San Diego Linguistic Papers **5** (2015) 71-120

Noun Class Agreement and the Elements of the Noun Phrase in Gitonga-Inhambane

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1 Introduction

1.1 Gitonga

Gitonga is a Bantu language spoken in southern Mozambique in the Inhambane area, which is located on the coast about 400 kilometers northeast of Maputo. *Ethnologue* notes that there were approximately 375,000 speakers in 2006 and classifies the language within the Niger-Congo family (Lewis, 2009). Borrowings from Portuguese are present in the Gitonga lexicon given the status of Portuguese as the official language of Mozambique; the influence of Portuguese, however, is limited to vocabulary (Lanham, 1955).

Guthrie (1971, 1984) classified Bantu languages not only according to geographic zones (A-S) but also taking into account lexical, grammatical, phonological, phonetic, and tonal features for each language. This system of classification, revised by Nurse & Philippson (2003), and later by Maho (2009), to include scholarship on languages not originally in Guthrie's original, categorizes Gitonga in Zone S within sub-zone 60, which includes the languages in the Inhambane group. Gitonga's code is S.62. [1]

Though there is a considerable amount of information on the Bantu languages, there have been very few scholarly investigations of Gitonga. The most comprehensive to date is Lanham's 1955 work *A Study of Gitonga of Inhambane*, a thesis dissertation that provides a grammatical analysis of the language. Lanham (1955) notes that prior to his work only a 1903 typewritten booklet and a 1932 document with vocabulary and cursory grammar notes existed as sources of scholarship in Gitonga. More recently, a chapter by Gowlett (2003) in Zone S Bantu languages in Nurse and Philippson (2003) provides some analysis of the structure of Gitonga in relation to other Zone S Bantu languages.

1.2 Present Study

As a typical Bantu language, Gitonga possesses a complex system of noun classes with an equally robust agreement system wherein the elements of a noun phrase agree with the noun class of the head noun. This agreement is evidenced in the form of noun class prefixes that are present on the head noun and on each of the elements that modify it – in Gitonga these elements can include demonstrative modifiers, adjectives, numerals, and genitive phrases. In this paper I provide an overview of these elements of the noun phrase, their agreement patterns with the head noun, and

[1] Elsewhere in this study, where I make reference to a Bantu language, I indicate its classification in parentheses. The letter corresponds to the Bantu zone and the number to the sub-zone. See Nurse & Philippson (2003) for a complete classification.

their interactions with other elements of the noun phrase from a semantic and morphosyntactic standpoint.

I dedicate part two to a subtype of complex noun phrases, namely genitive phrases with nominal possessors. I survey three morphologically-distinct constructions that encode genitive relations with nominal possessors in Gitonga, the agreement patterns of these constructions, and the interactions of the head noun with other elements in the genitive noun phrase.

1.3 Methodology

The data reported in this present study was elicited as part of a two-quarter linguistics field-work course at the University of California, San Diego that took place during the winter and spring quarters in 2010 with additional one-on-one elicitation sessions from June 2010 through April 2011. The data was elicited in two ways: one, in a classroom setting with students taking turns to elicit individual words, phrases, and sentences, and asking our consultant to describe scenes from videoclips or retell a story in his own words; two, in one-on-one elicitation sessions led by me and with only the consultant providing the data in Gitonga. In these sessions, I provided my consultant with sentences and phrases in English and asked him to translate them into Gitonga.

The sole consultant for this study is a 29-year-old male native of Mozambique's Inhambane region and whose family language is Gitonga. Other languages from the region were spoken in his home, and he is also a speaker of Portuguese and English. At the time of elicitation he was completing his bachelor's degree at the University of California, San Diego, where he had been living for the past five years. In elicitation sessions, he refers to his dialect of Gitonga as the urban variety and acknowledges that there is a rural dialect that shows some variation from his dialect. The consultant pointed out that some concepts and vocabulary words could not be expressed in Gitonga since Portuguese is more widely used. I indicate where this presents an issue (e.g. numerals) in my presentation of the data.

Elicitation sessions were conducted in a classroom setting with the number of participants ranging from 8 to approximately 20, and one-on-one at my office with minimum noise save for one session at the consultant's home. All data was recorded with a Marantz recorder in WAV format and stored in a web server property of the UCSD Linguistics department to build a corpus of spoken Gitonga. I identify each of the audio files that contain the relevant data next to each example in square brackets. Each file is identified by the capital letters GT and a five-digit number that corresponds to the audio file. Hence, examples range from [GT00001] to [GT00802].

2 Simple Noun Phrases

I begin this first part with an overview of nouns, the noun classes and their classification, and a summary of their agreement patterns (section 2.1). In section 2.2 I delve into the three different types of demonstrative modifiers. In section 2.3 I survey the way in which adjectives are formed in Gitonga. In section 2.4 I provide a discussion of cardinal numerals. In section 2.5 I discuss pronominal possessive phrases. A discussion of subject-verb agreement is provided in section 2.6, and I conclude this first part with an overview of the structure of the elements of the noun phrase in Gitonga in section 2.7.

2.1 Noun Classes

Gitonga is a language that possesses a system of noun classes, which Katamba (2003) notes is a distinguishing feature not only of African languages but also especially of Bantu languages. Noun

class markers are obligatory in Gitonga[2]. Dryer (2007) indicates that in a language where noun class markers are obligatory, these markers function as articles because they have article-like properties in that they mark number and gender in nouns.

In Gitonga, noun class markers occur in the form of prefixes that are attached to noun stems. For example, the word for *farmer*, ('murimi') consists of the prefix 'mu-', which corresponds to noun class 1, and the noun stem '-rimi'. Number agreement is encoded by the noun class markers. Whereas 'murimi' refers to a single person, its plural counterpart – *farmers* – is expressed as 'ʋarimi' and this is analyzed as a separate class (Class 2).

A total of 23 noun classes have been reconstructed from Proto Bantu (Katamba, 2003). Katamba (2003) notes that all of the Bantu languages have reduced their number of noun classes considerably from Proto Bantu. The most often-cited reconstructions of the Proto Bantu noun classes, beginning with Bleek's 1869 study that assigned the numbering to the first 12 classes, include Meinhoff's (1932), Meeussen's (1967), Guthrie's (1971), and Welmer's (1973). Each reconstruction has maintained Bleek's original noun class numbering and has built upon it accordingly. Katamba (2003) also mentions that most attempts to categorize the semantic contents of noun classes have been futile since the classes appear to be semantically incoherent. In spite of a comprehensive survey of the semantic content of noun classes in Bantu languages by Hendrikse and Poulos (1992) – wherein 11 different categories are necessary to account for the nouns in class 7, for instance – the only consensus in the literature is that classes 1 and 2 consistently contain personal nouns, and class 15 contains infinitival forms of verbs across all Bantu languages. Classes 16-18 typically contain locative forms (Katamba, 2003) and though Gowlett (2003) includes the locative prefixes for these three classes in Gitonga, Lanham (1955) has proposed that these three noun class prefixes do not correspond to nouns in Gitonga since they lack subject-verb concord when in the subject position – instead, their function is more akin to adverbs.

The noun system in Gitonga belongs to what Creissels et al (2008) describe as a system of noun classes with obligatory affixes and where the distinctions between classes is singular vs. plural. Attested in the data are 12 distinct noun classes in Gitonga. Five of these classes (1, 3, 5, 7, 9) refer to singular nouns whereas five others (2, 4, 6, 8, 10) refer to plural nouns. An eleventh noun class (14) describes abstract nouns and mass nouns that lack a plural. Class 15 consists of the infinitival forms of verbs. In TABLE 1 I present the prefixes for all 12 noun classes in Gitonga with some examples. I maintain Bleek's original numbering system for identifying the noun classes in Gitonga. Except for noun classes 14 and 15, all odd-numbered classes correspond to singular nouns and all even-numbered classes to plural nouns[3].

TABLE 1: NOUN CLASSES IN GITONGA

Noun Class	NC Prefix(es)	Example	Gloss
1	N-/mu-/Ø	murimi	'farmer'
2	ʋa-	ʋarimi	'farmers'
3	N-/Ø	nsimbo	'tree'
4	mi-	misimbo	'trees'
5	ri-	ritanra	'egg'
6	ma-	manra	'eggs'

[2] A few nouns in classes 1, 3, and 9 (see Table 1) consist of the noun stem and no prefix. However, these nouns' agreement patterns indicate that they in fact belong to distinct noun classes.

[3] All examples are transcribed in the International Phonetic Alphabet (IPA).

7	ji-/j(a)-	jiwoŋga	‘cat’
8	si-/s(a)-	siwoŋga	‘cats’
9	ji-/Ø	jimbwe	‘dog’
10	dzi-	dzimbwe	‘dogs’
14	wo-	womi	‘life’
15	ɣu-	ɣuhodza	‘food’

In the sections that follow, I provide a description of some of the categories of nouns that each noun class contains as attested in the data. This list, however, is not meant to be exhaustive nor the categories for each noun class definitive. I also explore any relevant allomorphy or variation in classes with more than one prefix. It is worth mentioning that the first section in this study owes greatly to Ferjan & Klainerman (2010), whose class paper provided the basis for the exploration into the noun classes in Gitonga. As part of this project, they were the first to elicit nouns extensively and classifying them according to their class; their results served as the basis for the next section. Following the descriptions for each of the categories, I discuss the noun class agreement patterns that elucidate how nouns are assigned to specific noun classes.

2.1.1 Noun Classes 1 and 2

Noun classes 1 and 2 consist primarily of nouns that represent human beings, though they also include some animals. In (1) I present a set of class 1 and 2 nouns. The class 1 prefix for these nouns is either a nasal segment that assimilates in place of articulation to the following stop (N-), the prefix ‘mu-’, or no prefix at all. Lanham (1955) observes that what likely accounts for the presence of a word-initial nasal sound in the nouns of classes 1 and 3 is the disappearance of a prefix ‘NV-’ before a consonant-initial stem. This ‘NV-’ prefix – which Demuth (2000) points out was likely ‘mo-’ in Proto-Bantu, but Katamba (2003) theorizes it was more likely ‘mʊ-’ – eventually dropped the vowel sound and the nasal sound assimilated where appropriate. According to Lanham, the word for *man* (‘mwama’), in (1c), is evidence of this original ‘NV-’ prefix in that its original stem must have been vowel-initial and assimilated to a semi-consonantal ‘w’.

(1) Noun Classes 1 and 2 in Gitonga

	Class 1 (singular)	Class 2 (plural)
	N-/mu-/Ø	va-
a. ‘sibling’	ndije	vandije
b. ‘frog’	ɲakere	vaɲakere
c. ‘man’	mwama	vama
d. ‘farmer’	murimi	varimi
e. ‘dancer’	muhani	vahani
f. ‘father’	papaje	vapapaje
g. ‘mother’	mamaje	vamamaje
h. ‘teacher’	prosur	vaprosur
i. ‘guest’	pfumba	vapfumba

Nouns prefixed with ‘mu-’ within this class refer to the agent of a verb (Ferjan & Klainerman, 2010). For example, (1d) ‘murimi’ – *farmer* derives from the verb ‘ɣurima’ – *to cultivate* and (1e) ‘muhani’ – *dancer* from the verb ‘ɣuhana’ – *to dance*. Nouns without a prefix include blood relations (1a, f, g) and loanwords (1h, i) in addition to proper names and honorific animals (1b). That these nouns lack a prefix is simply a lexical fact of Gitonga. Gowlett (2003) observes that

some young speakers display a tendency to prefix class 1 prefix-less nouns with ‘mu-’. Regardless of which prefix a class 1 noun takes, for class 2 nouns the prefix is always ‘va-’.

2.1.2 Noun Classes 3 and 4

Classes 3 and 4 are very semantically diverse. Nouns in these classes include body parts, elements in nature, and artifacts. Class 3 nouns can either have an ‘n-’ prefix, as in (2a-c) or no prefix at all, as in (2d-e). The prefix for all nouns in class 4 is ‘mi-’.

(2) Noun Classes 3 and 4 in Gitonga

	Class 3 (singular)	Class 4 (plural)
	n-/ Ø	mi-
a. ‘foot’	ŋgonro	migonro
b. ‘tree’	nsimbo	misimbo
c. ‘river’	ndzoŋgo	midzoŋgo
d. ‘car’	movo	mimovo
e. ‘fire’	niro	miniro

2.1.3 Noun Classes 5 and 6

Nouns in classes 5 and 6 belong to another semantically diverse set of noun classes that includes body parts, nouns about time, and objects, among others. Class 5 nouns are prefixed with ‘ri-’ whereas the prefix for class 6 nouns is ‘ma-’. When the noun stem is monosyllabic, as in (3f-g), the class 5 prefix ‘ri-’ is maintained when pluralizing the noun.

