
545. *o-shoo*
NP14-face
'face, forehead'
546. *w-ɔɔngɔ*
NP14-brain
'brain'

547. *o-suufu*
NP14-swelling
'swelling'
548. *o-riyo*
NP14-membrane
'membrane'

Demarcation (4 - 4%):

549. *w-aama*
NP14-fence
'fence'
550. *o-paandɛ*
NP14-side
'side'

551. *o-tulɔ*
NP14-end
'end'
552. *o-fɛrɔ*
NP14-end
'end, edge'

Porridge-related nouns (4 - 4%):

553. *w-are*
NP14-porridge
'porridge'
554. *w-are*
NP14-ugali
'ugali'

555. *w-oonga*
NP14-flour
'flour'
556. *w-ɔɔnga*
NP14-threshing.floor
'threshing floor'

Smell (2 - 2%):

557. *o-bani*
NP14-incense
'incense'

558. *o-suula*
NP14-perfume
'perfume'

Other (3 - 3%):

559. *o-sho*
NP14-big.group
'big group'
560. *o-tiko*
NP14-night
'night'

561. *o-futa*
NP14-sesame.seed
'sesame seed'

Below, a semantic network of class 14 is given. The categories in this class can be linked to each other through individual nouns. 'porridge' is a Viscous liquid and connects to this category to the category containing other Porridge-related nouns. In addition, the Abstract term 'end, edge' links to a category of nouns relating to Demarcation. In turn, the word for 'sole of foot' can be seen as the end of the body (Demarcation), which links it to other Human body related nouns.

Figure 4. Semantic network class 14

(viscous) Liquids (9 - 10%)   Abstract (66 - 73%)

             'porridge'   'end, edge'

                                             Smell (2 - 2%)

Porridge-related nouns (4 - 4%)   Demarcation (4 - 4%)

         'threshing floor'

                                   'sole of foot'

                         Human body (5 - 5%)

Class 14/10

There is one noun that belongs to class 14/10. It is shown in the examples below:

562. *o-ta*
    NP14-bow.for.hunting
    'bow for hunting'

563. *n-ta*
    NP10-bow.for.hunting
    'bows for hunting'

Class 14/6

This class contains 5 nouns in the word list. Examples 564 and 565 both refer to body parts. The other three examples were not categorized.

564. *o-sho*
    NP14-face
    'face'

565. *ma-la*
    NP6-small.intestine
    'small intestines'

566. *m-oolalɔ*
    NP6-bridge
    'bridges'

567. *o-rere*
    NP14-bed
    'bed'

568. *o-teyɔ*
    NP14-trap
    'trap'

Class 15/6

There are 3 nouns that belong to class 15/6 in the word list. 2 of these are paired body parts. This fits with the reconstructions to Proto-Bantu of Creider (1975) and Givón (1971).

569.*k-oolo*
   NP15-leg
   'leg, foot'
570.*m-oolo*
   NP6-leg
   'legs, feet'

571.*ko-to*
   NP15-ear
   'ear'
572.*ma-to*
   NP6-ear
   'ears'

The noun *kusara* 'rumpbone' is also analyzed as class 15 by Mous (2004:44), however, it does not have the expected *ko-* prefix for class 15/6 nouns. It is a bodypart, but not a paired bodypart.

Class 16

This class contains 2 nouns in the word list. Both relate to location, as can be seen in the examples below. This meaning matches the reconstruction of Creider (1975).
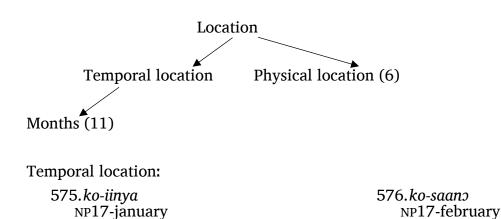
573.*fa-antɔ*
   NP16-place
   'place'

574.*peri*
   NP16A-forest
   'forest'

Class 17

Class 17 contains 17 nouns in the word list. They relate to either temporal location or physical location, as can be seen in the semantic network below. The nouns referring to temporal location are the names for the months of the year, but interestingly do not include the word for 'August'. This is the only month name that is not marked with a class 17 prefix. The meanings in this noun class fit with the reconstruction of Creider (1975). The categories that were found are listed below, including a range of examples.

Figure 5. Semantic network class 17

Location

Temporal location   Physical location (6)

Months (11)

Temporal location:

575.*ko-iinya*
   NP17-january
   'January'

576.*ko-saanɔ*
   NP17-february
   'February'

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577. *ko-saansaato*
NP17-march
'March'
578. *ko-fuungaate*
NP17-april
'April'
579. *ko-naana*
NP17-may
'May'
580. *ko-kɛɛnda*
NP17-june
'June'
581. *kw-aikomi*
NP17-july
'July'

582. *ko-veere*   *cho*
NP17-september   ?
'September'
583. *ko-moonti*
NP17-october
'October'
584. *ko-veere*
NP17-november
'November'
585. *ko-saato*
NP17-december
'December'

Physical location:

i.e.

586. *ko-ley*
NP17-far.away
'far away (place)'
587. *ko-lomɛ*
NP17-right
'right hand side'
588. *ko-mɔɔnsɔ*
NP17-left
'left hand side'

589. *ko-onto*
NP17-place
'place'
590. *ko-omo*
NP17-dry.place
'dry place'
591. *ko-rimo*
NP17-afterworld
'afterworld'

3.2.2. Discussion

As we have seen, many of the reconstructed semantics of the noun classes of Proto-Bantu can be found in the Kimbugwe noun classes as well. However, a lot of the categories that were found are not exclusive to one noun class. Below, an overview is given of the categories that occur in more than one noun class. This shows that there are tendencies of semantic categories in noun classes, but that categories can cross noun class boundaries. In the Appendix, an overview can be found of the classes, the categories that were found in the classes, and the percentages of all of the nouns in the noun class.

Table 6. Overview categories in classes

Category	Occurs in classes
Abstract	3/4, 5/6, 7/8, 9/10, 9/6, 10, 11, 14
Animal	3/4, 5/6, 7/8, 9/10, 9/6, 11/10
Elongated	3/4, 11/10
Food	5/6, 7/8, 9/10, 9/6, 11

Human body	3/4, 5/6, 7/8, 9/10, 11/10, 14, 14/6, 15/6
Liquids	6, 14
Location	5/6, 11/10, 16, 17
Nature	3/4, 4, 5/6, 7/8, 9/10
Object	5/6, 7/8, 8, 9/10, 9/6, 14/10
People	1/2, 7/8, 9/10

In addition, almost all noun classes contain nouns of which the meaning also occurs in a different class. This shows that not only the categories are not exclusive to certain noun classes, but also the meanings of the nouns themselves are not exclusive to the noun classes. A selection of these synonyms is given below.

Table 7. Overview synonyms across classes

	5/6	7/8	9/10	9/6	11	14
1/2		'messenger' *motomi ~ ketuutu*				
3/4	'offering' *mofakɔ ~ fɔrya*	'finger' *monwɛ ~ kedolee*	'season' *monamɔ ~ mbɛtɛmbɛtɛ*	'medicine' *mote ~ daawa*	'dusk' *monanoongo ~ loloo*	
5/6		'giant' *korogoto ~ ketino*	'grassland' *saka ~ nyeeka*		'valley' *bɔɔtɛ ~ lɔkɔlɔ*	'porridge' *itaante ~ ware*
7/8			'bead' *kesiinga ~ ntɔtɔ*	'wasp' *keriinga ~ wii*		
11/10			'newborn' *ndoova ~ lokachwa*			
12/19			'mouse' *nchii ~ kabɛɛva*			

Lastly, I attempted to link the semantic categories to each other within the noun classes. Some links can be established – mostly through individual nouns. However, not all noun classes have such a semantic web, because in some noun classes, I was not able to link the meanings of the nouns. A psycholinguistic study on the connotations that Kimbugwe speakers have with the nouns in the different noun classes would be interesting, to extend the first attempt at these semantic networks. In conclusion, Kimbugwe noun classes have semantic tendencies. The reconstructed semantics of Proto-Bantu are still visible, but more semantic categories have been added to the noun classes. The nouns in this language can largely be divided into semantic categories, but more research is needed to learn about the fine-grained links between the noun classes and their inherent semantics.

4. Derived nominals

This section aims to answer research question 3: 'How are nouns derived in Kimbugwe?' and will show how class semantics are used in derivation, which is especially interesting with the previous section in mind. Derivation to a noun in Kimbugwe can be denominal, deverbal and deadjectival. This section discusses Denominal derivation (4.1) and Deverbal derivation (4.2).

4.1. Denominal derivation

In Kimbugwe, it is possible to derive a noun from a noun. This is done by adding a noun class prefix to the original noun. Three types of derivations and their meanings are discussed in this section; the Diminutive (4.1.1), the Augmentative (4.1.2), and the Locative class 16 (4.1.3). Lastly, derivation with -*a* is discussed in Section 4.1.4.

4.1.1. Diminutive

The diminutive is derived by prefix *ka-* in its singular form, which is class 12, and *fi-* or *sha-* in its plural form, which is class 19. Example 592 shows the underived noun, which can be compared to the derived class 12 noun in example 593, and the derived class 19 nouns in examples 594 and 595. The *fi-* prefix can also surface as *fya-*, as in example 596 (see Section 4.1.4 for a discussion derivation with *a-*).

592. *n-chóriɔ*
     NP10-chick
     'chick'
593. *kanchóriɔ*
     ka-n-choriɔ
     NP12-NP9-chick
     'small chick'
594. *finchóriɔ*
     fi-n-choriɔ
     NP19-NP10-chick
     'small chicks'
595. *shanchóriɔ*
     sha-n-choriɔ
     NP19-NP10-chick
     'small chicks'
596. *fyanchóriɔ*
     fi-a-n-choriɔ
     NP19-CONN-NP10-chick
     'small chicks'

These derivational prefixes are in principle added to the noun with its original prefix. But interestingly, the root in the examples above has an equivalent that is inherently class 12, as is shown in example 597. This form does not have a class 9 *n-* noun prefix, which is present in example 593, repeated here in example 597. There are more instances of nouns that can occur with and without their original noun class prefix after derivation to the diminutive classes, such as examples (598-599). At this point it is not clear what conditions being derived with the original noun class prefix or without.

597. *kachóriɔ*   ~   *kanchóriɔ*
ka-choriɔ   ka-n-choriɔ
NP12-chick   NP12-NP9-chick
'small chick'   'small chick'

598. *kadédu*   ~   *kákédédu*   <   *kédédu*
ka-dedu   ka-ke-dedu   ke-dedu
NP12-chin   NP12-NP7-chin   NP7-chin
'small chin'   'small chin'   'chin'

599. *fyarééngɔ*   ~   *fyamɔrééngɔ*   <   *mɔrééngɔ*
fi-a-reengɔ   fi-a-mɔ-reengɔ   mɔ-rééngɔ
NP19-CONN-door   NP19-CONN-NP3-door   NP3-door
'small doors'   'small doors'   'door'

On the other hand, it is not always grammatical to leave the original noun class prefix out, as in examples 600 and 601. There are no examples of derived nouns where it is ungrammatical for the original prefix to stay on the noun.

600. *fyádédu
fi-a-dedu
NP19-CONN-chin
Intended: 'small chins'

601. *kaéndo   <   *wéénda*
ka-end-o   ɔ-end-a
NP12-walk-NMLZ   NP15-walk-FV
Intended: 'small walk' 'walk'

Example 599 also shows that the original noun class prefix may be the singular class prefix, although the **plural** diminutive class prefix is added. This shows that the original noun prefix does not necessarily add a singular meaning. Note that the translation gives a plural interpretation to the derivation in example 599. Furthermore, example 602 shows that when the 'matching' plural noun class prefix of the original noun class is used in the same derivation, a diminutive meaning is not found, which seems to point to a lexicalized meaning of this word. Another mismatch in number is shown in example 603, where the class 19 prefix *fi-* would be the plural prefix and the class 1 prefix *mɔ-* the singular prefix. Example 603 is the plural form of example 604, where the number in the prefixes matches. More research is needed to find out why and in what circumstances a 'mismatch' in number on stacked prefixes can occur.

602. *fyamerééngɔ*
fi-a-me-reengɔ
NP19-CONN-NP4-door
'decorations on door'

603. *fyamwáána*   <   *mwáána*
fi-a-mɔ-ana   mɔ-ana
NP19-CONN-NP1-child   NP1-child
'small children'   'child'

604. *kamwáána*
ka-mɔ-ana
NP12-NP1-child
'small child'

Note that example 601 is a nominalized verb, after which it was derived to class 12. It can only be grammatical when the class prefix is present, as in example 605. These

examples suggest that diminutives can only be derived from nominals. Nominalizers are discussed in Section 4.2.

605. *kalwéndo*
ka-lo-end-o
NP12-NP11-walk-NMLZ
'small walk'

The distribution of the prefixes *fi-, fya-* and *sha-* is not clear. Compare examples 606 and 607, where *sha-* is ungrammatical, 'because buffalos are big' according to the speaker(s), and *fya-* and *fi-* are grammatical in the meaning of a 'baby buffalo'.

606. **shankɔlɔmá*   <   *nkɔ́lɔ́ma*
sha-nkɔlɔma   nkɔlɔma
NP19-NP10.buffalo   NP10.buffalo
Intended: 'small buffalos'   'buffalo(s)'
607. *fyankɔlɔmá*   ~   *finkɔlɔmá*
fi-a-nkɔlɔma   fi-nkɔlɔma
NP19-CONN-NP10.buffalo   NP19-NP10.buffalo
'baby buffalos'   'baby buffalos'

Class 19 is reconstructed for Proto-Bantu as a class with noun prefix **pi-* and with the meaning 'very small', in addition to class 12 (singular diminutive) and 13 (plural diminutive) (Meeussen 1967). Kimbugwe must have lost class 13 as a plural of class 12, and replaced it with class 19. This is not unlikely since class 19 is historically mentioned as 'super' diminutive (Meeussen 1967:103). Closely related language Rangi also has the diminutive class 12 with a plural in 19 (Stegen 2002:135). It is likely that the languages shifted from diminutive plural in class 13 to class 19 in a proto-stage as a group.

4.1.2. Augmentative

Kimbugwe has four classes that show an augmentative meaning. The derivation is made with prefixes; class 5 *ra-*, class 6 *ma-,* class 7 *cha-* and class 8 *vi-*, as is shown in examples (608-611). *Ra-* and *cha-* are a prefixes that do not occur outside of the augmentative meaning. It is only used when deriving a noun to class 5 or 7. The regular class 5 prefix is either zero, *i-* or *r(i)-* and the regular class 7 prefix is either *ke-* or *ch-* (see Section 3). The addition of the *-a* during derivation is discussed in Section 4.1.4.

608. *éré raamɔ́ɔ́nto*   <   *mɔ́ɔ́nto*
e-re   ra-mɔ-nto   mɔ-nto
AP5-5.DEM.PROX   NP5-NP1-person   NP1-person
'this big person with bad behavior'   'person'
609. *mamábasa*   <   *mábasa*
ma-ma-basa   ma-basa
NP6-NP6-twin   NP6-twin
'big twins with bad behavior'   'twins'
610. *chamwáána   éché*   <   *mwáána*
ke-a-mɔ-ana   e-che   mɔ-ana
NP7-CONN-NP1-child AP7-7.DEM.PROX   NP1-child
'this bad child'   'child'

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611. *vimbuo*   <   *mbuo*
vi-m-buo   m-buo
NP8-NP10-riddle   NP9-riddle
'bad riddles'   'riddle'

A pejorative meaning is present in many nouns referring to animate entities. In those cases, the meanings include 'bad behavior' and 'bad health'. But for inanimate nouns, the meaning can also be 'bad' in the sense of 'poisonous', as in example 612.

612. *áá mamaajé*   <   *maajé*
a-a   ma-ma-aje   ma-aje
AP6-6.DEM.PROX   NP6-NP6-water   NP6-water
'a lot of bad water (that will kill you)' 'water'

Example (609) and (612) also show that the same prefix, a class 6 prefix, can occur twice on the same noun. However, this is not always possible (see example 613), although it is not clear why this example was not accepted.

613. **áá mamakanísa*   <   *makanísa*
a-a   ma-ma-kanisa   ma-kanisa
AP6-6.DEM.PROX   NP6-NP6-church   NP6-church
'these big churches'   'churches'

Sometimes, the class 8 noun prefix *vi-* is not used with an augmentative meaning, like example 611 above, but with a diminutive meaning. In Swahili, the meaning of class 8 is diminutive (see example 614). However, the pejorative meaning that is associated with the augmentative in Kimbugwe is still present, as can be seen in example 615.

614. Swahili
kimeza
NP7-table
'little table'

615. *vimábasa*   <   *mabása*
vi-ma-basa   ma-basa
NP8-NP6-twin   NP6-twin
'small twins with bad health' 'twins'

As can be seen from the examples above, it is possible to derive a noun to the class 5, 6 or 8 with and without their original noun prefix. In the example below (616), the ungrammaticality is shown of a noun that is derived to class 5 without its original noun prefix. It is not yet clear in what conditions the presence or lack of the original noun class prefix.

616. **radedú*
ra-dedu
NP5-chin
Intended: 'big chin'

The two examples below are interesting because they show how the derivational morphology of the diminutive and augmentative can both be applied to the class 6 noun *mabása* 'twins':

617. *kabáása*   <   *mabása*
ka-basa   ma-basa
NP12-twin   NP6-twin
'small one of the twins' 'twins'

618. *rabáása*   <   *mabása*
     ra-basa   ma-basa
     NP5-twin   NP6-twin
     'big one of the twins'   'twins'

Just as in the diminutive, there is sometimes a mismatch in number. This is illustrated in example (619), where there is no augmentative meaning, but rather a specialized meaning. Example (619) is the plural form of example (620). Another mismatch in number is shown in example 621, where the stacking of the original singular noun prefix and the derivational plural noun prefix results a specialized meaning that is likely influenced by Swahili (as in example 615).

619. *vimwáána*   <   mwáána
     vi-mɔ-ana   mɔ-ana
     NP8-NP1-child   NP1-child
     'beautiful girls'   'child'
     *'bad children'
620. *kemwáána*
     ke-mɔ-ana
     NP7-NP1-child
     'beautiful girl'
621. *vikedédu*   <   *kedédu*
     vi-ke-dedu   ke-dedu
     NP8-NP7-chin   NP7-chin
     'small bad chins'   'chin'

4.1.3. Locative class 16

In Kimbugwe, a class 16 noun can be derived from another noun. This is done by adding a prefix *fa-* to it, which is the noun class prefix of the locative class 16, as is shown in example 622. This is one of the few examples of a noun that is inherently class 16. Almost all of the other class 16 nouns are derived from nouns that originally belong in other classes. Derivation to class 16 can have three different meanings; a locative meaning (example 623), a partitive meaning (example 624), and a diminutive meaning (example 625).

622. *fáánto fárá fánjishíryé na furáhá*
     fa-nto   fa-ra   fa-nji-shir-ye   na   furaha
     NP16-place NP16-DEM.DIST AP.SBJ.16-1SG.OBJ-make-PFV with 9.joy
     'The place makes me happy'
623. *fánjala*
     fa-njala
     NP16-9.hunger
     'area with hunger'
624. *fangʼɔɔmbé*
     fa-ngʼɔɔmbe
     NP16-9.cow
     'part of a cow'
625. *fakanísa*
     fa-kanisa
     NP16-5.church
     'small church'

As can be seen in example 626, the derived noun can have all three meanings. It seems that the meaning of the derivation is underspecified. Which meaning is chosen, will most likely depend on discourse context. Although it seems that most nouns allow a locative and partitive reading, many do not allow a diminutive reading. The nouns that do allow a diminutive reading are listed below (example 626-629). Based on this list, the hypothesis arises that 'branching' concepts can have a diminutive reading. This is understandable, as 'a part of a river' can be considered 'a small river'. However, if that is the case, the ungrammaticality of the meanings of examples (630) and (631) would need to be explained.

626. *famɔnkánana*
    fa-mɔ-nkanana
    NP16-NP3-river
    'area with rivers' / 'part of the river' / ' a small river'
627. *fakanísa*
    fa-kanisa
    NP16-5.church
    'small church'
628. *fámɔté*
    fa-mɔ-te
    NP16-NP3-tree
    'little tree'
629. *famemméa*
    fa-me-mea
    NP16-NP4-plant
    'small plants'
630. *famekíífa*
    fa-me-kiifa
    NP16-NP4-vein
    *'small veins'
    'area where veins meet'
631. fánjɛɛra
    fa-njɛɛra
    NP16-10.road
    *'small roads'
    'junction (area where roads meet)'

When being derived to class 16, the noun class prefix *fa-* is always added to the original noun class prefix. The agreement that is triggered is class 16, proving that these nouns function as a noun rather than a prepositional (locative) phrase, as can be seen in example 632 on the verb.

632. *fakanísa fanjishírye na furaha*
    fa-kanisa   **fa**-nji-shir-ye   na   furaha
    NP16-5.church   AP16.SM-1SG.OM-make-PFV   with 9.joy
    'the small church makes me happy'

4.1.4. Derivation with -a

Some nouns can be derived with the addition of an *-a*. This type of derivation occurs in classes 2a (*vaa-*) (Poole, p.c. 2022), 5 (*ra-/raa-,* as in example 634), 7 (*cha,* as in example 635), and 19 (fya-, as in example 636). Interestingly, for class 19 there are

two surface forms possible, as can be seen in example 636. It remains unclear whether more derivations with -*a* can also occur without.

633. *vaamaamey*
    va-a-maamey
    NP2A-CONN-ancestor
    'ancestors'
634. *raamabása*
    ra-a-ma-basa
    NP5-CONN-NP6-twin
    'bad twins'
635. *chamwáána éché*
    ke-a-mɔ-ana   e-che
    NP7-CONN-NP1-child   AP7-7.DEM.PROX
    'this bad child'
636. *fyankɔlɔmá*   ~   *finkɔlɔmá*
    fi-a-nkɔlɔma   fi-nkɔlɔma
    NP19-CONN-NP10.buffalo   NP19-NP10.buffalo
    'baby buffalos'   'baby buffalos'

At first glance, this type of derivation looks similar to the formation of the noun *chakɔra* 'food', which is made with the noun class 7 prefix and a connective, that attaches to the verb *kula* 'to eat'. It is a possibility that this deverbal derivation process influenced denominal derivation processes by analogy, which would be why it is used in these classes. However, there are a lot less deverbal derivations that are formed with a connective than denominal derivations that are formed with this -*a*. Nonetheless, since the connective is the most fitting label at this point, the -*a* is glossed as CONN throughout the thesis. Another explanation for the insertion of -*a* after the noun class prefix is the analogy with other classes (class 6 *ma-,* class 12 *ka-*). For example, class 19 is the plural counterpart of class 12, which has a prefix *ka-*. During data collection, it was apparent that when these singular-plural pairs were contrasted, the derivation with -*a* was always used. This would not explain the -*a* in class 7, of which the plural counterpart is *vi-*. More research is needed to find the function and distribution of this inserted -*a*.