(3) Noun Classes 5 and 6 in Gitonga

	Class 5 (singular)	Class 6 (plural)
	ri-	ma-
a. ‘egg’	ritanra	manra
b. ‘leg’	ritunru	mawunru
c. ‘tongue’	ridimi	madimi
d. ‘book’	ribuku	mabuku
e. ‘wall’	ridima	madima
f. ‘voice’	rito	marito
g. ‘name’	rina	marina

2.1.4 Noun Classes 7 and 8

Animals, body parts, diminutives, and humans comprise noun classes 7 and 8. Class 7 nouns contain the prefix ‘ɟi-’ whereas their plural counterparts in class 8 are prefixed with ‘si-’. Lanham (1955) observes that in cases where the noun stem is vowel-initial, the vowel of the prefix deletes, as in (4e-f). However, in the data I only attest examples where the initial vowel of the stem is [a].

(4) Noun Classes 7 and 8 in Gitonga

	Class 7 (singular)	Class 8 (plural)
	ɟi/ɟ(a)-	si-/s(a)
a. ‘animal’	ɟireŋgo	sireŋgo
b. ‘body’	ɟiviri	siviri

c. ‘cat’	ɟiwoŋga	siwoŋga
d. ‘servant’	ɟitumi	situmi
e. ‘baby’	ɟanana	sanana
f. ‘young.girl’	ɟadzana	sadzana

2.1.5 Noun Classes 9 and 10

Classes 9 and 10 are another semantically diverse set that consists of animals, body parts, objects, humans, and foods, among others. Nouns of these classes are presented in (5). Class 9 nouns do not have an overt prefix and their pluralization process consists of adding the class 10 prefix ‘dzi’. Gowlett (2003) notes that monosyllabic class 9 noun stems, which are rare for this class – such as *dog* (5a) – always take a prefix ‘ji-’ (p. 619). Though the words for *bread* and *gold*, (5i-j) also represent monosyllabic noun stems, the prefix ‘ji-’ is not added to these nouns likely because they are loanwords (Lanham, 1955, p. 102). Moreover, notice that the stem for the noun for *song* (5b) is ‘-dzimo’, and as such the class 10 prefix ‘dzi-’ adds an [n] before the stem.

(5) Noun Classes 9 and 10 in Gitonga

	Class 9 (singular)	Class 10 (plural)
	ji-/Ø	dzi-
a. ‘dog’	jimbwe	dzimbwe
b. ‘song’	dzimo	dzindzimo
c. ‘chief’	pfumu	dzipfumu
d. ‘friend’	pari	dzipari
e. ‘house’	ɲumba	dziɲumba
f. ‘workplace’	tumuni	dzitumuni
g. ‘lion’	ŋgara	dziŋgara
h. ‘photo’	fotu	dzifotu
i. ‘bread’	pao	dzipao
j. ‘gold’	uru	dziuru
k. ‘cup’	kopo	dzikopo

2.1.6 Noun Class 14

Nouns in class 14 are abstract nouns or mass nouns that are semantically incompatible with pluralization. Their noun class prefix is ‘wu-’ and only two examples are attested in my data. As with nouns in classes 7 and 8, the vowel of the noun class prefix deletes with a vowel-initial stem, as in (6a). Lanham (1955) notes that some nouns in this class (such as ‘wuraŋga’ – *plac*e) will be used in plural by some speakers, in which case the plural prefix corresponds to the class 6 prefix ‘ma-’. However, nouns of this type are generally rare.

(6) Noun Class 14 in Gitonga

	Class 14
	wu-
a. ‘life’	womi
b. ‘north’	wuroŋga

2.1.7 Noun Class 15

The prefix for noun class 15 is ‘ɣu-’ and this class includes all of the verb forms in Gitonga. Verb stems in the language take the noun class 15 prefix for their infinitival forms but also to function as nouns, as in (7).

(7) Noun Class 15 in Gitonga

	Class 15
	ɣu-
a. ‘food’/‘to eat’	ɣuhodza
b. ‘life’ /‘to live’	ɣubana
c. ‘beauty’/‘to be beautiful’	ɣumburi

2.1.8 Noun Class Agreement

In the previous section, I presented examples of how agreement is realized in noun stems in the form of noun class prefixes in Gitonga. Agreement with noun classes is also present in numerals – as in (8) – demonstrative modifiers (9), possessive adjectives (10), and some genitive constructions such as socio-cultural relations (11). Noun class agreement, however, is not present in all types of genitive constructions, such as descriptive possessives[4] (12).

(8) sanana siviri ɲa-dzadzana [GT00735]
8.children 8.two REL-female
‘two female children’

(9) dzimbwe dzedzi dzaɣuweta ɣuhodza [GT00376]
10.dogs 10.these 10.want 15.eat
‘these dogs want to eat’

(10) jake waje ɲa-koŋgoro wumburiɗe [GT00395]
3.jacket 3.her REL-big 3.beautiful.PAST
‘her big jacket was beautiful’

(11) dzipari dza-varoŋgo vaŋgo [GT00605]
10.friends 10.AGR-2.family 2.POSS
‘friends of my family’

(12) vaŋamajane ɲa-ɣorape vahodziɗe [GT00432]
2.woman REL-tall 2.eat.PAST
‘the tall woman ate’

In (8), the numeral ‘two’ is prefixed by the class 8 numeral agreement marker (‘si-’) that pertains to the head noun ‘children’. Similarly, in (9), the demonstrative ‘these’ contains the class 10 demonstrative prefix (‘dze-’) that corresponds to the class 10 noun ‘dogs’. The possessive pronoun ‘her’ in (10) is also marked by a class 3 genitive prefix (‘wa-’) that agrees with the class 3 noun ‘jacket’. Finally, the genitive construction in (11) is marked by a class 10 genitive prefix (‘dza-’) that agrees in class with the head noun ‘friends’, but a different sub-type of genitive construction – a descriptive possessive – in (12) shows that there is no agreement indicated in the genitive morpheme (‘ɲa-’) with the class 2 head noun ‘woman’.

In the following sections, I provide a discussion of the different elements of the noun phrase where noun class agreement is present in Gitonga. I have provided some examples in (8-12) for the

[4] For a complete discussion, see section 3.2.

sake of illustration, but more in-depth discussions on demonstrative modifiers, adjectives, numerals, and genitive constructions follow.

2.2 Demonstrative Modifiers

There are three demonstrative stems in Gitonga: proximal, medial, and distal. In TABLE 2 I present the types of demonstrative pronouns for each one of the noun classes. The demonstrative modifiers in column 1, identified as proximal, correspond to a referent that is near the speaker. The demonstrative modifiers in column 2, identified as medial, describe a referent that is far from the speaker but close to the hearer. Column 3 contains distal demonstrative modifiers that express that the referent is far from the speaker but make no reference to the hearer. This three-way distinction was pointed out by my consultant, who has clear intuitions about it.

TABLE 2: DEMONSTRATIVE MODIFIERS IN GITONGA [GT00563 AND 564]

NC	Noun	Gloss	(1) Proximal	(2) Medial	(3) Distal
1	murimi	'farmer'	joju	jojo	wure
2	varimi	'farmers'	vava	vavo	vare
3	nsimbo	'tree'	wowu	wowo	wure
4	misimbo	'trees'	jeji	jojo	jire
5	ritanra	'egg'	reri	roro	rire
6	manra	'eggs'	jaja	jajo	jare
7	ɟadzana	'young.girl'	ɟeɟi	ɟoɟo	ɟire
8	sadzana	'young.girls'	sesi	soso	sire
9	jimbwe	'dog'	jeji	jojo	jire
10	dzimbwe	'dogs'	dzedzi	dzodzo	dzire
14	ɣuhodza	'food'	ɣuɣu	ɣoɣo	ɣure

Proximal demonstrative modifiers consist of a demonstrative prefix attached to the base form of the pronoun for that specific class, as TABLE 3 below illustrates. The demonstrative prefix agrees with the noun class of the head noun. For example, the proximal demonstrative for a class 4 noun ('jeji') consists of the class 4 demonstrative prefix ('ji-') attached to the base form of the proximal demonstrative ('eji') to form the demonstrative modifier for that specific class ('jeji'). Except for one case – the proximal demonstrative modifier for class 14 ('ɣuɣu') – the final high vowel in the noun class prefix deletes when it attaches to the base form of the pronoun.

TABLE 3: VOWEL DELETION IN PROXIMAL DEMONSTRATIVE MODIFIERS [GT00563 AND 564]

NC	Demonstrative Prefix	Demonstrative Base Form		Proximal Demonstrative Modifier
1	wu-	oju	→	joju
2	va-	ava	→	vava
3	wu-	owu	→	wowu
4	ji-	eji	→	jeji
5	ri-	eri	→	reri
6	ji-	aja	→	jaja
7	ji-	eɟi	→	ɟeɟi
8	si-	esi	→	sesi

9	ji-	eji	→	jeji
10	dzi-	edzi	→	dzedzi
14	ɣu-	oɣu	→	ɣuɣu

Medial demonstrative modifiers – presented in TABLE 4 – have the form /CoCo/ where /C/ corresponds to the consonant of the demonstrative base form. Exceptions to the vowel rule are the medial modifiers for classes 2 and 6, which have the form /CaCo/.

TABLE 4: MEDIAL DEMONSTRATIVE MODIFIERS IN GITONGA [GT00563 AND 564]

NC	Demonstrative Base Form	Medial Demonstrative Modifier
1	oju	jojo
2	ava	vavo
3	owu	wowo
4	eji	jojo
5	eri	roro
6	aja	jajo
7	ɟi	ɟoɟo
8	esi	soso
9	eji	jojo
10	edzi	dzodzo
14	oɣu	ɣoɣo

Distal demonstrative modifiers consist of the noun class prefix attached to the base form of the distal demonstrative (‘re’), as presented in TABLE 5. The one irregular form is the distal demonstrative modifier for noun class 6 demonstratives, where the prefix ‘ji-’ changes to ‘ja-’ to form ‘jare’.

TABLE 5: DISTAL DEMONSTRATIVE MODIFIERS [GT00563 AND 564]

NC	NC Prefix	Base form		Distal Demonstrative Modifier
1	wu-	re	→	wure
2	va-	re	→	vare
3	wu-	re	→	wure
4	ji-	re	→	jire
5	ri-	re	→	rire
6	ji-	re	→	jare
7	ɟi-	re	→	ɟire
8	si-	re	→	sire
9	ji-	re	→	jire
10	dzi-	re	→	dzire
14	ɣu-	re	→	ɣure

In regards to its order within a noun phrase, the demonstrative modifier is most commonly post-nominal in that it follows the noun, as in (13-14).

(13) dzimbwe dzedzi [GT00376]
10.dogs 10.PROX
'these dogs'

(14) mwama wure awoniɗe dzimbwe dzire [GT00376]
1.man 1.DIST 1.see.PAST 10.dogs 10.DIST
'that man saw those dogs'

2.3 Adjectives

A distinctive feature of Bantu languages is the lack of pure adjectives in the languages (Doke, 1982; Creissels et al, 2008). Lanham (1955) points out that there are only ten true adjectival stems in Gitonga. These are presented in TABLE 6.

TABLE 6: ADJECTIVE STEMS

Stem	Gloss
-pya	'new, fresh'
-duguana	'small'
-koŋgoro	'big, great'
-nji	'many'
-ngani	'how many/how much?'
-mbihu	'raw'
-mbe	'another'
-viri	'two'
-raro	'three'
-na	'four'

In an adjectival phrase, the ten adjective stems take the prefix that corresponds to the noun class of the head noun. The position of the adjective in the phrase is after the head noun, as in (15-16).

(15) ɟimbwe ɟekoŋgoro [GT00133]
7.dog 7.big
'big dog'

(16) mwaga mina [GT00735]
4.years 4.four
'four years'

To describe a noun outside of the ten adjectival stems in Gitonga, the construction used is what Lanham (1955) refers to as a 'descriptive possessive' wherein a verb's base form is used to describe a head noun. Descriptive possessives are a sub-category of genitive constructions and as such are dealt with more fully in part two of this study. As an example of how these interact with the noun, in (17) the verb stem '-ɣaɲa' (*to be rich*) describes the head noun *woman* through a 'descriptive possessive' relationship that is encoded by the genitive morpheme 'ɲa-'.

(17) ɲamajane ɲa-ɣuɣaɲe [GT00395]
1.woman REL-15rich
'rich woman'

Descriptive possessives, however, are not reserved exclusively for non-adjectival stems. Some examples, such as (18) and others in part two of this study, indicate that an adjectival stem, such as '–nji' (*many*) in (18), can be used in a descriptive possessive construction. For a more thorough discussion of descriptive possessives in Gitonga, see section 2.2.1 in this paper.

(18) ɲiŋguti vatu ɲa-vanji va-maputu [GT00395]
1sg.know 2.people REL-2.many 2.AGR-Maputo
'I know a lot of people from Maputo'

2.4 Numerals

TABLE 7 presents the pattern that noun class prefixes and numeral stems in Gitonga follow to form numerals. Numerals consist of a stem and a prefix. When numerals head a phrase, the stem for the numeral *one* is a class 7 noun and as such takes the corresponding class prefix ('ʝi-'). The stems for numerals *two*, *three*, and *four* are class 8 nouns and therefore are prefixed with that class' prefix ('si-'). Numerals including *five* and thereafter are class 5 nouns and their stems are prefixed with the class 5 noun class prefix ('ri-'). The cardinal number system in Gitonga is a quinary one, which is common for Bantu languages, wherein the language only has five numerals and any numeral beyond *five* has the structure *five and one*, *five and two*, and so forth (Doke, 1982). This is the case in Gitonga and it is illustrated in TABLE 7.

TABLE 7: NUMERALS IN GITONGA [GT00735]

Numeral	Stem	As Head	As Modifier
'one'	mo-	- [5]	ŋgonro mojo 3.foot 3.one 'one foot'
'one'	-mwe-	ʝimwejo	ʝanana ʝimwejo 5.day 5.day 'one day'
'two'	-viri	siviri	miɣonro miviri 4.feet 4.two 'two feet'
'three'	-raro	siraro	mawaja mararo 6.teeth 6.three 'three teeth'
'four'	-na	sina	mʷaɣa mina 4.years 4.four 'four years'
'five'	-banre	ribanre	ribanre miɣonro 5.five 4.feet 'five feet'
'six'		ribanre na ʝimwejo	ribanre na mojo misimbo 5.five CONJ 3.one 4.trees 'six trees'

[5] As a head, the numeral 'one' is always a class 7 noun that emerges as 'ʝimwejo'.

			ribanre na rimwedo manra 5.five CONJ 5.one 5.trees 'six eggs'
'seven'		ribanre na siviri	
'eight'		ribanre na siraro	
'nine'		ribanre na sina	
'ten'	-kumi	rikumi	
'eleven'		rikumi na ɟimwejo	rikumi na ɟimwejo siwoŋga 5.ten CONJ 7.one 8.cats 'eleven cats'
'sixteen'		rikumi na ribanre na ɟimwejo	

When numerals modify a noun, the stems of the first four numerals take the noun class prefix that corresponds to the class of the head noun. Lanham (1955) notes that because numeral stems function like adjectival stems, they require noun class agreement. The numeral *one* is unique in that it has a complicated structure wherein it consists of a noun class prefix, a stem '-mo-', and suffix '-jo' that resembles the demonstrative modifier suffix[6] (Lanham, 1955). Moreover, the noun class prefix is absent when it modifies nouns in classes 1 and 3, as in (19-21) and without a prefix the numeral stem is realized as 'mo-'. However, for the rest of the noun classes of the head noun, the numeral stem takes the corresponding noun class prefix and it emerges as 'mwe-', as in (22-23).

(19) mutu mojo [GT00735]
1.person 1.one
'one person'

(20) nsimbo mojo [GT00735]
3.tree 3.one
'one tree'

(21) ŋgoro mojo [GT00735]
3.foot 3.one
'one foot'

(22) ritsigu rimwedo [GT00735]
5.day 5.one
'one day

(23) ɲinawona ɟiɲoni ɟimwejo [GT00366]
1sg.FUT.see 7.bird 7.one
'I will see a/one bird'

The emergence of the numeral stem as 'mwe-' appears to be a derivation that takes place when the stem 'mo-' interacts with the noun class prefix of the head noun. However, what this interaction is or why these three noun classes require a suffix for this numeral is not something that is mentioned in the literature. Lanham (1955) speculates that they come from a common stem while noting that the manifestation of two different forms for the numeral 'one' is rare among Bantu languages. This irregular paradigm appears to be a case of suppletion.

[6] Lanham (1955) also notes that the presence of this suffix only on the numeral 'one' may indicate a form that has been lost in the other numerals in Gitonga.

For the first four numeral stems as modifiers, their position within the noun phrase is post-nominal, as in (24-28). Numerals beyond 'four' cannot occur post-nominally as the ungrammaticality of (29) evidences.

(24) migonro miviri [GT00735]
4.feet 4.two
'two feet'

(25) migonro mina [GT00735]
4.feet 4.four
'four feet'

(26) vaŋakere vaviri [GT00735]
2.frogs 2.two
'two frogs'

(27) mwaga miraro [GT00735]
4.years 4.three
'three years'

(28) dzikhugu dziraro [GT00735]
10.chickens 10.three
'three chickens'

(29) *misimbo ribanre [GT00735]
4.trees 5.five
'five trees'

Numerals after '5' are not very common in Gitonga – the Portuguese numbers are almost always used – but when they are used their position is pre-nominal and they display no agreement with the noun class of the head noun, as in (30-32), with the exception being numerals that combine with '1', which displays agreement in some cases, as will be described below. Lanham (1955) notes that every numeral after '5' is a class 5 noun and for this reason no agreement is present.

(30) ribanre misimbo [GT00735]
5.five 4.trees
'five trees'

(31) ribanre na sina mawaja [GT00735]
5.five CONJ 8.four 6.teeth
'nine teeth'

(32) rikumi sireŋgo [GT00801]
5.ten 8.animals
'ten animals'

Note that in example (31) to form the numeral *nine*, the agreement numeral *four* combines with the non-agreement numeral *five*, but there is no agreement indicated in *four* to match the noun class of the noun that is modified ('mawaja' – noun class 6). The numeral *one*, however, even when combined with a class 5 numeral, such as 5 ('ribanre'), agrees in noun class with the head noun, as in (33)[7]. The ungrammaticality of (34) demonstrates that the numeral *one* as a plain, class 7 noun

[7] Earlier in this section I mentioned that when the numeral 'one' modifies nouns in classes 1 and 3, it takes no noun class prefix. Though the head noun in (33) is a class 4 noun (because it is a plural), the numeral 'one' agrees in class with the singular form, which is a class 3 noun.

with its corresponding class 7 prefix is not permissible and thus the numeral one, even when it combines with another numeral – such as *five*— that takes no agreement to create another numeral, must agree in class with the head noun.

(33) ribanre na mojo misimbo [GT00735]
5.five CONJ 3.one 4.trees
'six trees'

(34) *ribanre na jimwejo misimbo [GT00735]
5.five CONJ 7.one 4.trees
'six trees'

Moreover, the ungrammaticality of (35-36) indicates that class 5 numerals ('5' and beyond) cannot have a post-nominal position.

(35) *misimbo ribanre [GT00735]
4.trees 5.five
'five trees'

(36) *dzirapisera rikumi [GT00801]
10.pens 5.ten
'ten pens'

When numerals interact with descriptive possessives (see section 2.2.1) in modifying a head noun, the numeral immediately follows the head noun which is in turn followed by the descriptive possessive phrase, as in (37-38).

(37) sanana siviri ɲa-dzadzana [GT00735]
8.babies 8.two GEN-10.girls
'two baby girls'

(38) dziŋumba dzimbiri ɲa-vapfumba [GT00730]
10.houses 10.two GEN-2.guests
'two guest houses'

2.5 Pronominal Possessive Phrases

Possessive pronouns in Gitonga are formed in a similar manner as demonstrative modifiers (Section 2.2). Possessive pronouns consist of a base form, which encodes the properties of the possessor – first, second, or third person, and singular or plural – and a possessive prefix that agrees in noun class with the head noun. TABLE 8 outlines the possessive pronominal base forms according to the properties they encode.

TABLE 8: POSSESSIVE PRONOUN BASE FORMS [GT00607]

	Singular	Plural
1st person	-ŋgu	-tu
2nd person	-ɣu	-nu
3rd person	-je	-we

As such, a possessive construction with a pronominal possessor for a class 9 noun such as ‘jimbwe’ (‘dog’), for instance, requires that the corresponding base form have a noun class prefix that is unique to pronominal possessive constructions, as in (39).

(39)
a.	jimbwe ja-ŋgu	‘my dog’
	9.dog 9-1SG	
b.	jimbwe ja-ɣu	‘your (sg) dog’
	9.dog 9-2SG	
c.	jimbwe ja-je	‘his/her dog’
	9.dog 9-3SG	
d.	jimbwe ja-tu	‘our dog’
	9.dog 9-1PL	
e.	jimbwe ja-nu	‘your (pl) dog’
	9.dog 9-1PL	
f.	jimbwe ja-we	‘their dog’
	9.dog 9-1PL	

In TABLE 9 I provide a list of the class-agreeing prefixes that possessive pronominal bases take for each of the noun classes of the head noun.

TABLE 9: NOUN CLASS PREFIXES FOR POSSESSIVE PRONOUNS [8] [GT00607]

Noun Class	Possessive Noun Class Prefix		
1	wa-	papaje waŋgo 1.father 1.1SG ‘my father’	[GT00729]
2	va-	varoŋgo vaŋgo 2.family 2.1SG ‘my family’	[GT00605]
3	wa-	nsimbo waŋgu 3.tree 3.1SG ‘my tree’	[GT00247]
4	ja-	misimbo jaŋgu 4.tree 4.1SG ‘my trees’	[GT00247]
5	ra-	ribuku raŋgu 5.book 5.1SG ‘my book’	[GT00607]
6	ja-	mabuku jaɣu 6.books 6.2SG ‘your (sg) books’	[GT00607]
7	ɟa-	ɟiflur ɟaŋgu 7.flower 7.1SG ‘my flower’	[GT00249]

[8] The examples for noun classes 3, 4, 7 and 8 were elicited by (Ferjan & Klainerman, 2010).

8	sa-	siflur saŋgu 8.flowers 8.1SG 'my flowers'	[GT00249]
9	ja-	jimbwe jaŋgu 9.dog 9.1SG 'my dog'	[GT00607]
10	dza-	dzimbwe dzanu 10.dogs 10.2PL 'your (pl) dogs'	[GT00607]
14	wa-	wobaɲa waŋgu 14.life 14.1sg 'my life'	[GT00734]
15	wa-	ɣuhodza waŋgu 15.food 15.1SG 'my food'	[GT00607]

In addition to structure – in that a base pronominal form takes a unique noun class prefix that agrees with the head noun – another similarity that possessive pronouns have with demonstrative modifiers is that they occur after the head noun they modify. A basic possessive phrase with a pronominal possessor consists of a head noun and a possessive pronoun, as (40-47) illustrate. I gloss the possessive pronoun with the noun class agreement (classes 1-14) and the attributes of the possessive pronoun base form (person and number).

(40) ribuku raŋgu [GT00607]
5.book 5.1SG
'my book'

(41) mubuku jaɣu [GT00607]
6.books 6.2SG
'your (sg) books'

(42) ritanra raje [GT00607]
5.egg 5.3SG
'his/her egg'

(43) manra jatu [GT00607]
6.eggs 6.1PL
'our eggs'

(44) dzimbwe dzanu [GT00607]
10.dogs 10.2PL
'your (pl) dogs'

(45) jimbwe janu [GT00607]
9.dog 9.2PL
'your (pl) dog'

(46) ɣuhodza waŋgu [GT00607]
15.food 15.1SG
'my food'

(47) ɣuhodza watu [GT00607]
15.food 15.1PL
'our food'

In a basic pronominal possessive construction of this type, the ordering of the elements is fixed. The possessive pronoun does not precede the head noun, as the ungrammaticality of (48-50) shows.

(48) *raŋgu ribuku [GT00802]
5.1SG 5.book
'my book'

(49) *dzanu dzimbwe [GT00607]
10.2PL 10.dogs
'your (pl) dogs'

(50) *watu ɣuhodza [GT00607]
15.1PL 15.food
'our food'

2.6 Verb Agreement

Given that the noun classes in Gitonga cannot be easily categorized based on their semantic properties, and seeing how some of the noun classes (e.g., noun classes 1, 3, and 9) take more than one noun class prefix or no noun class prefix, it is verb agreement that is a consistent indicator of noun-class membership. In basic sentences, such as (51), the verb is prefixed by a morpheme that agrees in class with the subject noun. In all three cases (51) this verb prefix is 'a-', as it corresponds to a noun class 1 subject. Note that regardless of the semantic properties of the noun stem or the class 1 prefix that the noun stem takes – an 'N-' prefix on (51a), 'mu-' for (51b) and 'Ø' for (51c) – what defines these three nouns as pertaining to noun class 1 is that all three share the same verbal agreement morpheme 'a-'.