4.2. Deverbal derivation

Nouns can also be derived from verbs. This is done by adding a suffix to a verb root; either -*i,* -*a,* -*o/-ɔ,* or -*e,* and a noun class prefix. Table 8 gives an overview of the derivations that were found in Kimbugwe. Afterwards, a discussion of the meanings of these derivations is given.

Table 8. Nominalizing suffixes

Class 15	-i	-a	-o	-e
ɔremá 'to cultivate; to work'	mɔremí 'cultivator'	mɔréma 'farmer'	mɔremɔ́ 'work'	
ɔlɔɔmbalɔɔmbá 'to borrow something'		mɔlɔɔ́mba / ɔɔmbaɔɔ́mba 'beggar'		
ɔrerá 'to cry'	mɔrerí 'someone who cries regularly'	mɔrérya 'someone who causes someone else to cry regularly'		
ɔfundisha 'to train; to teach'	mɔfúndíshwi 'trainee' mɔfúndishi 'trainer'	mɔfundishííwa 'trainee'		
ɔsáákéra 'to search'	mɔsákérí 'someone who searches' mɔsáákérí (3/4) 'a search'			
ɔtóómwa 'to be made slave / to be approached (as a girl)'	mɔtúúmwí 'slave'	ketúúmwa 'bad slave'		
ɔtóóma 'to approach / to make someone a slave'	mɔtuumí 'slave holder'		mɔtúúmo 'slave'	
ɔlúwalá 'to be sick'		kelúwala 'bad disease'		mɔlúwae 'sick person' oluwáe (14) 'disease'
ɔtáángataangá 'to move'	mɔtáángitáángi 'he who moves (traveller)'	lootáánga 'journey' mɔtáánga 'spot / place'		
ɔsalá 'to be mad'		masɛrɛra 'diseases'		
ɔfúúngwa 'to be in jail'		mɔfúúngwa 'prisoner'		
ɔ́lóva 'practice sorcery'		malóva 'spells'		
ɔtá 'to sell'	mɔtéi 'seller'	mɔtééja 'buyer' otééja (14) 'service' ɔtéi (14) 'a sale'		

ɔvijiá 'to play'	mɔvijíí 'player'		mbijío (9/10) 'game' mɔvijío '(different) game' (mevijío 'various games') lovijío 'big game'	vijíe (5/6) 'usual game'
ojísha 'to do'	mɔjíshi 'mechanic' mɔjíshwi 'some whose hair is done'			
ɔlɔ́ɔ́mba 'to preach'	mɔlɔ́ɔ́mbi 'pastor'			
ɔfééŋa 'to run'	mɔfɛɛŋí 'runner' mɔfɛɛŋwí / mɔfwɛɛŋwí 'person who remains after someone runs'			
ɔtɔ́mama 'to work'	mɔtɔ́mami 'worker/employee'			
wíva 'to steal'	mwívi 'invader' wívi (14) 'act of stealing'			
ɔwɛ́ɛ́mba 'to sing'	mwɛ́ɛ́mbi 'singer'			
ɔkɔ́na 'to scratch'	ɔkɔ́ni 'a scratch'			
ɔbɔ́ɔ́ndya 'to dent'	ɔbɔ́ɔ́ndi 'a dent'			
ɔgúúsana 'to crash'	ɔgúúsani 'a crash'			
ɔlɔ́ɔ́tera 'to dream'	ndɔ́ɔ́teri 'a dream'			
ɔlɔ́seka 'to speak'	ndɔ́seki 'a conversation'		malósekɔ 'speech' (sg: lósekɔ 'speech of one person')	
ɔsiyá 'to grind grain'	mɔsíí 'someone who grinds grain'			
ɔluvá 'to cook'	mɔluvíí 'cook'			
ɔtulá ' to fight / to prepare grain'	mɔturí 'fighter / he who prepares grain'			
ɔsaambá 'to dive'	mɔsaambíí 'diver'			
ɔtúma 'to taylor'	mɔtumí 'a taylor'		matúúmo 'stiches'	

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ɔluwáriá 'to give care'	mɔluwári 'person who takes care of the sick'			
ɔrékérya 'to ask'	mɔrékéri 'someone who asks something'			
wííkala 'to live'	mwííkarí 'someone who lives somewhere'		wííkalo (14) 'life' keííkalo 'short life'	
wefúúnzwa 'to be taught'	mɔfúnzwi 'student'			
wefúnza 'to study'	mɔfúnzi 'teacher'		mɔfúnzo 'lesson / course'	
ɔ́ɔ́la 'to buy'	mɔ́ɔ́ri 'buyer'			
ɔsalá 'to be mad'	mɔ́sɛri 'mad person'			
ɔ́lóva 'to practice sorcery'	mɔlóvi 'witchcrafter'		mɔlóvɔ 'a spell'	
ɔwáánza 'to start'			mɔwáánzo 'start'	
ɔsíímba 'to make a whole in the ground'			síímbɔ 'hole in ground'	
ɔríɡa 'to load'			mɔríɡɔ 'load' keriɡɔ́ 'small load'	
ɔfúúnga 'to put someone in jail'			mɔfúúngɔ 'fasting period'	

4.2.1. -i suffix

Deverbal nouns with an *-i* suffix refer to humans for the most part, as is illustrated in examples 637 and 638. These nouns have a class 1 prefix in the singular. The mapping from verb to noun can be either the agent of the action, as in example 637, or the patient of the action, as in 638. Example 638 also shows the passive verbal morphology on the verb, *-w*, which is included in the nominalization. The fact that the patient of a verb can be nominalized with the suffix *-i* is in contrast to other Bantu languages (Northern Sotho, Tshivenda, Xitsonga, and Siswati), where all patient nominalizations occur with the suffix *-a* (Mletshe 2007). As we will see below, the *-a* suffix is also used for patient nominalizations in Kimbugwe, but also for other meanings.

637. *mwɛ́ɛ́mbi*   <   *ɔwɛ́ɛ́mba*
     mɔ-ɛɛmb-i   ɔ-ɛɛmb-a
     NP1-sing-NMLZ   NP15-sing-FV
     'singer'   'to sing'
638. *mɔjíshwi*   <   *ojísha*
     mɔ-jish-w-i   ɔ-jish-a
     NP1-do-PASS-NMLZ   NP15-do-FV
     'someone whose hair is done' 'to do'

In addition, the nominalization can refer to 'the act of X', as in 639 and 640, or to the result of the action, as in 641 and 642. The classes assigned to these nominalizations are 3 and 14 in these cases.

639. *wívi*   <   *wíva*
     ɔ-iv-i   ɔ-iv-a
     NP14-steal-NMLZ   NP15-steal-FV
     'act of stealing'   'to steal'
640. *mɔsáákérí*   <   *ɔsáákéra*
     mɔ-saaker-i   ɔ-saaker-a
     NP3-search-NMLZ   NP15-search-FV
     'a search'   'to search'
641. *ɔbɔ́ɔ́ndi*   <   *ɔbɔ́ɔ́ndya*
     ɔ-bɔɔnd-i   ɔ-bɔɔnd-y-a
     NP14-dent-NMLZ   NP15-dent-CAUS-FV
     'a dent'   'to dent'
642. *ɔgúúsani*   <   *ɔgúúsana*
     ɔ-guusan-i   ɔ-guusan-a
     14-crash-NMLZ   NP15-crash-FV
     'a crash'   'to crash'

4.2.2. -a suffix

Deverbal nouns with an *-a* suffix can be a patient nominalization, as in example 643, where the passive morphology of the verb is still present. Nouns with an *-a* suffix can, however, also be an agent nominalization, as in example 645. The examples are contrasted to the nouns with an *-i* suffix in example 644 and 646, showing that patient nominalization are not exclusively formed with an *-a* suffix.

643. *mɔfundishíwa*   <   *ɔfundisha*
     mɔ-fundishi-w-a   ɔ-fundish-a
     NP1-teach-PASS-NMLZ   NP15-teach-FV
     'trainee'   'to train; to teach'

644. *mɔfúndíshwi*   <   *ɔfundisha*
     mɔ-fundish-w-i   ɔ-fundish-a
     NP1-teach-PASS-NMLZ   NP15-teach-FV
     'trainee'   'to train; to teach'

645. *mɔréma*   <   *ɔremá*
     mɔ-rem-a   ɔ-rem-a
     NP1-work-NMLZ   NP15-work-FV
     'farmer'   'to cultivate; to work'

646. *mɔremí*   <   *ɔremá*
     mɔ-rem-i   ɔ-rem-a
     NP1-work-NMLZ   NP15-work-FV
     'cultivator'   'to cultivate; to work'

Other verbal morphology can map a different meaning on the verb, such as in example 647, where the causative suffix *-y* makes the meaning of the noun 'a causer of the agent of the action'. This example likely first derived the verb *ɔrerá* 'to cry' to *ɔreryá* 'to make cry', but this should be confirmed by a Kimbugwe speaker.

647. *mɔrérya*   <   *ɔrerá*
     mɔ-rer-y-a   ɔ-rer-a
     NP1-cry-CAUS-NMLZ   NP15-cry-FV
     'someone who causes   'to cry'
     someone else to cry regularly'

Most of the nominalizations referring to people are placed in class 1, in the singular. However, there is also an example of a nominalization referring to a person that is placed in class 7 (example 648). This is discussed in Section 4.1.2.

648. *ketúúmwa*   <   *ɔtóómwa*
     ke-tuum-w-a   ɔ-toom-w-a
     NP7-approach-PASS-NMLZ   NP15-approach-PASS-FV
     'bad slave'   'to be made slave; to be approached (as a girl)'

Other noun classes that are found with nominalizations ending in -a are class 3, 6 and 14, exemplified below.

649. class 3:

     mɔtáánga   <   *ɔtáángataangá*
     mɔ-taang-a   ɔ-taanga-taang-a
     NP3-move-NMLZ   NP15-move-move-FV
     'spot; place'   'to move'

650. class 6:

     masɛrɛra   <   *ɔsalá*
     ma-sal-ɛr-a   ɔ-sal-a
     NP6-be.mad-APPL-NMLZ   NP15-be.mad-FV
     'diseases'   'to be mad'

651. class 6:

malóva   <   *ɔ́lóva*
ma-lov-a   ɔ-lov-a
NP6-practice.sorcery-NMLZ   NP15-practice.sorcery-FV
'spells'   'practice sorcery'

652. class 14:

otééja   <   *ɔtá*
o-ta-y-a   ɔ-t-a
NP14-sell-CAUS-NMLZ   NP15-sell-FV
'service'   'to sell'

4.2.3. -o / -ɔ suffix

The *-o* and *-ɔ* suffixes are considered to have one underlying form. Deverbal nouns with an -o or -ɔ suffix can be placed in class 1/2 in order to refer to people, as can be seen below in example 653. However, most nouns with these suffixes are inanimate. Compare example 654 and 655, where only the nominalizer suffix makes the difference between an agent nominal and an action nominal.