(51) a. ndije waŋgo a.hodziɗe [GT00432/802]
1.sibling 1.POSS 1.eat.PAST
'my brother ate'

b. mwaŋgadzi a.tejiɗe [GT00106]
1.wife 1.fall.PAST
'the wife fell'

c. papaje waŋgo a.hodziɗe [GT00432]
1.father 1.POSS 1.eat.PAST
'my father ate'

In TABLE 10 I present the agreement prefixes for verbs for each of the noun classes. The sample sentences come from Ferjan & Klainerman (2010), who elicited them as part of their investigation on noun class concord. Note that there is no individual morpheme for class 15 nouns since these represent the infinitival forms of verbs; their nominalized forms would belong to class 14.

TABLE 10: NOUN CLASS AGREEMENT FOR VERBS IN GITONGA[9]

Noun Class	Verb Agreement Morpheme		
1	a-	mwama a.piɗe ɲapupwe 1.man 1.catch.PAST 1.butterfly 'the man caught the butterfly'	[GT00285]
2	va-	vama va.piɗe vaɲapupwe 2.men 2.catch.PAST 2.butterflies 'the men caught the butterflies'	[GT00285]
3	wu-	niro wu.bisiɗe nsimbo 3.fire 3.burn.PAST 3.tree 'the fire burned the tree'	[GT00285]
4	mi-	miniro mi.bisiɗe misimbo 4.fires 4.burn.PAST 4.trees 'the fires burned the trees'	[GT00285]
5	ri-	riʤaha ri.hodziɗe ridimwa 5.young.boy 5.eat.PAST 5.orange 'the boy ate the orange'	[GT00285]
6	ma-	maʤaha ma.hodziɗe madimwa 6.young.boys 6.eat.PAST 6.oranges 'the boys ate the oranges'	[GT00285]
7	ji-	jiwoŋga jihodziɗe jiɣebeŋga 7.cat 7.bite.PAST 7.murderer 'the cat bit the murderer'	[GT00285]
8	si-	siwoŋga sihodziɗe siɣebeŋga 8.cats 8.bite.PAST 8.murderers 'the cats bit the murderers'	[GT00285]
9	je-	mvuɣu je.pfuŋgununusiɗe ŋgarava 9.hippo 9.destroy.PAST 9.boat 'the hippo destroyed the boat'	[GT00285]
10	dzi-	dzimvuɣu dzi.pfuŋgununusiɗe dziŋgarava 10.hippos 10.destroy.PAST 10.boats 'the hippos destroyed the boats'	[GT00285]
14/15	ɣu-	ɣumburi ɣu.naɣuhongodzisi huindzo 14.beauty 14.FUT.take further 'beauty will take you further'	[GT00286]

2.7 The Structure of the Simple Noun Phrase in Gitonga

Bearth (2003) and Rugemalira (2007) acknowledge that there is a need for more scholarship that focuses on the syntax of the noun phrase in Bantu languages. Most studies dealing with noun phrase syntactic phenomena in Bantu are limited to very few languages, such as Swahili, and they tend to focus on the lexical and morphological structure of the language (Bearth, 2003). Rugemalira (2007) similarly feels that most Bantu syntax studies focus on the morphology of the noun, the noun class

[9] While in my data I did not attest any forms with the verb agreement morpheme for noun class 15, the one I present here comes from Lanham (1955).

system, and the concord system. In this section I provide a description of the structure of the noun phrase in Gitonga. I explore how dependent elements modify a noun, in what order, and how they interact with one another.

2.7.1 Determiners: Demonstratives and Possessives

In a Bantu noun phrase, the noun is typically in the leftmost position with all of its modifiers following (Nurse & Philippson, 2003). In Gitonga, if a determiner is present (which may be either a demonstrative or a possessive), its most common position is immediately following the noun. In (52) the determiner is a demonstrative and in (53) a possessive.

(52) ɟitembwana ɟire [GT00338]
7.little.farm 7.DIST
'this little farm'

(53) jimbwe jaŋgu [GT00607]
9.dog 9.1SG
'my dog'

Bantu languages like Mashami (E.60) and Matengo (N.13) allow the two determiners to be stacked as long as their linear order is Noun + Demonstrative + Possessive (Rugemalira, 2007; Lusekelo, 2009). This is also the case in Gitonga, as illustrated by (54).

(54)

Head Noun	Demonstrative	Possessive	
jimbwe	jeji	jaɣu	[GT00376]
9.dog	9.PROX	9.2SG POSS	

'this dog of yours'

Whereas languages like Swalihi (G.41) and Nyambo (E.21) permit the Noun + Possessive + Demonstrative order in a noun phrase (Rugemalira, 2007), the ungrammaticality of (55) is evidence that this order is not allowed in Gitonga.

(55)

Head Noun	Possessive	Demonstrative	[GT00376]
*jimbwe	jaɣu	jeji	
9.dog	9.2SG POSS	9.PROX	

'this dog of yours'

The demonstrative modifier does not take a noun class agreement prefix if a possessive stands between the head noun and the demonstrative, as in (56).

(56) jimbwe jaɣu eji [GT00376]
9.dog 9.2SG Ø.PROX
'this dog of yours'

It is worth mentioning that example (56) is the only one where this phenomenon is attested in the data. Further investigation into how the two determiners interact is necessary to determine if the lack of agreement on the demonstrative in a sentence like (56) indicates that the demonstrative is

no longer modifying the noun within the noun phrase (and is, as a result, outside of it) or if it undergoes a loss of noun class prefix in this particular order.[10]

Van de Velde (2005) and Lusekelo (2009) note that in Bantu languages there is a lot of freedom in the order in which modifiers can occur post-nominally since the rules that govern the order of the elements within a noun phrase are quite variable. As such, all of the modifiers in the noun phrase "this beautiful little farm of mine" can emerge in different order in the noun phrase. In (57), the head noun is followed by the demonstrative, a relativized modifier, and a possessive.

(57)	Head Noun	Demonstr.	Rel. Modifier	Possessive	
	ɟitembwana	ɟire	ɲa-ɣumbure	kʸaŋgo	[GT00338]
	7.little.farm	7.DIST	REL-15.beautiful	7.OWN.POSS	
	'this beautiful little farm of mine'				

In (58), the order is demonstrative + head noun + possessive + relativized modifier.

(58)	Demonstr.	Head Noun	Possessive	Rel. Modifier	
	ɟire	ɟitembwana	ɟaŋgo	ɲa-ɣumbure	[GT00338]
	7.DIST	7.little.farm	7.AGR.POSS	REL-15.beautiful	
	'this beautiful little farm of mine'				

And in (59) the order is head noun + possessive + relativized modifier + demonstrative.

(59)	Head Noun	Possessive	Rel. Modifier	Demonstrative	
	ɟitembwana	ɟaŋgo	ɲa-ɣumbure	ɟire	[GT00338]
	7.little.farm	7.AGR.POSS	REL-15.beautiful	7.DIST	
	'this beautiful little farm of mine'				

2.7.2 Demonstratives and Numerals

Lusekelo (2009) points out that the noun modifiers in Swahili have a similar freedom of occurrence in the noun phrase. In the case of a sentence such as (58), Van de Velde (2005) notes that the pre-nominal position of the demonstrative is a choice that speakers make for emphasis, which is clarified in actual speech through enunciation[11]. And although languages like Swahili, Mbowe (K.32), and Makhuwa (P.31) allow the demonstrative and the possessive to occur pre-nominally for emphasis (Lusekelo, 2009), the possessive is never attested pre-nominally in my data in Gitonga. Rather, for emphasis, in Gitonga a demonstrative and a numeral can occur pre-nominally, as in (60).

(60)	jajo	ja-maviri	mabuku	[GT00724]
	6.MED	6.6.two	6.books	
	'those two books'			

A notable aspect of the interaction of a demonstrative and a numeral in a noun phrase in Gitonga is the presence of an additional agreement marker on the numeral. In (60), the numeral that

[10] Furthermore, comparing (56) with (59), it appears that the presence of the modifier 'beautiful' between the possessive and the phrase-final demonstrative in (59) does not preclude the demonstrative from agreeing in noun class with the head noun. These types of construction require further investigation.

[11] My consultant corroborates this notion.

corresponds to the class 6 noun (‘mabuku’) is ‘maviri’, which is already prefixed with the class 6 noun class prefix ‘ma-’. However, the numeral emerges with the additional prefix ‘ja-’, the pronominal possessive prefix for a class 6 noun, as ‘ja-maviri’. Examples (61-62) illustrate this double-agreement marker phenomenon on the numeral when a demonstrative and a numeral modify the same noun.

(61) siwoŋga sesi sa-siviri [GT00729]
8.cats 8.these 8-8.two
‘these two cats’

(62) dziɲumba dzedzi dza-dzimbiri ɲa-vapfumba [GT00730]
10.houses 10.these 10-10.two GEN-2.guests
‘these two guest houses’

These same forms as in (61-62) but without the double-agreement marker on the numeral (63-64) are somewhat acceptable though they are reported by my consultant to be odd.

(63) ?siwoŋga sesi siviri [GT00729]
8.cats 8.these 8.two
‘these two cats’

(64) ?dziɲumba dzedzi dzimbiri ɲa-vapfumba [GT00730]
10.houses 10.these 10.two GEN-2.guests
‘these two guest houses’

The ungrammaticality of (65) is evidence that the numeral cannot take double agreement immediately following the head noun and that the emergence of a double agreement marker on the numeral is a result of the interaction between a demonstrative and numeral modifying the head noun crucially in that order.

(65) *dziɲumba dza-dzimbiri dzedzi ɲa-vapfumba [GT00730]
10.houses 10-10.two 10.these GEN-2.guests
‘these two guest houses’

2.7.3 Possessives and Adjectival Modifiers

When a relativized adjectival modifies the head noun of a genitive construction with a pronominal possessor, as in (66), the relativized modifier follows the possessive construction. The ordering of the elements, where the possessive pronoun follows the head noun, is fixed in the presence of a relativized adjectival. Sentence (67), where the relativized modifier occurs between the head noun and the possessive, is ungrammatical.

(66)	Head Noun	Possessive	Rel. Modifier	
	jimbwe	jaŋgo	ɲa-jekoŋgoro	[GT00133]
	9.dog	9.1SG	REL-9.big	
	‘my big dog’			
(67)	Head Noun	Rel. Modifier	Possessive	
	* jimbwe	ɲa-jekoŋgoro	jaŋgo	[GT00133]
	9.dog	REL-9.big	9.1SG	
	‘my big dog’			

Although there is in Gitonga a certain freedom of occurrence that allows the modifiers in the noun phrase to occur in a variety of orders, an analysis of the data reveals that there are some parameters in how these elements of the noun phrase interact with one another:

(i) The preferred position of the head noun is at the leftmost in the noun phrase, though a demonstrative may precede it for emphasis.
(ii) A demonstrative and a possessive may both immediately follow the noun they modify but only in that order.
(iii) If the noun phrase contains a determiner (either a demonstrative or a possessive), in the majority of cases the determiner occurs adjacent to the noun.
(iv) A possessive does not precede the head noun.
(v) When both a demonstrative and a numeral modify a head noun, the numeral takes an additional prefix (in addition to its class noun prefix) that corresponds in form to the possessive prefix.
(vi) A demonstrative and a numeral may precede a head noun.

TABLE 11 presents all of the noun modifiers and the place each occupies in the noun phrase with relation to the head noun. Modifiers that do not show agreement with the noun class of the head noun are indicated with the null symbol Ø. Some genitive constructions lack agreement with the head noun of the noun phrase, but I save that discussion for part two of this paper. All genitive constructions, whether or not they display agreement with the noun class of the head noun, occupy the same position in the noun phrase in Gitonga.

If a numeral lacks agreement with the head noun, its position is at the beginning of the NP. Numerals after and including *five* do not display agreement with the head noun and as such their position is always at the beginning of the NP (as in 11.11). Demonstratives can also lack agreement with the head noun, as in (11.8), but this is due to a possessive occurring between the head noun and the demonstrative. Note that if a possessive and a genitive construction occur between the head noun and the demonstrative (as in 11.7), the demonstrative does display agreement with the noun class of the head noun.

Demonstratives and numerals with noun class agreement can occur before or after the head noun. Possessive modifiers, on the other hand, can only occur after the head noun. Genitive constructions always occur after the head noun – a possessive or a demonstrative that agrees with the noun class of the head noun may occur after a genitive construction. I include VP/Adj-P in the leftmost position. While there are only a few true adjectival stems in Gitonga, they do not always display verb-like behaviour (11.10) and as such they modify and agree with the noun class of the head noun.

TABLE 11: NOUN MODIFIERS AND THEIR POSITION WITHIN THE NOUN PHRASE

Num Ø	Dem	Num	Head Noun	Dem	Num	Poss	Genitive Constructions	Poss	Dem	Dem Ø	VP/ADJ-P
			metadi half				ɲa-pao GEN-9.bread		jeji 9.this		
(1) 'half of this bread'											
			sanana 8.babies		siviri 8.two		ɲa-dzadzana GEN-10.girls				
(2) 'two baby girls'											
			dzimbwe 10.dogs	dzedzi 10.these							
(3) 'these dogs'											
			jake 3.jacket			waje 3.her	ɲa-koŋgoro REL-big				
(4) 'her big jacket'											
			ɟitembwana 7.little farm	ɟire 7.dist			ɲa-ɣumbure REL-beautiful	kyaŋgo 7.own.poss			
(5) 'this beautiful little farm of mine'											
	ɟire 7.dist		ɟitembwana 7.little farm			ɟaŋgo 7.poss	ɲa-ɣumbure REL-beautiful				
(6) 'this beautiful little farm of mine'											
			ɟitembwana 7.little farm			ɟaŋgo 7.poss	ɲa-ɣumbure REL-beautiful		ɟire 7.dist		
(7) 'this beautiful little farm of mine'											
			jimbwe 9.dog			jaɣu 9.yours				eji Ø.dist	
(8) 'this dog of yours'											
			jimbwe 9.dog	jeji 9.dist		jaɣu 9.yours					
(9) 'this dog of yours'											
			ɟimbwe 7.dog								ɟekongoro 7.big
(10) 'big dog'											
			migonro 4.feet		miviri 4.two						
(11) 'two feet'											
rikumi 5.ten			sireŋgo 8.animals								
(12) 'ten animals'											
			siwoŋga 8.cats	sesi 8.dist	sa-siviri 8.8.two						
(13) 'these two cats'											
			dziɲumba 10.houses	dzedzi 10.dist	dza-dzimbiri 10.10.two		ɲa-vapfumba GEN-2.guests				
(14) 'these two guest houses'											

			vatu 2.people				ɲa-vanji REL-many	va-maputu AGR-Maputo				

(15) ‘a lot of people from Maputo'

Num Ø	Dem	Num	Head Noun	Dem	Num	Poss	Genitive Constructions		Poss	Dem	Dem Ø	VP/ADJ-P
			ribuku 5.book	roro 5.that			ɲa-sireŋgo GEN-8.animals					

(16) ‘the book about the animals' / 'the animals' book'

			dzimo 9.song				ɲa-sireŋgo GEN-8.animals	ɲa-mbapimisa REL-stupid				

(17) ‘the song about the animals sounds dumb' / 'the animals' song sounds dumb'

			vaŋamajane 2.women				ɲa-tsiba GEN-9.force	ɲa-ɣumbure REL-14.beautiful				

(18) ‘strong, beautiful, tall women'

			janana 7.baby	jeji 7.this			ɲa-ɣuene REL-10.fat					na-jimburiḓe conj-2.be beautiful.PERF

(19) ‘this fat, beautiful baby'

			janana 7.baby	jeji 7.this			ɲa-ɣumbure REL-14.beautiful					na-jieniḓe conj-2.be fat.PERF

(20) ‘this beautiful, fat baby'

	jajo 6.those	jamaviri 6.two	mabuku 6.books				kya-sireŋgo 6.OWN-8.animals					

(21) ‘those two books of the animals

			mabuku 6.books	jajo 6.those	jamaviri 6.two		kya-sireŋgo 6.OWN-8.animals				.	

(22) ‘those two books of the animals were stolen

2.8 Summary

This overview of the structure of the simple noun phrase in Gitonga concludes part one of this study, where I have discussed simple noun phrases. As a Bantu language, Gitonga possesses a system of noun classes that only in some cases (classes 1 and 2, 14 and 15) is it possible to categorize semantically. Gitonga also has a robust agreement system wherein all the dependent elements of the noun phrase display agreement (in the form of prefixes) with the noun class of the head noun. Head nouns, adjectival stems, and numerals utilize the noun's class prefix whereas demonstratives, possessives, and verbs employ each a separate set of prefixes. I present a schema of these prefixes in TABLE 12, and I argue – as the table illustrates – that it is verb agreement, with its unique prefix for each of the noun classes, that is the best indicator of each noun's noun-class membership.

TABLE 12: A SCHEMA OF PREFIXES FOR THE VARIOUS NOUN MODIFIERS

Noun Class	Noun Class Prefixes	Demonstrative	Possessive	Verb
1	N-/mu-/Ø	wu-	wa-	a-
2	va-	va-	va-	va-
3	N-/Ø	wu-	wa-	wu-
4	mi-	ji-	ja-	mi-
5	ri-	ri-	ra-	ri-
6	ma-	ji-	ja-	ma-
7	ɟi-/ɟ(a)-	ji-	ɟa-	ɟi-
8	si-/s(a)-	si-	sa-	si-
9	ji-/Ø	ji-	ja-	je-
10	dzi-	dzi-	dza-	dzi-
14	wo-	ɣu-	wa-	ɣu-
15	ɣu-	ɣu-	wa-	ɣu-

In part three, I provide an investigation of a subtype of complex noun phrases in Gitonga, namely genitive constructions with nominal possessors. Unlike the modifiers explored in part two, genitives in Gitonga are encoded with three different types of constructions, two of which have their unique patterns of agreement for each of the noun classes of the head noun.

3 Complex Noun Phrases: Genitive Constructions with Nominal Possessors

A basic genitive phrase in Gitonga, such as (68), consists of a head noun ('rina') followed by a genitive phrase. The genitive phrase consists of a genitive construction (marked by the prefix 'ra-') – which encodes the genitive relation – and the genitive noun ('ɟekwatana').

(68) rina ra-ɟekwatana [GT00475]
5.name 5.AGR-7.boy
'the boy's name'

The elements of any basic genitive phrase in Gitonga are ordered as in (69).

(69) Head Noun Genitive Phrase
[Noun] [Genitive Prefix + Noun]

There are three different types of genitive constructions in Gitonga. The first is a construction with an agreement morpheme (glossed as AGR) that encodes relations of possession with a genitive noun that is human (70) or relations of time and space (71).

(70) ɣuhodza ɣa-pfumu [GT00801]
14.food 14.AGR-9.chief
'the chief's food' (possession relation)

(71) jireŋgo ja-kabini [GT00002]
7.animal 7.AGR-wild
'wild animal'

The second is a construction with a generic genitive morpheme 'ɲa' (glossed as GEN or REL) that encodes relations of possession with a genitive noun that is non-human (72); part/whole, type, content, and partitive relations (73); descriptive possessive relations, where the head noun is described by the perfective form of a verb stem – this genitive construction is glossed as REL since its function is more akin to a relativizer in a descriptive possessive relation (74); and ordinal numbers (75), also glossed as REL given its function as more of a relativizer.

(72) mamaje ɲa-ŋgara [GT00800]
1.mother GEN 9.lion
'the lion's mother's'

(73) ridimba ɲa-ɲumba [GT00475]
5.wall GEN-9.house
'wall of the house'

(74) jimbwe ɲa-ɣuene [GT00376]
9.dog REL-14.fat
'fat dog'

(75) ɲumba ɲa-ribanri [GT00735]
9.house REL-5.fifth
'fifth house'

The third type is a construction with an ownership morpheme (glossed as OWN) that encodes the same relations as the agreement morpheme (possession and placement in space and time) but which doesn't differentiate between human and non-human genitive nouns (76).

(76) jitumi kʸa-pfumu [GT00727]
7.servant 7.OWN-9.chief
'the chief's servant'

Genitive markers in Gitonga are monosyllabic and have the form /*Ca*-/, where *C* represents a consonant sound. The vowel *-a* is typical of genitive markers in Bantu languages (Lanham, 1955): Elderkin (2003) describes it as a general preposition that follows a general prefix in genitive constructions in Herrero (R.31) whereas Philippson & Montlahuc (2003) call it a connective. It is

also present in genitive constructions in Kilimanjaro (E.60/74) (Philippson & Montlahuc, 2003), Lega (D.25) (Botne, 2003), Swahili, Kikuyu, Chewa, Tonga, and Tswana (Bentley 2008).

There are three distinctions worth discussing in describing genitive constructions in Gitonga: the form of the genitive markers, the semantic properties of the genitive noun (the possessor), and the encoding of agreement by the genitive construction.

Lanham (1955) identifies two different forms for genitive constructions in Gitonga: a direct possessive and a descriptive possessive. In this study, the direct possessive corresponds to the AGR construction while the descriptive possessive corresponds to the GEN/REL construction. Lanham (1955), however, does not describe any possessives that resemble the OWN construction. The dichotomy of two distinct forms of genitive constructions (a direct possessive and a descriptive possessive) is a feature that Lanham (1955) acknowledges is rare among Bantu languages.

Another distinction between the forms concerns the semantic properties of the genitive noun, specifically, whether the genitive noun is human or non-human. Lanham (1955) establishes that relations with animate possessors in Gitonga belong to the category of direct possessives whereas inanimate possessors belong with descriptive possessives. In reality, this distinction is not as clear-cut considering that relations of time and space (where an entity is described as belonging to a particular place or is placed within a time frame) in Gitonga are encoded with the AGR construction, which for the most part encodes relations with a human genitive noun. Matambirofa (2000) notes that this sensitivity in genitive constructions to distinguish between a human and non-human genitive noun is typical of S-zone Bantu languages such as Zulu (S.42), Sotho (S.30), and Shona (S.10).

The three sections that follow elaborate on the morphosyntactic and semantic properties of each one of these three types of constructions. In section 3.1 I provide a discussion of genitive phrases that are encoded with the agreement construction. Genitive phrases with the generic genitive construction are examined in section 3.2. Section 3.3 consists of an assessment of genitive phrases that are encoded with the ownership construction.

3.1 Genitive Phrases with the Agreement Construction

The Agreement construction (AGR) encodes relations of possession with a human genitive noun and relations of time and space. The agreement marker agrees with the noun class of the head noun and is added to a base (the genitive noun) that may already be marked with inherent inflection. In (77a), for example, the genitive noun (‘vapapaje’) has a class 2 prefix (‘va-’) and is prefixed by a genitive marker (‘ja-’) that agrees with the noun class (class 7) of the head noun (‘jiwoŋga’). Some basic examples of relations encoded with the AGR construction are relations of possession with a human genitive noun (77a-c) and relations of time/space where the head noun in placed in a particular time, space, or place (78a-c).

(77) a. jiwoŋga ja-vapapaje [GT00729]
7.cat 7.AGR-2.parents
‘the parents’ cat’
b. risa ra-jone [GT00188]
5.apple 5.AGR-John
‘John’s apple’

c. ɣuhodza ɣa-pfumu [GT00607]
14.food 14.AGR-9.chief
'the chief's food'

(78) a. ɟireŋgo ɟa-kabini [GT00002]
7.animal 7.AGR-wild
'wild animal' (literally 'animal of the wild')

b. ɲiŋguti mutu wa-βare [GT00395]
1sg.know 1.person 1.AGR-there
'I know someone from there'

c. ridimi ra-mozambik [GT00733]
5.tongue 5.AGR-Mozambique
'language of Mozambique'

Botne (2003) notes that in Lega (D.25) a noun class prefix that agrees with the head noun and a connective vowel '*-a'* link two nouns in a genitive construction. However, the form of the AGR construction in Gitonga is similar to what Philippson & Montlahuc (2003) describe for Kilimanjaro (E.60/74), where the genitive particle is formed by the concord for the proximal demonstrative plus the vowel '*-a*'. The form of the ARG construction in Gitonga is similar: the AGR construction is derived directly from the demonstrative modifier for each of the noun classes in addition to the vowel '*-a*'. TABLE 13 below outlines the pattern of noun class agreement for each of the forms of the AGR marker.