653. *mɔtúúmo*   <   *ɔtóóma*
mɔ-tuum-o   ɔ-toom-a
NP1-approach-NMLZ   NP15-approach-FV
'slave'   'to approach; to make someone a slave'

654. *mɔréma*   <   *ɔremá*
mɔ-rem-a   ɔ-rem-a
NP1-work-NMLZ   NP15-work-FV
'farmer'   'to cultivate; to work'

655. *mɔremɔ́*   <   *ɔremá*
mɔ-rem-ɔ   ɔ-rem-a
NP1-work-NMLZ   NP15-work-FV
'work'   'to cultivate; to work'

The deverbal nouns ending in *-o* or *-ɔ* can also refer to the result of the action, as in examples 656-659 below, in which case they can be placed in class 3, 6, 9, or 11.

656. class 3:

mɔfúnzo   <   *wefúnza*
mɔ-funz-o   ɔ-e-funz-a
NP3-study-NMLZ   NP15-?-study-FV
'lesson; course'   'to study'

657. class 6:

malósekɔ   <   *ɔlóseka*
ma-losek-ɔ   ɔ-losek-a
NP6-speak-NMLZ   NP15-speak-FV
'speech'   'to speak'

658. class 9:

mbijío	<	*ɔvijiá*
N-viji-o		ɔ-viji-a
NP9-play-NMLZ		NP15-play-FV
'game'		'to play'

659. class 11:

lovijío	<	*ɔvijiá*
lo-viji-o		ɔ-viji-a
NP11-play-NMLZ		NP15-play-FV
'big game'		'to play'

Interestingly, where the class 7 nouns in combination with the *-a* nominalizer have a pejorative connotation, the class 7 prefixes in combination with the *-o* or *-ɔ* suffix have a diminutive connotation, as in examples 660 and 661. This is seen more often in Kimbugwe and is likely under influence of the Swahili diminutive noun classes 7/8.

660. | *kerigɔ́* | < | *ɔríga* |
|---|---|---|
| ke-rig-ɔ | | ɔ-rig-a |
| NP7-load-NMLZ | | NP15-load-FV |
| 'small load' | | 'to load' |

661. | *keíĭkalo* | < | *wíĭkala* |
|---|---|---|
| ke-iikal-o | | ɔ-iikal-a |
| NP7-live-NMLZ | | NP15-live-FV |
| 'short life' | | 'to live' |

4.2.4. -e suffix

Only three nominalizations were found that are formed with the *-e* suffix. One of them is an agent nominal in class 1 (example 662), one is an abstract noun in class 14 (example 663), and lastly there is a result nominal in class 5 (example 664).

662. | *mɔlúwae* | < | *ɔlúwalá* |
|---|---|---|
| mɔ-luwa-e | | ɔ-luwa-l-a |
| NP1-be.sick-NMLZ | | NP15-be.sick-APPL-FV |
| 'sick person' | | 'to be sick' |

663. | *oluwáe* | < | *ɔlúwalá* |
|---|---|---|
| o-luwa-e | | ɔ-luwa-l-a |
| NP14-be.sick-NMLZ | | NP15-be.sick-APPL-FV |
| 'disease' | | 'to be sick' |

664. | *vijíe* | < | *ɔvijiá* |
|---|---|---|
| viji-e | | ɔ-viji-a |
| 5.play-NMLZ | | NP15-play-FV |
| 'game'[1] | | 'to play' |

It seems that the verb form *ɔlúwalá* 'to be sick' contains more morphology than the nominalized forms. Formally, it looks like it might be an applicative suffix *-er* on the verb, which is not included in the nominalization.

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[1] The translation of this example by the language consultant was 'usual game', implying that it refers to a game that is regularly played.

4.2.5. Discussion

In general, it seems that there are a lot of person nominalizations. These are mostly formed with the *-i* suffix, but can also be formed with the other three nominalizing suffixes. Givón (1971: 35, as cited in Msaka 2019:36) also notes that the *-i* suffix is often used for nominalizing subject-agentive verbs in many Bantu languages. Noun class 5 was not often found, although class 6 was. This might be caused by the lack of marking class 5 has. Since almost all derivations are overtly marked, this may influence the frequency with which a noun is derived to class 5. In addition, denominal derivation to class 5 carries an augmentative and pejorative meaning (discussed in Section 4.1.2), which may be a reason why it is used less in deverbal derivation. However, class 7 also carries this connotation, but does not stop derivation to these classes. It would be an interesting topic for further research to look into the specific connotations these classes have in relation to the nominalizing suffix, since there seems to be a split based on the data for this thesis. Most classes, except for 1/2, are often used for inanimate reference. Types of meanings that have been found among all the nominalizing suffixes are 'act of X' and 'result of X'. These also do not seem to be restricted to certain noun classes.

5. Number: inflection or derivation?

This section aims answer research question 4: 'Is number in Kimbugwe best analyzed as inflection or derivation?' The arguments in favor of and against the two possible analyses will be discussed. This will shed light on the conceptualization of number within the noun classes of Kimbugwe. According to Kosch (2011) 'number' is;

> "[…] a grammatical category generally described as an inflectional category of the noun. Number is assumed not to entail a change in referential or cognitive meaning, only a change in quantity (from singular to plural). […] in the Bantu languages, the morphemes responsible for a change in number also carry semantic implications, alluding to their derivational function." (Kosch 2011:95)

According to Booij (2006) the main difference between inflection and derivation is functional; derivation makes for new lexemes and inflection makes for a different form of the same lexeme. So, a derivation also results in a word for a new concept or stylistic variation, but a formal difference does not exist and therefore it is difficult to make a sharp distinction (Booij 2006:360-361). However, some characteristics are present in the literature that are canonical for the two processes. This section aims to assess these different characteristics for the Kimbugwe data, and contrasts arguments that have been used in the debate about the status of number in Bantu languages.

Firstly, it is claimed that derivation typically changes the word class of the input word, and that inflection does not (Booij 2006:361). In Kimbugwe, the word class is not changed when a noun changes number. For example, the class 3 noun *mɔsénsé* 'hen' (example 665) stays a noun when pluralized (example 666), as they can both be modified by an adjective. This characteristic is an argument in favor of analyzing number as an inflectional category.

665. *mɔsénse mɔnɛ́nɛ́*
  mɔ-sense mɔ-nɛnɛ
  NP3-hen AP3-big
  'big hen'
666. *mesénse mééja*
  me-sense mee-ja
  NP4-hen AP4-good
  'good hens'

Booij (2006, 363) also claims that inflection should be productive, in contrast to derivation. Kimbugwe number interpretation is productive, as new nouns can be differentiated for number through noun class prefixes. This was tested with the fabricated noun *mɔrara* that hypothetically means 'tree' (example 667). The speaker was asked what the plural this word would be, if it would have been a Kimbugwe noun. The answer was example 668, which shows that number in noun classes is productive. This is in favor of the inflection analysis.

667. Fabricated example:
  mɔ-rara
  NP3-tree
  'tree'
668. Fabricated example:
  me-rara
  NP4-tree
  'trees'

Recursivity is seen as a characteristic of derivation rather than inflection (Booij 2006:365). In principle, Kimbugwe nouns can bear only one noun class prefix (except if it is clearly a case of denominal derivation). However, there is one example where two noun class prefixes are stacked, changing the number reference of the noun; example 669 refers to a collective and example 670 to an individual stalk of millet. Examples 671 and 672 would be ungrammatical, confirming that example 669 and 670 are the right pairing. Example 670 could also be a denominal derivation, since class 7 is sometimes used as such, or a singulative, although singulatives have not been found anywhere else. However, that would leave the ungrammaticality of example 671 unexplained. Since this is only one example, and an exception to what is generally done, this an argument in favor of the inflection analysis. Prefix stacking does occur in Kimbugwe, only when there is a clear denominal derivation (see Section 4.1).

669. *íví viryɔ́*
    i-vi   vi-ryɔ
    AP8-8.DEM.PROX   NP8-millet
    'millet'
670. *ɛ́chɛ́ kéviryɔ́*
    e-che   ke-vi-ryo
    AP7-7.DEM.PROX   NP7-NP8-millet
    'millet stalk'
671. **viviryɔ*
    vi-vi-ryɔ
    NP8-NP8-millet
672. **ɛchɛ keryɔ*
    e-che   ke-ryɔ
    AP7-7.DEM.PROX   NP7-millet

Another characteristic of inflection is its relevance to syntax, or the rest of the sentence, such as agreement, which is less prominent for derivational processes. (Booij 2006:365). In Kimbugwe, number is reflected in agreement – compare the examples 673 and 674 below. Where Schadeberg (2001:12) shows that in Swahili, inanimate nouns do not necessarily trigger agreement showing the matching number value, Kimbugwe nouns always trigger agreement with the matching number value, whether this concerns animate or inanimate (example 675) nouns. This is an argument for the inflection analysis. However, Booij does make the point that syntactic relevance cannot always be used to distinguish between inflection and derivation (2006:365), and the argument should therefore be taken with caution.

673. *óó mɔté ɔmɔ́ mɔnɛ́nɛ́*
    o-o   mɔ-te   ɔ-mɔ   mɔ-nɛnɛ
    AP3-3.DEM.PROX   NP3-tree   AP3-one   AP3-big
    'This one big tree'
674. *éé meté etánɔ medidí*
    e-e   me-te   e-tanɔ   me-didi
    AP4-4.DEM.PROX   NP4-tree   AP4-five   AP4-small
    'These five small trees'
675. *jirá nyɔɔmbá nɛ́nɛ́ jaakɔ́*
    ji-ra   nyɔɔmba   nɛnɛ   j-aakɔ
    AP10-DEM.DIST   10.house   AP10.big   AP10-2SG.POSS
    'Those big houses of yours'

Booij (2006:362) also proposes that derivation is optional and inflection is obligatory. Kimbugwe number morphology is seen through noun class, and noun class marking is obligatory. Most noun classes carry a number value; noun classes 1-10 and 12/19 consist of singular-plural pairs. However, not all nouns necessarily have a value 'singular' or 'plural'. The remaining noun classes, 11, 14, and 15 (examples 676-678 below) do not necessarily have such a value. Agreement of these nouns would not tell us something about their number value (Schadeberg 2001). When the plural of example 676, *loojé* 'flood', was asked, the language consultant indicated there is no plural. So, although the morphological marking of noun class is obligatory, and number is specified for many nouns, the interpretation of number is not obligatory. This characteristic is therefore an argument in favor of analyzing number as derivation in Kimbugwe.