TABLE 13: AGREEMENT CONSTRUCTIONS FOR GENITIVE PHRASES

Demonstr. Prefix	Genitive Agreement Constructions	Example	Gloss
1 wu-	wa-	prosur wa-ɟone	'John's teacher'
2 va-	va-	varoŋgo va-dzipari dzaŋgo	'my friends' family'
3 wu-	wa-	ŋgonro wa-ɟone	'John's foot'
4 ji-	ja-	migonro ja-ɟone	'John's feet'
5 ri-	ra-	ridimi ra-mozambik	'language of Mozambiq'
6 ji-	ja-	mabuku ja-ɟone	'John's books'
7 ɟi-	ɟa-	ɟireŋgo ja-kabini	'animal of the wild'
8 si-	tsa-	siwoŋga tsa-papaje	'father's cats'
9 ji-	ja-	ɲumba ja-papaje	'father's house'
10 dzi-	dza-	dziɲumba dza-ɟone	'John's houses'
14 ɣu-	ɣa-	ɣuhodza ɣa-pfumu	'the chief's food'

A pronominal possessive phrase, such as '*my family*' in (79) and '*my father*' in (80), can be embedded inside a genitive construction – one with a nominal possessor – where it functions as the genitive noun phrase. In (79)-(80), the possessive pronominal phrases '*my family*' and '*my father*' represent human genitive nouns and as such the genitive phrases are encoded with the AGR construction.

(79) dzipari dza-[varoŋgo vaŋgu] [GT00607]
10.friends 10.AGR-[2.family 2.1SG]
'friends of my family'

(80) siwoŋga siviri sa-[papaje waŋgo] [GT00729]
8.cats 8.two 8.AGR-[1.father 1.SG]
'my father's two cats'

The possession relations with a human possessor attested in the data that are encoded with the AGR construction can include kinship relations (81-86), body parts (87-89), possessions (90-97), and socio-cultural relations (98-103).

(81) mamaje wa-ɟone [GT00345]
1.mother 1.AGR-John
'John's mother'

(82) mamaje wa-ɟone ni ɟanana [GT00345]
1.mother 1.AGR-John and 7.child
'John's mother and child'

(83) ndije wa-ɣabi [GT00538]
1.brother 1.AGR-Gaby
'Gaby's brother'

(84) ɟanana ja-papaje waŋgo [GT00729]
7.baby 7.AGR-1.father 1.1sg.POSS
'My father's baby'

(85) varoŋgo va-pari jaŋgo [GT00605]
2.family 2.AGR-9.friend 9.1sg.POSS
'my friend's family'

(86) varoŋgo va-dzipari dzaŋgo [GT00605]
2.family 2.AGR-10.friends 10.1sg.POSS
'my friends' family'

(87) migonro ja-ɟone [GT00727]
4.feet 4.AGR-John
'John's feet'

(88) ŋgonro wa-ɟone [GT00727]
3.foot 3.AGR-John
'John's foot'

(89) ritundu ra-papaje waŋgo [GT00729]
5.legs 5.AGR-1.father 1.POSS
'My father's legs'

(90) siwoŋga tsa-papaje [GT00729]
8.cats 8.AGR-1.father
'father's cats'

(91) siwoŋga siviri tsa-papaje waŋgo [GT00729]
8.cats 8.two 8.AGR-1.father 1.POSS
'my father's two cats'

(92) mabuku ja-ɟone [GT00188]
6.books 6.AGR-John
'John's books'

(93) risa ra-ɟone [GT00188]
5.apple 5.AGR-John
'John's apple'

(94) ɣuhodza ɣa-pfumu [GT00607]
15.food 15.AGR-9.chief
'the chief's food'

(95) dziɲumba dza-ɟone [GT00188]
10.houses 10.AGR-John
'John's houses'

(96) ɲumba ja-papaje waŋgo [GT00729]
9.house 9.AGR-1.father 1.POSS
'my father's house'

(97) ɲumba ja-βane [GT00729]
9.house 9.AGR-somebody
'somebody's house'

(98) ɟitumi ja-pfumu [GT00475]
7.servant 7.AGR-9.chief
'the chief's servant'

(99) situmi tsa-pfumu [GT00475]
8.servants 8.AGR-9.chief
'the chief's servants'

(100) prosur wa-ɟone [GT00728]
1.teacher 1.AGR-John
'John's teacher'

(101) prosur wa-ɟekwatana [GT00728]
1.teacher 1.AGR-7.boy
'the boy's teacher'

(102) tumuni ja-papaje waŋgo [GT00729]
9.work place 9.AGR-1.father 1.POSS
'my father's workplace'

(103) dzipari dza-varoŋgo vaŋgo [GT00605]
10.friends 10.AGR-2.family 2.POSS
'friends of my family'

When the head noun phrase (the possessor) consists of a compound of two nouns of two different noun classes, the genitive phrase agrees with the noun class of the last conjoined noun, the one that immediately precedes it. This is demonstrated by examples (104-107).

(104) mamaje wa-ɟone [GT00345]
1.mother 1.AGR-John
'John's mother'

(105) mamaje ni ɟanana ɟa-ɟone [GT00345]
1.mother and 7.child 7.AGR-John
'John's mother and John's child'

(106) ɟanana ni mamaje wa-ɟone [GT00800]
7.child and 1.mother 1.AGR-John
'John's child and mother'

(107) mamaje ni ɲumba ja-ɟone [GT00800]
1.mother and 9.house 9.AGR-John
'John's mother and house'

With certain nouns, such as *book*, a dual reading is possible where the relation between the genitive noun and the head noun (*book*) is not one of possession (as in *John's book*) but rather one of "subject matter" (as in '*The book about John'*). Sentences (108-109) illustrate this point.[12]

(108) ribuku ra-ɟone ridʲɣubidʷe vonoβa [GT00725]
5.book 5.AGR John 5.stolen yesterday
'John's book was stolen yesterday' / 'the book about John was stolen yesterday'

(109) ifotu ja-kudzi [GT00724]
9.photo 9.AGR-Kudzi
'Kudzi's photo' (possession: a photo that belongs to Kudzi) / 'A photo of Kudzi'

At the beginning of this section I mentioned that a genitive phrase in which the head noun is placed in time or space (including habitat) is encoded with the AGR construction in Gitonga. In these phrases, the AGR construction always agrees with the noun class of the head noun regardless of the human or non-human properties of the possessor. The examples that follow present these types of relations. In (110), the head noun ('songs') is placed in time, whereas in (111-115) the head noun is placed in space, specifically a habitat

(110) dzindzimo dza-muhuno [GT00733]
10.songs 10.AGR-today
'contemporary songs' (literally 'songs of today')

(111) ridimi ra-mozambik [GT00733]
5.tongue 5.AGR-Mozambique
'language of Mozambique'

(112) ɟireŋgo ɟa-kabini [GT00002]
7.animal 7.AGR-wild
'wild animal'

(113) sireŋgo tsa-kabini [GT00561]
8.animals 8.AGR-wild
'wild animals'

(114) ɟireŋgo ɟa-nraŋgane [GT00561]
7.animal 7.AGR-house
'domesticated animal' (literally 'animal of the house')

[12] See section 3.3 of this paper for a discussion on how to disambiguate such sentences by using the ownership constructions.

(115) sireŋgo tsa-nraŋgane [GT00561]
8.animals 8.AGR-house
'domesticated animals' (literally 'animals of the house')

Under this analysis, the agreement construction also encodes the head noun's place of origin, which can be specific (116-117) or be left unspecified (118-120).

(116) ɲiŋguti vatu ɲa-vanji va-maputu [GT00395]
1sg.know 2.people 2.many 2.AGR-Maputo
'I know a lot of people from Maputo'

(117) kʰujebje uru jiegu ja-maputu [GT00800]
9.which 9.gold 9.is 9.AGR Maputo
"Which gold is from Maputo?"

(118) ɲiŋguti mutu wa-βare [GT00395]
1sg.know 1.person 1.AGR-there
'I know someone from there'

(119) ɲiŋguti vatu va-βare [GT00395]
1sg.know 2.people 2.AGR-there
'I know people from there'

(120) kʰujebje uru jieɣu ja-βare [GT00395]
9.which 9.gold 9.is 9.AGR-there
"Which gold is from there?"

3.2 Genitive Phrases with the Generic Genitive Construction 'ɲa'

Like the AGR construction, the generic genitive construction (GEN/REL) '*ɲa*' acts as a prefix to the genitive noun, which is already inflected with a noun class prefix marker. The form of the generic genitive marker is similar to what Creissels et al (2008) identify as a 'linker', which is a particle that may at some point have been a demonstrative but which no longer displays agreement of any kind to any element in the phrase and whose purpose is only syntactic. In Tswana (S.30), for instance, the linker ('tse') operates as a relativizer (Creissels et al., 2008) and its function in Gitonga is similar to the generic genitive construction 'ɲa-' in descriptive possessive constructions.

Lanham (1955) identified the generic genitive construction '*ɲa*-' primarily as encoding descriptive possessive and type relations. This construction does not agree in class with any element of the noun phrase and as such emerges as the invariable marker '*ɲa*-' for all the noun classes. The GEN/REL construction encodes possession relations in constructions where the genitive noun is non-human (121). It also encodes type relations (122-123), content relations (124), and partitive relations (125) without distinguishing between a human or non-human genitive noun.

(121) mamaje ɲa-janana[13] ɟeji [GT00728]
1.mother GEN-7.baby 7.this
'This baby's mother'

[13] In Gitonga the word for *baby* ('janana') belongs to a noun class where inanimates are classified. Matambirofa (2000) notes that in a system of possession that is sensitive to the person-animacy hierarchy, children can never be possessors

(122) muβaɲisi ɲa-ɟireŋgo [GT00733]
doctor GEN-animal
'veterinarian'

(123) ɣara ɲa-mesa [GT00314]
utensils GEN-table
'utensils for the table'

(124) kopo ɲa-mati [GT00733]
7.glass GEN-water
'glass of water'

(125) jikʷemo ɲa-pao [GT00734]
piece GEN-bread
'a piece of the bread'

Constructions that are encoded with GEN/REL also include descriptive possessives (126) and ordinal numbers (127). Because these two types of constructions are syntactically different from the ones outlined above, I discuss these types of constructions in two separate sub-sections (3.2.1 and 3.2.2) at the end of this section.

(126) sanana ɲa-mabaha [GT00012]
8.babies REL-6.twins
'twin babies'

(127) ɟanana ɲa-ɣupere [GT00732]
7.baby REL-15.first
'first baby'

Relations of possession in which the genitive noun (the possessor) is human are encoded with the agreement construction (section 3.1). Those same relations with a non-human genitive noun, on the other hand, are encoded with the GEN/REL construction. These relations include kinship (128-130), body parts (131)-(133), part-whole (134-136), and socio-cultural (137-139).

(128) ɟanana ɲa-ŋgara [GT00725]
7.baby GEN-9.lion
'the lion's baby'

(129) mamaje ɲa-ŋgara [GT00800]
1.mother GEN 9.lion
'the lion's mother's'

(130) mamaje ɲa-janana ɟeji [GT00728]
1.mother GEN-7.baby 7.this
'this baby's mother'

(131) riβoɣo ɲa-janana [GT00475]
arm GEN-7.child
'the child's arm'

(132) ŋgira ɲa-ŋgara [GT00475]
tail GEN-9.lion
'the lion's tail'

(133) miteŋga ɲa-jiɲone [GT00728]
feathers GEN-bird
'the bird's feathers'

(134) rihagane ɲa-nsimbo [GT00346]
leaf GEN-tree
'leaf of a tree'

(135) ritsigo ɲa-riviki [GT00346]
day GEN-week
'day of the week'

(136) ridimba ɲa-ɲumba [GT00475]
wall GEN-house
'wall of the house'

(137) pari ɲa-janana [GT00346]
9.friend GEN-7.child
'the child's friend'

(138) moŋgana ɲa-janana [GT00728]
1.friend GEN-7.child
'the child's friend'

(139) pfumu ɲa-nraŋga [GT00475]
9.chief GEN-home
'chief of the home'

Possessions of non-humans are ambiguous in Gitonga; Lanham (1955) calls attention to this fact. My consultant informs me that animals and entities such as babies (which are classified as non-human in Gitonga) cannot own things. For this reason, a sentence such as (140) can only be expressed in a context such as a cartoon or a story, in which animals could conceivably own something.

(140) ɲumba ɲa-sireŋgo [GT00800]
9.house GEN-8.animals
'the animals' house'

With certain nouns, such as *book*, *song*, or *photo* – as it was the case with relations encoded with the agreement constructions – the GEN/REL construction encodes a "subject matter" relation in addition to a possession relation. This is not something that is observed in the literature and Lanham (1955) makes no mention of this fact. While the examples in (141-145) have these two distinct readings, the possession relation is the least commonly interpreted (according to my consultant) as it can only occur in specific contexts such as a cartoon or a story.[14]

(141) ribuku roro ɲa-sireŋgo [GT00724]
5.book 5.that GEN- 8.animals
'book about the animals' / 'the animals' book'

[14] See section 3.3 of this paper for a discussion on how to disambiguate such sentences by using the ownership constructions.

(142) ifotu ɲa-ɟireŋgo [GT00338]
9.photo GEN-7.animal
'photo of the animal' / 'the animal's photo'

(143) raturatu ɲa-ɟanana [GT00338]
image GEN-7.baby
'image of the baby' / 'the baby's image'

(144) ifotu ɲa-ŋgara [GT00338]
9.photo GEN-9.lion
'photo of the lion' / 'the lion's photo'

(145) dzimo ɲa-sireŋgo [GT00726]
9.song GEN-8.animals
'song about animals' / 'the animals' song'

In the phrases presented in (146-159), the GEN/REL construction encodes relations of type (146-150), function (151-153), content (154-155), and partitives (156-159) regardless of whether or not the genitive noun (the possessor) is human (150) or non-human (the rest of the examples).

(146) mubaɲisi ɲa-sanana [GT00733]
1.doctor GEN-8.children
'pediatrician'

(147) mubaɲisi ɲa ɟireŋgo [GT00733]
1.doctor GEN-7.animal
'veterinarian'

(148) prosur ɲa-matematika [GT00728]
1.teacher GEN-math
'Math teacher'

(149) dzimo ɲa-reharadzu [GT00726]
9.song GEN-love
'love song'

(150) ɲumba ɲa-vapfumba [GT00733]
9.house GEN-2.guests
'guest house'

(151) gara ɲa-mesa [GT00314]
utensils GEN-table
'utensils for the table'

(152) ɲumba ɲa-ɣorare [GT00733]
9.house GEN-12.sleep
'hotel/shelter'

(153) muviɣeri ɲa-ɟituŋgu [GT00475]
1.protector GEN-7.people
'protector of the people'

(154) kopo ɲa-rito [GT00733]
7.glass GEN-milk
'glass of milk'

(155) kopo ɲa-mati [GT00733]
7.glass GEN-water
'glass of water'

(156) metadi ɲa-pao jeji [GT00734]
half GEN-9.bread 9.this
'half of this bread'

(157) metadi ɲa-ɣuβaɲa waŋgo [GT00734]
half GEN-14.life 14.1sg.POSS
'half of my life'

(158) jikwemo ɲa-pao [GT00734]
piece GEN-9.bread
'a piece of the bread'

(159) metadi ɲa-sanana [GT00734]
half GEN-8.babies
'half of the babies'

One example with semantically ambiguous encoding attested in the data is (160), where the genitive noun is classified as non-human. Bearing in mind that the non-humanness of the genitive noun requires that the relation be encoded with the generic genitive construction, a possession relation is a possible reading for the construction. However, because 'ɟanana' (*baby*) is classified as unable to possess, the relation encoded by the construction is primarily one of type. Lanham (1955) makes mention of this ambiguity in GEN/REL constructions. The possession reading is possible, however, if a context such as a story or a fantasy is set up such that a baby could feasibly own something.

(160) ɣuhodza ɲa-ɟanana [GT00800]
14.food GEN-7.baby
'baby food' / 'the baby's food'

3.2.1 Descriptive Possessives

To modify a noun beyond the ten adjectival stems, as explored in section 2.3, Gitonga employs a construction that Lanham (1955) calls a 'descriptive possessive' since it uses the same marker ('*ɲa-*') to encode generic genitive constructions, as shown in (161-162). The construction takes no noun class agreement.

(161) ritanra ɲa-ɣuaje [GT00723]
5.egg REL-15.white
'white egg'

(162) manra ɲa-ɣuaje [GT00723]
6.eggs REL-15.white
'white eggs'

In descriptive possessive constructions, '*ɲa-*' functions as a relativizing prefix to a verb form that modifies the head noun. To distinguish this type of genitive construction, I gloss the descriptive possessive '*ɲa-*' as REL to underscore its function as a relativizer as opposed to a generic genitive GEN. This is because descriptive possessive constructions are equivalent in meaning to adjectival

constructions (section 1.3), as (163) demonstrates. The adjectival construction in (163a) uses one of the few true adjectival stems in Gitonga (section 2.7), but the same relation can be encoded with the '*ɲa-*' relativizer (163b).

(163) a. ɟimbwe ɟekoŋgoro [GT00133]
7.dog 7.big
'big dog'
b. ɟimbwe ɲa-ɟekoŋgoro [GT00133]
7.dog REL-7.big
'big dog'

In Gitonga, descriptive possessives that are encoded with the base form of a verb appear in their perfective form (Lanham, 1955). For instance, in (164) the verb stem '-ena' ('*to be fat*') takes the noun class 15 prefix ('ɣu-') that corresponds both to the infinitival and nominalized form of a verb and the final vowel '-e' that corresponds to the perfective.

(164) jimbwe jeji ɲa-ɣuene [GT00376]
9.dog 9.PROX REL-15.fat
'this fat dog'

Similarly, the forms for '*tall*' '*beautiful*', '*rich*', '*white*', and '*ugly*' are derived from the verbs '-rapa' ('*to be tall*'), '-mbura' ('*to be beautiful*'), '-ɣaɲa' ('*to be rich*'), '-aja' ('*to be white*'), and '-biba' ('*to be ugly*'), with the class 15 infinitival/nominalized prefix, as in (165-(169).

(165) ɲdije ɲa-ɣurape [GT00730]
1.sibling REL-15.tall
'tall brother/sister'
(166) ɟanana ɲa-ɣumbure [GT00376]
7.baby REL-15.beautiful
'beautiful baby'
(167) ɲamajane ɲa-ɣuɣaɲe [GT00395]
1.woman REL-15.rich
'rich woman'
(168) ɲumba ɲa-ɣuaje [GT00723]
9.house REL-15.white
'white house'
(169) dzimbwe ɲa-ɣubibe [GT00133]
10.dogs REL-15.ugly
'ugly dogs'

Whereas the semantically-empty final vowel for indicative verbs in Gitonga is '*-a*' (Nurse, 2008), the suffix '*-e*' is the most common for the perfective form.[15]

Two further observations that Lanham (1955) makes about verb-derived adjectives are the presence of noun-class agreement in some monosyllabic stems and the variation of the perfective

[15] For a complete discussion, see Lanham (1955), Hyman (1999), and Nurse (2008).

suffix. In (170), for instance, the perfective form of the monosyllabic verb stem '*-ena*' (*to be fat*) does not take the class 14 infinitival prefix '*ɣu-*', as one would expect. Rather, its prefix is the agreement prefix that corresponds to the noun's class ('ɟi-').

(170) ɟanana ɲa-ɟieniɗe [GT00432]
7.baby REL-7.PERF.fat
'fat baby'

Lanham (1955) provides one sole instance of this phenomenon as it pertains to a monosyllabic verb stem in perfective form that modifies a class 9 noun. In my data, two instances are attested: One (170) involves a class 7 noun and the other (171) a class 2 noun.

(171) vaɲamajane ɲa-vamburiɗe [GT00432]
2.women REL-2.beautiful
'beautiful women'

The perfective suffix can also vary with the same verb stem. Compare (172), which takes the perfective suffix '-iɗe', to (166), repeated below as (173), which takes '-e' for the same verb stem.

(172) ɟanana ɲa-ɣumburiɗe [GT00376]
7.baby REL-15.fat.PERF
'beautiful baby'

(173) ɟanana ɲa-ɣumbure [GT00376]
7.baby REL-15.beautiful
'beautiful baby'

Lanham (1955) notes that although the perfective suffix '-iɗe' is reserved for monosyllabic verb stems, some non-monosyllabic verb stems may use it.

Descriptive possessive relations can also be encoded between nouns. There is no noun class agreement marking the construction, but rather the relation is encoded with the relativizing prefix '*ɲa-*' on the modifying noun. The order of these elements is always HEAD NOUN + GEN-MODIFYING NOUN. Examples of these types of descriptive possessive constructions are (174)-(177).

(174) pfumu ɲa-ɲamajane [GT00733]
9.chief REL-1.woman
'female chief'

(175) sanana ɲa-mabaha [GT00012]
8.babies REL-6.twins
'twin babies'

(176) ɲamajane ɲa-tsiba [GT00395]
1.woman REL-9.force/power
'strong woman'

(177) ɲamajane ɲa-mbiri [GT00395]
1.woman REL-youth
'young.girl'

Whenever the relativizer prefix ‘ɲa-’ encodes a descriptive possessive relation between a head noun and more than one modifying noun, as in (178-180), all modifying nouns (or adjectival stems) except for the last one in the sequence, are prefixed with the relativizer ‘*ɲa-*’. The last modifier in the sequence takes verbal inflection and it is conjugated in concordance to the noun class of the head noun.

(178) vaɲamajane ɲa-tsiba ɲa-ɣumbure na vaɣurapiɗe [GT00432]
2.women REL-9.force REL-15.beautiful CONJ 2.be tall.PERF
‘strong, beautiful, tall women’
(literally ‘women who are strong, who are beautiful, and are tall’)

(179) ɟanana ɟeji ɲa-ɣuene na ɟimburiɗe [GT00376]
7.baby 7.PROX REL-15.fat CONJ 7. be beautiful.PERF
‘this fat beautiful baby’ (literally ‘this baby who is fat and is beautiful’)

(180) ɟanana ɟeji ɲa-ɣumbure na ɟieniɗe [GT00376]
7.baby 7.PROX REL-15.beautiful CONJ 7. be fat.PERF
‘this beautiful fat baby’ (literally ‘this baby who is beautiful and is fat’)

3.2.2 Ordinal Numbers

Rugemalira (2007) makes no distinction between ordinal numbers and associative phrases (what I call descriptive possessive constructions) in that they both employ a connective to modify a noun. Ordinal numbers behave like verb stems and are encoded with the GEN/REL construction and thus are very similar to the descriptive possessive genitive constructions, especially in the case of the ordinal number ‘first’, as in (181-182), where the modifier is derived from the verb ‘ɣupere’ – *to begin*. Deko (1982) remarks that in Bantu languages it is common for the ordinal number ‘first’ to be a form of the verb ‘to begin’.

(181) ɟanana ɲa-ɣupere [GT00732]
7.baby REL-15.first
‘first baby’

(182) ɲumba ɲa-ɣupere [GT00732]
9.house REL-15.first
‘first house’

For the ordinal numbers ‘second’ to ‘fourth’, the stem of the cardinal numeral behaves like a descriptive possessive in that the modifier is used with the class 15 prefix ‘ɣu-’. My consultant states that ordinal forms like ‘ɣuviri’ ‘ɣuraro’ and ‘ɣuna’, as in (183-185), mean ‘to be second’, ‘to be third’, and ‘to be fourth’, respectively; however, unlike descriptive possessives, the final vowel in these nominalized verb forms does not correspond to the perfective ‘-e’ or any of the variations discussed in section 3.2.2.Instead, the numeral stems are used (see TABLE 7) with the class 15 prefix but with no noun class agreement to the head noun (unlike cardinal numerals – see section 2.4.1)

(183) ɲumba ɲa-ɣuviri [GT00734]
9.house REL-15.second
‘second house’

(184) ɲumba ɲa-ɣuraro [GT00734]
9.house REL-15.third
'third house'

(185) ɲumba ɲa-ɣuna [GT00734]
9.house REL-15.fourth
'fourth house'

Cardinal numerals beyond five do not take agreement and their ordinal versions lack agreement as well, as shown in (186-188). The only exception is found with the number 'one', as in (188), in which case the numeral agrees with the noun class of the head noun.

(186) ɟanana ɲa-ribanri [GT00735]
7.baby REL-5.fifth
'fifth baby'

(187) ɲumba ɲa-ribanri [GT00735]
9.house REL-5.fifth
'fifth house'

(188) ɲumba ɲa-ribanri na ɟimwejo [GT00735]
9.house REL-5.fifth CONJ 9.one
'sixth house'

3.3 The Ownership Construction

Genitive constructions with the ownership morpheme (OWN) are the most general type of construction in Gitonga. Whereas the (AGR) construction encodes possession relations with only human genitive nouns and all relations of time and place, the (OWN) construction encodes all possession relations and relations of time and place for both human and non-human genitive nouns. Like the (AGR) construction, the (OWN) construction agrees with the noun class of the head noun in the genitive noun phrase. In TABLE 14 I present the paradigm for the system of agreement for each ownership morpheme with respect to each of the noun classes of the head noun in the genitive phrase.