676. class 11:
loojé
lo-oje
NP11-flood
'flood'

677. class 14:
ɔsóóngɔ́
ɔ-soongɔ
NP14-pain
'pain'

678. class 15:
wááka
ɔ-aak-a
NP15-shine-FV
'to shine'

Another characteristic of inflection is that it can be organized along a paradigm, as opposed to derivation (Booij 2006:362). For Kimbugwe, it can be argued that the values singular and plural are a two-fold paradigm. However, the point that these values do not apply to all nouns is a valid consideration again. Noun class 6 can function as a plural of inherent class 5 nouns, as an uncountable class for liquids, such as in example 679, and it can also be used to derive augmentative plural nouns (see Section 4.1.2). These three uses of class 6 vary in their ability to reflect number and canonicity for either inflection or derivation. This shows that noun class prefixes do not have consistent semantics, which makes identifying a number paradigm difficult, which is in favor of the derivation analysis. It also shows that, if number would be analyzed as inflection, the same morphology is used for inflection and derivation. For (Kosch 2011:94-95), this is an argument against analyzing number as inflection. She even claims that because noun to noun derivation is achieved by shifting noun class, all noun class shifts are derivation.

679. *maajé*
ma-aje
NP6-water
'water'

Booij (2006:363) also claims that inflection should be general, in contrast to derivation. Kimbugwe number interpretation is not general, since it does not apply to all noun classes. This is in favor of the derivation analysis.

Another characteristic of inflection is that it is transparent, whereas the process of derivation is opaque (Booij 2006:364). Referring back to the multiplicity of the use of

class 6, I would consider some of the classes in Kimbugwe as having opaque number, but not all of them, because for classes 1/2, 3/4, 5/6, 7/8, 9/10, 11/10, and 12/19 the singular-plural pairings are clear. This is an argument in favor of analyzing number as derivational process.

According to Schadeberg (2001:11), it would be unexpected that there are nouns that occur only in one class if number is an inflectional category. Also in Kimbugwe, there are one-class nouns in some of the noun classes, as illustrated in the examples below. This is an argument for the derivation analysis.[2]

680. *biró éé* ~ **biró iji*
    biro   e-e   biro   i-ji
    9.warmth AP9-9.DEM.PROX   10.warmth AP10-10.DEM.PROX
    'this warmth'

681. *áá maasií*
    a-a   ma-asii
    AP6-6.DEM.PROX   NP6-milk
    'this milk'

Booij (2006:365) lastly mentions that inflection is often peripheral, in contrast to derivation, which is not necessarily peripheral. When a Kimbugwe noun is derived to another noun class, the original noun class prefix is not always removed. If number is analyzed as inflection, this would mean that inflection of the original noun stays on the noun, in a non-peripheral position, as in example 682. In addition, the noun class of the newly derived noun and the original noun class do not need to be the same number value, which shows number insensitivity of the noun prefixes. In example 683, the original noun prefix usually refers to a singular, but the noun prefix of the newly derived noun is plural. Both of the arguments are in favor of analyzing number marking as a derivational process.

682. *vimwáána* < *mwáána*
    vi-mɔ-ana   mɔ-ana
    NP8-NP1-child   NP1-child
    'beautiful girls'   'child'

683. *fyamɔrééngɔ*
    fi-a-mɔ-reengɔ
    NP19-CONN-NP3-door
    'small doors'

Another argument for Schadeberg (2001) to regard KiSwahili number as derivation, is because there is not a single rule that applies to all plural noun classes. Therefore there is no reason to assume it can be seen as a category (Schadeberg 2001:11). The same applies to Kimbugwe, as there is not a rule that applies to the plural classes only. This is a reason to analyze number as derivation.

The arguments mentioned in this section are summarized in the Table below.

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[2] Note that English mass nouns also do not have a plural or singular value, but number is still considered an inflectional category. However, it is a less canonical characteristic of English.

Table 9. Overview arguments derivation vs. inflection

	Derivation analysis	Inflection analysis
Change of word class		✓
Productiveness		✓
Recursivity		✓
Relevance to syntax		✓
Obligatoriness	✓	
Organization along a paradigm	✓	
Generality	✓	
Transparency	✓	
One-class nouns	✓	
Peripheral position	✓	
Lack of 'plural' rule	✓	

As can be seen in Table 9, there are more arguments in favor of analyzing number as derivation. However, it should be observed that the arguments in gray supporting the derivation analysis are all based on the same feature of the noun class system of Kimbugwe, namely that there are noun classes that do not inherently have a number value. Therefore, these arguments should not be taken as separate, but form one major argument together. This argument shows a split between noun classes with (NC 1-11 and 12/19) and without number reference or plural counterpart (NC 11, 14, 15). Even among the noun classes that do have number reference, there is no a lack of transparency and organization along a paradigm, as shown by the multiple possibilities for interpreting noun class 6. It seems that these noun classes can be considered inflection, since they meet most of the criteria, even the ones in gray. For NC 11, 14, and 15 number is irrelevant anyway, so changing number does not happen either. So, analyzing number as inflection in Kimbugwe is a more elegant analysis, as the two types of noun classes can easily be distinguished as having number relevance or not. For the system as a whole, it should be noted that number marking in Kimbugwe is proto-typical for neither derivation nor inflection and shows features of both, which Kosch (2011:89) stresses is found more often in Bantu languages.

6. Formal vs. semantic agreement

This section aims to answer research question 5: 'In what ways do semantics overrule the formal noun class system?'. This will show how semantics impose structure on the Kimbugwe language through different types of agreement. Corbett (2006) states that formal agreement 'is agreement consistent with the form of the controller'. Up until this point, most agreement patterns in this thesis have been formal. There is a second kind of agreement, which is consistent with the semantics of the noun, rather than the form. Nouns that can trigger either type of agreement, are called hybrid nouns (Corbett 2006:155). As is stated in Schadeberg (2001:8), in a lot of Bantu languages, there is an interaction between a formal agreement system and a semantic agreement system, which can bring about a mismatch in gender between the gender marker on the noun itself and its agreement markers. This section discusses different types of semantic agreement. Section 6.1 discusses name agreement, Section 6.2 discusses animal agreement, Section 6.3 discusses location agreement, and Section 6.4 discusses coordinated noun phrases.

6.1. Name agreement

A proper name can be defined as follows; 'a proper name is a noun that denotes a unique entity at the level of established linguistic convention to make it psychosocially salient within a given basic level category. The meaning of the name, if any, does not (or not any longer) determine its denotation' (Van Langendonck 2007: 182).' What is relevant in the definition for this thesis, is that the meaning no longer determines its denotation. As will be shown in this section, this is relevant for Mbugwe names. Many languages use proprial lemmas as names, such as the names Nelson and Vicky. Nowadays, many Mbugwe people have a Christian name, which is often a proprial lemma, and a Mbugwe name, which is often based on an appellative (a common noun (Van Langendonck 2007:1)). This Mbugwe name is often related to the circumstances at the birth. For example, if there is a crowing rooster when a baby is born, chances are the baby is named *séséo* 'rooster'. The names are usually taken from the environment of the birth, and are often nouns that also function within the formal noun class system. One name was found that did not relate to the circumstances at birth, *mɔtéɔ* 'he who makes traps'. This seems like a name relating to the characteristics of a person.

It can occur that there is a mismatch in agreement between the noun when used as a proper name and when used in its original meaning, as will be shown in this section. In Table 10 below, there is an overview of the Kimbugwe names that were collected, and their noun classes.

Table 10. Overview names

Name (f/m)	Circumstances of name giving	Meaning	Noun class
mwaasí (f/m)	Born with the help of a nurse from Mbulu	'Iraqw/Gorwaa person'	1
séséo (m)	Born while a rooster was crowing	'rooster'	5
ɔjúúlɔ (f)	Born from a pregnancy during which the mother was in conflict	'misunderstanding'	1 / 5
mɔtéɔ (m)	He who makes traps	'traps'	6
késeembe (m)	Born in the area where boys are circumcised	'circumcision'	7
kɛsɔɔre (m)	Born in the animal shed	'animal shed'	7
chɔɔa (f/m)	Born in an open area	'field'	7
chuulá (f)	Born in a hut	'hut'	7
njaláá (m)	Born during a famine	'hunger'	9
nsɔɔláá (m)	Born while mother was going to a well	'well'	9
mbulá (f/m)	Born during the rains	'rain'	9
nsisá (f)	Born while mother was selling alcohol	'drunk'	9
ɔtikɔ́ (f)	Born during the night	'night'	14

As can be seen, there are names from class 1, 5, 6, 7, 9, and 14. However, all of these nouns have class 1 or 2 agreement when used as a name, meaning that the semantics

of the nouns overrule their formal features. This can be seen in the examples below; example 684 shows the original use of the noun *séséo* 'rooster' with class 5 agreement, and example 685 shows its use as a name with class 1 agreement. In addition, example 686 shows that the noun *njalaa* 'hunger' usually gets class 9 agreement, and example 687 shows that when two class 9 nouns are used as names in one NP, they trigger class 2 agreement.

684. *éré séséo*
 e-re seseo
 AP5-5.DEM.PROX 5.rooster
 'this rooster'

685. *Séséo otingoká akéénde ɔwáánji*
 seseo o-tingok-a a-ke-ende ɔwaanj-i
 1A.5.rooster NP15-walk-FV AP.SBJ1-PRS-AUX.PRS.IMP field-LOC
 'Seseo walks in the field'

686. *ńjaláá éé*
 njalaa e-e
 9.hunger AP9-9.DEM.PROX
 'this hunger'

687. *Nsɔɔláá na Njaláá na mérémɔ etatɔ varé*
 nsɔɔlaa na njalaa na me-rem-ɔ e-tatɔ va-re
 1A.9.well and 1A.9.hunger with NP4-work-NMLZ AP4-three AP.SBJ2-COP
 'Nsɔɔlaa and Njalaa have three jobs'

The example below is interesting because it differs in form depending on its use; as a regular noun, it is a class 5/6 noun, as illustrated in example 688 and 689. But as a name, a prefix ɔ- is added, as is illustrated in example 690. The prefix ɔ- in Kimbugwe is generally associated with class 14, but since all other names trigger class 1/2 agreement, analyzing it as an allomorph of a class 1 prefix seems more logical.

688. *ere júúlɔ*
 e-re juulɔ
 AP5-5.DEM.PROX 5.misunderstanding
 'this misunderstanding'

689. *aa majúúlɔ*
 a-a ma-juulɔ
 AP6-6.DEM.PROX NP6-misunderstanding
 'these misunderstanding'

690. *ɔjúúlɔ*
 ɔjuulɔ
 1A.misunderstanding
 'ɔjúúlɔ'

The class 1 agreement of names is not only visible in subject marking, but also in object marking, as can be seen in the example below. In example 691, the class 7 and class 14 nouns are used as names and therefore trigger class 1 marking, both in subject and object marking.

691. *ɔtikɔ́ ɔmɔsɔɔndéye kɛsɔ́ɔre*
 ɔtikɔ ɔ-mɔ-sɔɔnd-eye kɛsɔɔre
 1A.14.night **AP.SBJ1-AP.OBJ1**-kiss-PFV 1A.7.animal.shed
 'ɔtikɔ kisses kɛsɔɔre'

chuulá is a class 7 noun (example 692) and can be used as a name (example 693). Interestingly, example 692 can also refer to the human, but in that case, a pejorative meaning is added (example 694). So, this is an example where formal agreement is affected by derivational semantics, since class 7/8 is used to derive augmentative pejoratives. The augmentative is not mentioned in this particular example. See an overview of denominal derivation in Section 4.1.

692. *eche chuulá*[3]
    e-che   ch-uula
    AP7-7.DEM.PROX   NP7-hut
    'this hut'
693. *Chuulá ɔkatayɛ́ éé nsikɔ́*
    chuula   *ɔ-ka-ta-yɛ*   *e-e*   *nsikɔ*
    1A.7.hut   AP1.SM-NARR-be.tired-PFV   AP9-9.DEM.PROX   9.day
    'Chuula is tired today.'
694. *eche chuulá*
    e-che   ch-uula
    AP7-7.DEM.PROX   1A.7.hut
    'this Chuulá person with bad behaviour'

Mbugwe names are analyzed as derived units that have lost their inherent noun class. An argument supporting this analysis is shown in the example below. The derived name is a new noun, to which new noun class morphology can be added, and is not pluralized as *vyuula* 'two people named Chuula', but as *vachuula* 'two people named Chuula'. Van de Velde & Ambouroue (2011) consider the formation of a common noun from a name a *deproprial* lemma, which would mean this lemma went from an appellative lemma to a proper name, to a deproprial lemma.

695. *vachuula*
    NP2A-Chuula
    'two people named Chuula'

Since these nouns trigger class 1/2 agreement even though the inherent noun classes are different, I analyze this as semantic agreement, that is triggered by a +human feature. As soon as the referent is understood as a person, and not the original referent, agreement changes to class 1/2. Since there is not always an overt difference between the name and the original noun, class 1/2 agreement can be used to differentiate between a noun and a derived name. In this way, the semantics of a noun overrule the formal noun class system.

6.2. Animal agreement

Another area where semantic agreement is observed, is the following. In Mbugwe stories, the agreement prefixes for nouns referring to animals are often class 1 or 2. An explanation for this is that animals in stories are usually assigned anthropomorphic qualities, like speaking. Cross-linguistically, it is not uncommon that animals have these qualities in stories. In Mbugwe, an NP referring to an animal can trigger two types of agreement; formal agreement, when the subject NP is present (and only contains one noun class), and semantic agreement, when the subject NP is not present (and may contain noun of different noun classes). Compare the examples below; example 696 shows that the noun *cheemí,* a class 7 noun meaning 'rabbit' triggers class

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[3] Poole 2022 (p.c) states that there is a noun *chuulɔ* 'hut', in stead of *chuulá* 'hut'

7 agreement. However, in example 697, there is a class 2 subject marker on the verb, referring to 'the rabbit and the hyena', while these nouns are formally class 7 and class 9 nouns. So, only anaphoric agreement renders animals as human in stories.

696. *ch-eemí ke-ka-mwer-a*   *mpití …*
  NP7-rabbit AP.SBJ7-NARR-say-FV 9.hyena
  'the rabbit said to the hyena …'
697. *va-ka-tɔ́la*   *barúa …*
  AP.SBJ2-NARR-receive-FV 9.letter
  'they [the rabbit and the hyena] received a letter …'

The majority of agreement follows this pattern, but there are a few exceptions. There is one example (698) of a lexically expressed, singular NP that triggers class 1 agreement, where class 7 agreement is expected, because the NP is present in the sentence. However, there are also examples of the exact same sentence that do show the formal agreement prefix on the verb (example 699).

698. *Cheemí akamwera mpití*
  ch-eemi **a**-ka-mwer-a   mpiti
  NP7-rabbit **AP.SBJ1**-NARR-tell-FV 9.hyena
  'the rabbit told the hyena…'
699. *cheemí kekamwera mpití*
  ch-eemi **ke**-ka-mwer-a   mpiti
  NP7-rabbit **AP.SBJ7**-NARR-tell-FV 9.hyena
  'the rabbit told the hyena…'

There is one sentence in the story where class 2 agreement is expected, but a different agreement marker is used. In example 700, the subject marker is *vi-* (class 8) while the NP is not present. Note that the same example also has the expected verb form at the end. A possible explanation for this is that the second verb form is a correction of the first.

700. ***Ne vikara*** *mihogo poo ya mpiti* ***ne vakara.***
  ne   vi-ka-r-a   mi-hogo poo e-a
  FOC AP.SBJ8-NARR-eat-FV NP4-cassava all AP4-CONN

  mpiti ne va-ka-r-a
  9.hyena FOC AP.SBJ2-NARR-eat-FV
  'They ate the all of the cassava of the hyena, they ate.'

The example below shows that there can also be a mismatch in agreement when class 1 agreement is expected, but a class 7 marker is used. The NP *kila mɔɔntɔ* 'each person' refers to 'the rabbit and the hyena' again. At first sight, a plural agreement marker would be expected on the verb (either class 2 or class 8). However, the noun *mɔɔntɔ* is a singular noun, which may be the reason why a singular agreement marker is used. It remains unclear why the speaker did not make use of a class 1 agreement marker, but is possibly caused by the use of *ke-* agreement in the sentences before and after this sentence.

701. *Kila mɔntɔ kekaveeka kɔré mkoba waachwé.*
  kila mɔ-ntɔ   ke-ka-veek-a   kɔ-re   m-koba w-aachwe
  each NP1-person AP.SBJ7-NARR-put-FV AP17-COP NP4-bag AP4-3SG.POSS
  'Each person put it in their own bag'

As we have seen in this section, semantic agreement occurs in Mbugwe stories. An important aspect of this is that the NP that triggers the agreement is left out. So,

although the formal agreement system is overruled by semantics in this way, only the lack of the actual form allows for semantic agreement. Animals in stories have some degree of anthropomorphism, and semantic agreement can only surface when the formal NP is not present. More research is needed to explain the exceptions to this rule.

6.3. Location agreement

A third area in which semantic agreement is found, is location agreement. Location NP's in Kimbugwe can have different agreement patterns. These patterns are illustrated in this section. First of all, it is important to understand how locative phrases are formed in Kimbugwe. There are a few strategies to mark location. There is a suffix *-(n)εy* that attaches to a noun, the preposition *na* and the preposition *kɔre*. These morphemes can occur by themselves or in combination with each other to mark a location. A short overview of the possible combinations to mark a location is given below:

Table 11. Combinations of morphemes marking location

-(n)εy	*na*	*kɔre*
✓		
	✓	
		✓
✓	✓	
✓		✓
✓	✓	✓

The combinations found in the table above are illustrated in the examples below.

702. -(n)εy:

chalóy / chalwí	~	*chalo*
chalo-i		chalo
9.farm-LOC		9.farm
'at the farm'		'farm'

703. na:

náyolé áfɛtá	~	*yolé*
na-yole a-fɛt-a		yole
PREP-5.sky AP.SBJ1-walk-FV		5.sky
'He went upstairs'		'sky'

704. kɔre:

kɔ́rɛ́ kíwanja	~	*kiwanja*
kɔ-rɛ ki-wanja		ki-wanja
AP17-COP NP7-field		NP7-field
'at the field'		'field'

705. -(n)ɛy + na:
   váána vaafɛ́tá na sɔ́kɔ́nɛy   ~   *sɔkɔ*
   v-aana   va-a-fɛt-a   na   sɔkɔ-nɛy   sɔkɔ
   NP2-child   AP.SBJ2-PST-walk-FV   to   5.market-LOC   5.market
   'the children went to the market'   'market'

706. -(n)ɛy + kɔreː
   kɔ́rɛ́ mɔgaháwɛí njírɛ   ~   *mɔgaháwa*
   kɔ-rɛ   mɔ-gahaw-ɛi   nji-rɛ   mɔ-gahawa
   AP17-COP   NP3-restaurant-LOC   1SG.SBJ-COP   NP3-restaurant
   'I am at the restaurant'   'restaurant'

707. -(n)ɛy + na + kɔreː
   vááná vaafɛ́tá na kɔré sɔ́kɔ́nɛy   ~   *sɔkɔ*
   v-aana   va-a-fɛt-a   na   kɔ-rɛ   sɔkɔ-nɛy   sɔkɔ
   NP2-child   AP.SBJ2-PST-walk-FV   to   AP17-COP   5.market-loc   5.market
   'the children went to the market'   'market'

On top of this, however, locative marking can also be shown through agreement with a locative class. The locative classes in Kimbugwe are class 16, 17 and 18. There are a few nouns that belong in the locative classes 16 and 17, but there are no class 18 nouns (see Section 3). The nouns in these classes trigger locative agreement, which can be class 16, *fa-* (example 708), or class 17, *kɔ-* / *ko-* (example 709 and 710). These agreement patterns are shown in the examples below.

708. *Fáánto fárá fánjishíryé na furáhá*
   fa-nto   fa-ra   fa-nji-shir-ye   na   furaha
   NP16-place   AP16-DEM.DIST   AP.SBJ16-1SG.OBJ-make-PFV   with   9.joy
   'The place makes me happy'
709. *Kɔrá koóntó ne kɔlé*
   kɔ-ra   koo-nto   ne   kɔ-le
   AP17-dem   NP17-place   COP   AP17-far
   'this place is far'
710. *Koóntó kɔra konjishirye na furaha*
   ko-nto   kɔ-ra   ko-nji-shi-rye   na   furaha
   NP17-place   AP17-DEM.DIST   AP.SBJ17-1SG.OBJ-make-PFV   with   9.joy
   'The place/it makes me happy.'

Sometimes, a noun referring to a location can also trigger this locative agreement, as in example 711, where the suffix *-ni* (an allomorph of suffix *-nɛy*) is added to mark the location. It is ungrammatical to add a locative class prefix, as in example 712, which shows that the productiveness of class formation with this prefix is not high. These examples can be compared to the construction following the formal agreement system, as in example 713, where the class 5 noun *kanísa* 'church' triggers class 5 subject marking *re-* on the verb.

711. *kanisáni konjishírye na furáha*
   kanisa-ni   ko-nji-shir-ye   na   furaha
   5.church-LOC   AP.SBJ17-1SG.OBJ-make-PFV   with   9.joy
   'The church makes me happy'
712. **kokanísa konjíshírye na furáha*
   ko-kanisa   ko-nji-shir-ye   na   furaha
   NP17-church   AP.SBJ17-1SG.OBJ-make-PFV   with   9.joy

713. *kanísa renjíshírye na furáha*
  kanisa re-nji-shir-ye   na furaha
  5.church AP.SBJ5-1SG.OBJ-make-PFV with 9.joy
  'The church makes me happy'

A locational DP can also trigger class 17 agreement, even though there is no locative marking. This is shown in the example below. This is in contrast with the formal agreement pattern, shown in example 710 above. This example suggests that the locative suffix is not needed for locative agreement when the noun has an inherently locative meaning, but that the locative suffix *is* needed when the noun does not have an inherently locative meaning (Fuchs & van der Wal 2021:292-294; Guerois 2014). This would be an interesting topic for further research.

714. *kanísa konjíshírye na furáha*
  kanisa ko-nji-shir-ye   na   furaha
  5.church AP.SBJ17-1SG.OBJ-make-PFV with 9.joy
  'The church makes me happy'

In addition, class 9 is used as a default agreement class in the example below, showing that a noun with a prefix of class 17 does not necessarily trigger class 17 agreement. More examples of this type of default agreement are needed to establish a complete analysis.

715. *korimó yaasaidía váánto*
  ko-rimo   e-aa-saidi-a   va-nto
  NP17-afterworld AP.SBJ9-PST-help-FV NP2-person
  'The afterworld helped people'

Again, we observe that the semantics of the noun determine the agreement, rather than what is expected from the formal noun class system.

6.4. Coordinated noun phrases

The last area where semantic agreement is found, is with coordinated noun phrases. Formal agreement is triggered when the noun class of the noun is reflected in its agreement targets, as in example 716. This example shows a class 2 noun triggering class 2 agreement throughout the whole sentence.

716. *Avá vaaná vavéré vadídí vane*
  a-va   va-ana va-vere va-didi   v-aane
  AP2-2.DEM.PROX NP2-child AP2-two AP2-small AP2-1SG.POSS
  'These two little children of mine'

However, when a coordinated noun phrase containing nouns with two different noun classes, there is no formal agreement option. Therefore, a default agreement class is used. Animacy plays a role in this, as there is a distribution between coordinated noun phrases containing a noun referring to a human and coordinated noun phrases without a noun referring to a human. The former triggers class 2 subject marking on the verb, as can be seen in example 717, while the latter triggers class 8 subject marking, as is shown in example 718.

717. *Mɔ́ntɔmɔlɔ́me mɔ́lii na chɔrá kechafú vawine ḿtɔ*
  Mɔ-ntɔ-mɔ-lɔme   mɔ-lii na ch-ɔra
  NP1-person-NP1-masc AP1-tall and NP7-frog

ke-chafu   va-win-e   mtɔ
AP7-dirty   AP.SBJ2-see-SBJV   NP3-river
'The tall man and the dirty frog see the river'
718. ch-eemí   na   mpití   vy-ee-kúndiy-a …
NP7-rabbit   and   9.hyena   AP.SBJ8-IPFV.SBJV-meet-FV
'the rabbit and the hyena met …'

The same is observed for object marking, which is illustrated in examples 719 and 720 below. However, it seems that there are more possibilities for object marking than for subject marking, as the agreement of a coordinated noun phrase with one noun referring to a human can also trigger class 8 agreement sometimes (example 721). In the same way it is sometimes allowed to have class 2 object marking, although there is not a noun referring to a human in the coordinated noun phrase. This is shown in example 722.

719. *nevatovíye nkɔlɔmá na kaána áva*
ne-va-tov-iye   nkɔlɔmá   na   ka-ana   a-va
1SG.SBJ-AP.OBJ2-hit-PFV 9.buffalo and   NP12-child   AP2-DEM.PROX
'I hit the buffalo and the child'
720. *nevitovíye mɔsénsé na nkɔlɔmá*
ne-vi-tov-iye   mɔ-sense   na   nkɔlɔma
1SG.SBJ-AP.OBJ8-hit-PFV NP3-hen   and   9.buffalo
'I hit the hen and the buffalo'
721. *nevitovíye mwaaná na mɔsénsé*
ne-vi-tov-iye   mw-aana   na   mɔ-sense
1SG.SBJ-AP.OBJ8-hit-PFV NP1-child and   NP3-hen
'I hit the child and the hen'
722. *nevatovíye nkɔlɔmá na chɔrá ívi*
ne-va-tov-iye   nkɔlɔmá   na   ch-ɔra   i-vi
1SG.SBJ-AP.OBJ2-hit-PFV 9.buffalo and   NP7-frog AP8-8.DEM.PROX
'I hit this buffalo and the frog'

Syntactic agreement, or closest conjunct agreement, entails that the NP closest to the verb triggers the agreement on the verb (Schadeberg 2001:14). This is not attested for Kimbugwe. Moreover, it is ungrammatical in the following example: the class 9 noun is closest to the verb, but cannot trigger class 9 subject marking.

723. **mɔsénse na nkɔlɔma ikeféta*
mɔ-sense   na   nkɔlɔma   i-ke-fɛt-a
NP3-hen   and   9.buffalo AP.SBJ9-PRS-walk-FV
'The big hen and the buffalo walk'

According to Krifka (1995), KiSwahili follows the same pattern regarding coordinated noun phrases with a mismatch in gender (class 2 for human nouns and class 8 for nouns of other noun classes combined), so only the lack of syntactic agreement in Kimbugwe is different from KiSwahili.

Other agreement targets behave differently than subject and object marking in Kimbugwe, and are questionably grammatical when they are modifying a coordinated noun phrase, according to the Kimbugwe speaker. Note that the class 8 marking on the adjective is ungrammatical in example 724, but is allowed in example 725, although it is the same adjective modifying a coordinated noun phrase, that even consists of two nouns that belong to the same noun classes (7 and 9). This difference in grammaticality remains unexplained, but it possibly relates to the Animacy Hierarchy (see Bentley 1994; Nyaggah 1990; Woolford 1999). This would imply that

animals that are higher on the hierarchy, such as sheep, are more likely to be modified by an adjective in a coordinated noun phrase, than animals that are lower on the hierarchy, such as frogs and rats. This may have resulted in the ungrammaticality of modifying the coordinated noun phrase in example 724. Demonstratives are less restricted in the sense that class 8 agreement is allowed for these coordinated noun phrases (example 726).

724. *chɔra na mbɛva *[vididi] vyekundirye*
    ch-ɔra   na   mbɛva vi-didi   vy-ekund-irye
    NP7-frog and   9.rat AP8-small   AP.SB8-meet-PFV
  'The little frog and rat meet each other'

725. *arisé na chɔrá vidídí kaayé víre*
    arise   na   ch-ɔra   vi-didi   kaaye vi-re
    9.sheep and NP7-frog AP8-small home AP8-cop
  'the young sheep and the small frog stay at home'

726. *mɔsénsé na nkɔlɔmá ívi*
    mɔ-sense na   nkɔlɔma i-vi
    NP1-hen and   9.buffalo AP8-8.DEM.PROX
  ''This hen and buffalo'

Marten (2000:5) argues that coordinated noun phrases in KiSwahili are adjuncts, and not actual subjects. He suggests that an empty nominal subject triggers a default agreement prefix on the verb, which is supported through the illustration of other empty heads in KiSwahili. In addition, he bases this on the ungrammaticality of demonstratives and adjectives modifying a coordinated noun phrase. For Kimbugwe, however, there *is* default agreement within the DP: adjectives and demonstratives can modify a coordinated noun phrase, as is illustrated in the examples above. The fact that coordinated noun phrases can trigger agreement outside and inside of the noun phrase, would weaken the analysis of coordinated noun phrases as adjuncts. However, more research is needed to explore the syntactic status of a modified coordinated noun phrase.

Schadeberg states that, although semantic agreement caused by a coordinated NP does occur, most of the time it is avoided (1992:22). This is the same in Kimbugwe. The sentence in example 727 shows how this can be accomplished. The subject marker only agrees with the human noun in class 1, and the phrase *na nkókó* is treated as an adjunct to the head noun *mwáána.*

727. *Mwááná mɔ́baú na nkókó akéfétá néduki*
    mw-aana mɔ-bau na nkoko   a-ke-fɛt-a   na-iduki
    NP1-child AP1-big and 9.chicken AP.SBJ1-PRS.IMP-walk-FV by-shop
  'the big child and the chicken walk by the shop'

For KiSwahili, it is established that adjectives and demonstratives never modify a conjoined NP (Marten 2000, 6), which is clearly not the case in Kimbugwe, although their modification is not without restriction. This relates to the Agreement Hierarchy proposed by Corbett (1979) (below), which states that 'The further left an element on the hierarchy, the more likely syntactic (formal) agreement is to occur, the further right, the more likely semantic agreement' (Corbett 1979:204).

    Attributive – predicate – relative pronoun – personal pronoun

Since Kimbugwe allows adjectives and demonstratives to modify a coordinated noun phrase, which results in semantic agreement, this hierarchy would imply that semantic agreement should also be possible for the remaining positions on the hierarchy. As we have seen, the predicate allows semantic agreement as well, in the form of subject and

object marking. However, the remaining two positions are difficult to confirm or disprove, since relative clauses are formed with an inflected predicate and personal pronouns are not concerned with gender, which is the semantic feature that determines whether semantic of formal agreement is chosen. However, it would still be interesting to investigate how subject and object marking behaves in this domain.

7. Discussion

This thesis is a description of the Kimbugwe noun class system and its interaction with semantics. To research this, the following five questions have been looked at:

1. What does the formal noun class system of Kimbugwe look like?

2. Do Kimbugwe noun classes have semantic tendencies?

3. How are nouns derived in Kimbugwe?

4. Is number best analyzed as inflection or derivation?

5. In what ways do semantics overrule the formal noun class system?

The first research question, 'What does the formal noun class system of Kimbugwe look like?' was treated in Section 3. The prefixes and their formal agreement were shown. Regarding this formal system, it would be interesting to research its allomorphs, such as the *a-* and *ɔ-* subject marking of class 1, and the *fi-* and *sha-* prefix alternation in class 19. Section 3 also discussed the second research question 'Do Kimbugwe noun classes have semantic tendencies?', to which the answer is 'yes'. Kimbugwe noun classes do have semantic tendencies. Through the illustration of the categories that were found in the noun classes, and the connections made with the reconstruction of Proto-Bantu, it was shown that there are categories, but that the categories are not exclusive to one noun class. More research is needed to find out if semantic networks reflect the way Kimbugwe speakers conceptualize the semantics of these noun classes.

Section 4 discussed research question 3: 'How are nouns derived in Kimbugwe?'. It was illustrated how denominal and deverbal noun derivation works in Kimbugwe, which showed the use of the semantics of the noun classes. More research is needed regarding denominal derivation to find out why and in what circumstances a 'mismatch' in number on stacked prefixes can occur, when stacked prefixes occur and how this affects agreement throughout the sentence. Regarding deverbal derivation, it would be an interesting topic for further research to look more into the specific connotations the noun classes have in relation to the nominalizing suffixes.

Section 5 discussed research question 4: 'Is number best analyzed as inflection or derivation?'. The answer to this question is that analyzing the category of number as inflection is more elegant, because noun classes can easily be distinguished as having number relevance or not. However, regarding the system as a whole, number marking is neither proto-typical for derivation nor inflection and shows features of both. More research into Kimbugwe and how inflection and derivation varies in languages is needed to come to a final analysis.

Lastly, Section 6 discussed research question 5: 'In what ways do semantics overrule the formal noun class system?'. Various types of semantic agreement were shown; name agreement, animal agreement, location agreement, and coordinated noun phrase agreement, which all showed that in many instances agreement is determined by semantics in stead of formal characteristics. Topics for further research would be

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the possible types of agreement of non-inherent locatives, and the default class 9 agreement of locative DP's. More research is also needed into the syntactic status of coordinated noun phrases and how subject and object agreement of coordinated noun phrases behaves in relative clauses.

These sections all contributed to the main research question: 'How does the noun class system of Kimbugwe interact with semantics?'. As has been shown throughout the thesis, the noun class system interacts with semantics on a lexical level (the inherent semantics of the noun classes), on a morphological level (the derivational semantics of the noun classes), and on a syntactic level (the semantic agreement of the noun classes).

References

Bastin, Yvonne, Andr'e Coupez, Evariste Mumba & Thilo Schadeberg (eds). 2002. *Bantu Lexical Reconstructions 3*. Tervuren: Royal Museum for Central Africa, online database: https://www.africamuseum.be/nl/research/discover/human_sciences/culture_society /blr (Accessed 20 May 2022).

Baumann, Oskar. 1894. *Durch Massailand zur Nilquelle: Reisen und Forschungen der Massai-Expedition des deutschen Antisklaverei-Komite in den Jahren 1891- 1893*. Berlin: D. Reimer.

Bentley, Mayrene 1994. *The Syntactic Effects of Animacy in Bantu Languages*. Bloomington: Indiana University. PhD dissertation.

Booij, Geert. 2006. Inflection and derivation. In Keith Brown (Ed.), *Encyclopedia of Language & Linguistics, Second Edition,* (5). 654-661.Oxford: Elsevier.

Botne, Robert. 2019. Chimpoto N14. In Mark Van de Velde, Koen Bostoen, Derek Nurse & Gérard Philippson (Eds.), *The Bantu Languages, Second Edition*. London; New York: Routledge.

Brooks, Patricia J. & Vera Kempe. 2014. *Encyclopedia of Language Development*. Thousand Oaks: SAGE Publications.

Contini-Morava. 2002. (What) do noun class markers mean? In Wallis Reid, Ricardo Otheguy, & Nancy Stern (Eds.), *Signal, Meaning, andMessage: Perspectives on sign-based linguistics*. 3-64. Amsterdam: John Benjamins.

Corbett, Greville G. 1979. The agreement hierarchy. *Journal of Linguistics* 15 (02). 203-224.Cambridge University Press.

Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.

Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.

Creider, Chet A. 1975. The Semantic System of Noun Classes in Proto-Bantu. *Anthropological Linguistics* 17(3). 127–38.

Dempwolff, Otto. 1915-1916. Beitrage zur Kenntnis der Sprachen in Deutsch-Ostafrika 7. Buwe, 8. Irangi. *Zeitschrift fur Kolonialsprachen* 6. 1-27, 102-103.

Di Garbo, Francesca, Bruno Olsson & Bernhard Wälchli. 2019. *Grammatical gender and linguistic complexity. Volume I: General issues and specific studies*. Berlin: Language Science Press.

Eberhard, David M., Gary F. Simons & Charles D. Fennig (Eds). 2022. *Ethnologue: Languages of the World*. Twenty-third edition. Dallas, Texas: SIL International. http://www.ethnologue.com.

Givón, T. 1971. Some historical changes in the noun-class system of Bantu, their possible causes and wider implications. In C.W. Kim & H. Stalhke (Eds.), *Papers in African linguistics*. Vol. 1. (Current inquiry into language and linguistics). Edmonton, Alberta: Linguistic Research Inc. 33–53.

Gray, Robert F. 1953. Positional Succession Among the Wambugwe. *Africa: Journal of the International African Institute* Vol. 23(3). 233-243.

Gray, Robert F. 1955. *The Mbugwe Tribe: Origin and Development. Tanganyika Notes and Records*.

Gray, Robert F. 1963. Some structural aspects of Mbugwe witchcraft. In John Middleton & Edward Henry Winter (Eds.), *Witchcraft and sorcery in East Africa.* 143-174. London: Routledge and Kegan Paul.

Grollemund R., S. Branford, J.M. Hombert, & J.R. Watters. 2015. Towards a new phylogenetic classification of Bantoid languages. In J.R. Watters (Ed.), *Towards Proto-Niger-Congo: Comparison and Reconstruction.* Berlin: Language Science Press.

Guérois, Rozenn. 2015. *A Grammar of Cuwabo.* PhD dissertation. Lyon: Université Lumière Lyon 2.

Güldemann, T. 2011. Proto-Bantu and Proto-Niger-Congo: Macro-areal Typology and Linguistic Reconstruction. In O. Hieda, C. König & H. Nakagawa (Eds.), *Geographical Typology and Linguistic Areas with Special Reference to Africa,* 109–141. Amsterdam; Philadelphia: John Benjamins.

Hepburn-Gray, Robert. 2020. *Niger-Congo Noun Classes: Reconstruction, Historical implications, and Morphosyntactic Theory.* New York: Faculty of the Graduate School of the State University of New York: PhD dissertation.

Hockett, Charles F. 1958. *A course in Modern Linguistics.* New York: Macmillan.

Inge Kosch. 2011. Descriptive issues of derivation and inflection in Sesotho sa Leboa (Northern Sotho) with particular reference to 'number'. *Southern African Linguistics and Applied Language Studies*, 29:1. 89-96.

Krifka, Manfred. 1995. Swahili. In Joachim Jacobs, Arnim van Stechow, Wolfgang Sternefeld & Theo Vennemann (Eds.), *Syntax: Ein internationals Handbuch zeitgenoessischer Forschung,* vol. 2. 1397-1418. Berlin, New York: Walter de Gruyter.

LOT. 2009. *Atlasi ya lugha za Tanzania.* Dar es Salaam: Chuo Kikuu cha Dar es Salaam.

Maho, Jouni Filip. 2009. NUGL Online: *The online version of the New Updated Guthrie List, a referential classification of the Bantu languages.* https://brill.com/fileasset/downloads_products/35125_Bantu-New-updated-Guthrie-List.pdf (accessed on March 20, 2020).

Marten, Lutz. 2000. Agreement with conjoined Noun Phrases in Swahili. *Afrikanistische Arbeitspapiere: Swahili Forum VII,* Vol. 64. 75–96.

Masele, Balla F. Y. P. & Derek Nurse. 2003. Stratigraphy and Prehistory: Bantu Zone F. In Henning Andersen (Ed.), *Language contacts in prehistory: studies in stratigraphy*, 115-133.

Meeussen, A. E. 1967. Bantu Grammatical Reconstructions. *Africana Linguistica* 3. 79-121.

Meinhof 1906. *Grundzüge einer vergleichenden Grammatikder Bantusprachen.* Dietrich Reimer (Eruat Volmern).

Mletshe, Loyiso. 2017. Deverbal nominals derived from intransitive state verbs in isiXhosa: A Generative Lexicon approach. *South African Journal of African Languages,* 37:1. 29-39.

Mous, Maarten. 2000. Counter-universal rise of infinitive-auxiliary order in Mbugwe (Tanzania, Bantu F 34). *Mehr als nur Wrote.* 469-481.

Mous, Maarten. 2004. *A Grammatical Sketch of Mbugwe: Bantu F34, Tanzania.* Cologne: Köppe.

Msaka, Peter Kondwani. 2019. *Nominal classification in Bantu revisited: The perspective from Chichewa. Stellenbosch University.* PhD dissertation.

Nyaggah, Lynette Behm. 1990. *Cross-linguistic Influence in Kenyan English: The Impact of Swahili and Kikuyu on Syntax.* Los Angeles: University of California. PhD dissertation.

Petzell, Malin, Lotta Aunio. 2019. Kami G36. In Mark Van de Velde, Koen Bostoen, Derek Nurse, & Gérard Philippson (Eds.), *The Bantu Languages, Second Edition*. New York: Routledge.

Poole, Lizzie. 2021. *A closer look at the optional Class 5 prefix in Mbugwe*. Talk given at the Rift Valley Network Webinar Series. 10/03/2021.

Schadeberg, T.C. 1992. *A Sketch of Swahili Morphology*. Cologne: Köppe.

Schadeberg, T.C. 2001. Number in Swahili grammar. *Swahili Forum VIII 7* – 16.

Seidel, Alfred. 1898. Grammatik der Sprache von Irangi. In C. Waldemar Werther (Ed.), *Die mittleren Hochländer des nördlichen Deutsch-Ost-Afrika,* 387-434. Berlin: Hermann Paetel.

Stegen, Oliver. 2002. Derivational Processes in Rangi. *Studies in African Linguistics 31,* no. 1-2. 129-53.

Ström, Eva-Marie. 2013. *The Ndengeleko language of Tanzania*. PhD dissertation. Gothenburg: Gothenburg University.

UNESCO UNESCO (=UNESCO Ad Hoc Expert Group on Endangered Languages). 2003. Language Vitality and Endangerment. Document submitted to the International Expert Meeting on UNESCO Programme Safeguarding of Endangered Language. Paris, 10–12 March 2003. Paris.

Valdés Kroff, J.R., Rooijakkers, F. & Parafita Couto, M.C. 2019. Spanish Grammatical Gender Interference in Papiamentu. *Languages* 4.

Van de velde 2009. Agreement as a grammatical criterion for Proper Name status in Kirundi. *Onoma* 44. 219-241.

Van de Velde, Mark & Odette Ambouroue. 2011. The grammar of Orungu proper names. *Journal of African Languages and Linguistics* 32-1. 113-141.

Van de Velde, Mark. 2019. Nominal Morphology and Syntax. In Mark Van de Velde, Koen Bostoen, Derek Nurse & Gérard Philippson (Eds.), *The Bantu Languages, Second Edition,* London; New York: Routledge.

Van Langendonck, Willy 2007. *Theory and Typology of Proper Names*. Berlin: Mouton de Gruyter.

Welmers, W. E. 1973. *African Language Structures*. Berkeley: University of California Press.

Wilhelmsen, V. 2011. Grammaticalization of tense and aspect in Mbugwe: a preliminary investigation. *Language Documentation and Description* 10. 247–264.

Wilhelmsen, V. 2018. A Linguistic Description of Mbugwe with Focus on Tone and Verbal Morphology. *Studia Linguistica Upsaliensia 20.* Uppsala: Acta Universitatis Upsaliensis.

Woolford, Ellen. 1999. Animacy hierarchy effects on object agreement. In Paul Kotey (Ed), *New Dimensions in African Linguistics and Languages (Trends in African Linguistics 3)*, 203-216. University of Massachusetts.

Appendix

The table below contains an overview of the noun classes, the semantic categories that were found and the percentages of that category relative to all of the nouns that occur in that class.

Table 12. Overview semantic categories

Noun class	Semantic categories		Percentage
1/2	People		100%
3/4	Nature		23%
		Tree	9%
		Areal	4%
		Water	3%
		Plant	3%
		Weather	2%
		Fire	1%
	Human body		14%
	Elongated		14%
	Abstract		11%
	Animal		6%
	Other		5%
	Time		5%
	Hollow		5%
	Skin-like		3%
	Areal human creation		1%
4	Nominalizations		50%
	Other		33%
	Nature		17%
5/6	Object		39%
	Nature		17%
	Bad/big		15%
	Abstract		14%

	Human body	13%
	Food	10%
	Part	9%
	Location	8%
	Shell-like	7%
	Cooking	4%
	Weapon	3%
	Animal	3%
	Animal part	2%
	Fruit	2%
	Other	2%
6	Liquids	80%
	Other	20%
7/8	Object	34%
	Abstract	22%
	Human body	14%
	(small) Animal	13%
	Food	8%
	Nature	6%
	People	3%
8	Object	100%
9/10	Animal	27%
	Abstract	25%
	Object	19%
	Food	11%
	Nature	10%
	Human body	6%
	People	2%
9/6	Animal	43%
	Object	31%
	Food	9%

	Abstract	9%
	Other	6%
11/10	Elongated	27%
	Human body	22%
	Location	15%
	Animal body	10%
	Other	10%
	Direction	8%
	Kinship	8%
10	Abstract	60%
	Other	40%
11	Abstract	33%
	Mass	27%
	Food	27%
	Horn	20%
12/19	Small	89%
	Other	11%
14	Abstract	73%
	(viscous) Liquids	10%
	Human body	5%
	Demarcation	4%
	Porridge-related	4%
	Other	3%
	Smell	2%
14/10	Object	100%
14/6	Other	60%
	Human body	40%
15/6	Paired human body parts	100%
16	Location	100%
17	Location	100%

Temporal location	65%
Physical location	35%