TABLE 14: OWNERSHIP MORPHEME FOR GENITIVE CONSTRUCTIONS

Noun Class	Genitive Ownership Construction		
1	kʷa-	mamaje kʷa-ɟone	[GT00800]
		1.mother 1.OWN-John	
		'John's mother'	
2	pa-	vaɾoŋgo pa-ɟone	[GT00727]
		2.family 2.OWN-John	
		'John's family'	
3	kʷa-	movo wowo kʷa-ɟone	[GT00725]
		3.car 3.that 3.OWN-John	
		'That car of John's'	

4	kʸa-	migonro kʸa-ɟone	[GT00800]
		4.feet 4.OWN-John	
		'John's feet'	
5	tʰa-	ribuku tʰa ɟone ridɪɣubiɗwe vonoβa	[GT00800]
		5.book 5.OWN John 5.stolen yesterday	
		'John's book was stolen yesterday'	
6	kʸa-	mabuku kʸa-ɟone	[GT00800]
		6.books 6.OWN-John	
		'John's books'	
7	kʸa-	ɟireŋgo kʸa-kabini	[GT00800]
		7.animal 7.OWN-wild	
		'wild animal' (literally 'animal of the wild')	
8	tsa-	sanana tsa-papaje waŋgo	[GT00727]
		8.babies 8.OWN-1.father 1.POSS	
		'my father's babies'	
9	kʸa-	ɲumba kʸa-[mamaje ɲa-ŋgara]	[GT00800]
		9.house 9.AGR-1.mother GEN-9.lion	
		'the house of the lion's mother'	
10	tsa-	no example attested in the data	
14	kʷa-	no example attested in the data	

The form of the (OWN) genitive marker is /*Ca*-/ and it is derived directly from the form of the (AGR) marker. For each of the noun classes, the consonant in the (OWN) marker is a hardened (voiceless stop/affricate) variant of the consonant of the (AGR) marker (w or ɣ → kw, v → p, j or ɟ → kʸ, r → tʰ, dz → ts). This derivation is illustrated in TABLE 15.

TABLE 15: DERIVATION OF OWNERSHIP MARKERS FROM AGREEMENT MARKERS

Noun Class	Agreement Construction		Ownership Construction
1	wa-	→	kʷa-
2	va-	→	pa-
3	wa-	→	kʷa-
4	ja-	→	kʸa-
5	ra-	→	tʰa-
6	ja-	→	kʸa-
7	ɟa-	→	kʸa-
8	tsa-	→	tsa-
9	ja-	→	kʸa-
10	dza-	→	tsa-
14	ɣa-	→	kʷa-
15	ɣu-	→	kʷa-

It is worth noting that neither the form nor the function of the (OWN) construction have been described in the literature. Lanham (1955) makes no mention of it in his study of Gitonga.

In (189), the (AGR) construction encodes the kinship relation in (189a), which has a human genitive noun ('John') and can thus also be encoded with the (OWN) construction (189b). However, this same relation cannot be encoded with the (GEN/REL) construction (189c) since the genitive noun is human.

(189) a. mamaje ja-jone [GT00800]
1.mother 1.AGR-John
'John's mother'
b. mamaje k^{w}a-jone [GT00800]
1.mother 1.OWN-John
'John's mother'
c. *mamaje ɲa-jone [GT00800]
1.mother GEN-John
'John's mother'

In (190), on the other hand, a socio-cultural relation with a non-human genitive noun is encoded with the (GEN/REL) construction (190a). Because the (OWN) construction does not place any restriction on the human/non-human properties of the genitive noun, this same relation can be encoded with the (OWN) construction (190b). With the (AGR) construction, however, it is ungrammatical (190c) due to the fact that the genitive noun is classified as a non-human.

(190) a. muŋgana ɲa-janana [GT00728]
1.friend GEN-7.baby
'the baby's friend'
b. muŋgana k^{y}a-janana [GT00800]
1.friend 1.OWN-7.baby
'the baby's friend'
c. *muŋgana ja-janana [GT00800]
1.friend 1.AGR-7.baby
'the baby's friend'

The (OWN) construction is therefore the most general type of construction in Gitonga because it encodes a genitive relation without making reference to the semantic properties of the genitive noun. The use of the (OWN) construction in a sentence, is limited to question-and-answer exchanges wherein genitive questions of possession and time/space in Gitonga are typically asked with the (OWN) construction[16] (191a). Responses with either the (OWN) construction (191b) or the (AGR) construction (191c) are grammatical in the language.

(191) a. k^{y}a-haji jireŋgo jeji? [GT00800]
7.OWN-where 7.animal 7.this?
'To where does this animal belong?'

[16] Genitive questions may also be asked using the agreement construction. See the end of this section for a more complete discussion and further examples of questions and their responses.

b. ɟireŋgo kʸa-kabini [GT00800]
7.animal 7.OWN-wild
'wild animal' (literally 'animal of the wild')

c. ɟireŋgo ɟa-kabini [GT00800]
7.animal 7.AGR-wild
'wild animal' (literally 'animal of the wild')

Whereas the response with the (AGR) construction (191c) is an acceptable standalone declarative statement, the response with the (OWN) construction (191b) tends to exist primarily as a response to a question (191a) and would sound odd uttered in another context, according to my consultant's intuition.

All relations of possession can be encoded with the (OWN) construction; these include kinship relations with human genitive nouns (192-197) and with non-human genitive nouns (198-200); body parts (201-202); part-whole relations (203); possessions of human possessors (204-207) and of non-human possessors (208-210); and sociocultural relations (211-214). Time/space relations, which are encoded exclusively with the (AGR) construction, can also be encoded by the (OWN) construction, as the exchange in (215) demonstrates. As standalone declarative statements, these relations would be encoded with either the (AGR) or the (GEN/REL) construction depending on the restrictions that each construction places on the semantic properties of the genitive noun.

(192) ɟanana kʸa-papaje waŋgo [GT00725]
7.baby 7.OWN-1.father 1.poss
'my father's baby'

(193) ɟekwatana kʸa-mamaje waŋgo [GT00725]
7.boy 7.OWN-1.mother 1.poss
'my mother's boy'

(194) sanana tsa-papaje waŋgo [GT00727]
8.babies 8.OWN-1.father 1.poss
'my father's babies'

(195) varoŋgo pa-ɟone [GT00727]
2.family 2.OWN-John
'John's family'

(196) mamaje kʷa-ɟone [GT00800]
1.mother 1.OWN-John
'John's mother'

(197) mamaje kʷa-ɟanana ɟeji [GT00728]
1.mother 1.OWN -7.baby 7.this
'This baby's mother'

(198) ɟanana kʸa-ŋgara [GT00725]
7.baby 7.OWN-9.lion
'the lion's baby'

(199) mamaje kʷa-ɟanana ɟeji [GT00800]
1.mother 1.OWN-7.baby 7.this
'this baby's mother

(200) ɲumba kʸa-[mamaje ɲa-ŋgara] [GT00800]
9.house 9.AGR-1.mother GEN-9.lion
'the house of the lion's mother's'

(201) migonro kʸa-ɟone [GT00800]
4.feet 4.OWN-John
'John's feet'

(202) ritundu kʸa-papaje waŋgo [GT00801]
4.leg 4.OWN-1.father 1.poss
'my father's leg'

(203) rihagane kʸa-nsimbo [GT00346]
5.leaf 5.OWN-3.tree
'leaf of a tree'

(204) movo wowo kʷa-ɟone [GT00725]
3.car 3.that 3.OWN-John
"that car of John's"

(205) movo wure kʷa-papaje waŋgo [GT00725]
3.car 3.that 3.OWN-1.father 1.poss
'that car of my father's'

(206) ɲumba kʸa-ɟone [GT00800]
9.house 9.OWN-John
'John's house'

(207) mabuku kʸa-ɟone [GT00800]
6.books 6.OWN-John
'John's books'

(208) jajo jamaviri mabuku kʸa-sireŋgo [GT00724]
6.MED 6.two 6.books 6.OWN-8.animals
'those two books of the animals''

(209) dzimo kʸa-sireŋgo ɲa -mbapimisa [GT00725]
9.song 9.OWN-8.animals REL-without-thinking
'the song that belongs to the animals sounds dumb'

(210) foto kʸa-ŋgara [GT00725]
9.photo 9.OWN-9.lion
'the lion's photo' (possession: a photo that belongs to the lion)

(211) prosur kʷa-ɟone [GT00800]
1.teacher 1.OWN-John
'John's teacher'

(212) vaprosur pa-ɟone [GT00800]
2.teachers 2.OWN-John
'John's teachers'

(213) prosur kʷa-ɟekwatana [GT00800]
1.teacher 1.OWN-7.boy
'the boy's teacher'

(214) situmi tsa-pfumu [GT00475]
8.servants 8.OWN/AGR-9.chief
'the chief's servants'

(215) a. kʸa-haji ɟireŋgo ɟeji? [GT00800]
7.own-where 7.animal 7.this?
'Where is this animal from?'/ 'Where does this animal belong?'
b. ɟireŋgo kʸa-kabini [GT00800]
7.animal 7.OWN-wild
'wild animal' (literally 'animal of the wild')
c. ɟireŋgo kʸa-nraŋgane [GT00800]
7.animal 7.OWN-3.house
'domesticated animal' (literally 'animal of the house')

For nouns in class 8, the (AGR) and (OWN) constructions have the same form: 'tsa-'. Thus, in the constructions presented in (216-217), it is impossible to tell whether the relation is one that is encoded with the (AGR) or the (OWN) construction.

(216) siwoŋga tsa-papaje waŋgo [GT00800]
8.cats 8.OWN/AGR-1father 1sg.POSS
'my father's cats'
(217) siwoŋga tsa- ɟone [GT00800]
8.cats 8.OWN/AGR-John
'John's cats'

In section 3.1, I discussed how certain head nouns such as 'book', 'photo' and 'song' yield two readings with the (AGR) construction: one of possession and one of subject matter. The example I provided in section 2.1 is repeated below as (218).

(218) ribuku ra-ɟone riɗiɣubiɗwe vonoβa [GT00725]
5.book 5.AGR John 5.stolen yesterday
'John's book was stolen yesterday'
'the book about John was stolen yesterday'

Because the relation in (218) is one of possession, it can also be encoded with the (OWN) construction, as in (219). However, unlike the (AGR) construction, the (OWN) construction does not encode any relations of "subject matter", and as such the only possible reading with the (OWN) construction is one of possession.

(219) ribuku tʰa ɟone riɗiɣubiɗwe vonoβa [GT00800]
5.book 5.OWN John 5.stolen yesterday
'John's book was stolen yesterday'

Encoding the relation with the (OWN) construction is one way to disambiguate the two readings that the (AGR) construction otherwise yields with these nouns. A similar case is presented in (220), where the (AGR) construction conveys both a possession and a subject-matter reading in (220a) but only encodes possession with the (OWN) construction in (220b).

(220) a. foto ja-kudzi [GT00725]
9.photo 9.AGR-Kudzi
'a photo that belongs to Kudzi'/ 'an image of Kudzi'
b. foto kʸa-kudzi [GT00725]
9.photo 9.OWN-Kudzi
'a photo that belongs to Kudzi'

Examples (208-210) earlier in this section present similar cases where the (OWN) construction encodes only a possession relation and not a subject-matter one.

Another important difference between relations encoded with the (OWN) construction and those encoded with the (AGR) construction is that the (OWN) construction may take the form of a headless genitive clause – without a head noun – by virtue of existing primarily as responses to a genitive question where the head noun has already been referenced. Thus, the question (221a) may be responded to by either (221b) or (221c), which is a headless genitive clause that retains the head noun's ('jitumi') noun class agreement (class 7) in the (OWN) construction ('kya-'). In fact, in everyday speech (221c) would be a more common response than (221b) to the question posed in (221a), according to my consultant's intuitions.

(221) a. kʸa-mani jitumi jire? [GT00727]
7.OWN-who 7.servant 7.that
'Whose servant is that?'
b. jitumi kʸa-pfumu
7.servant 7.OWN-9.chief
'the chief's servant'
c. kʸa-pfumu
7.OWN-9.chief
'the chief's'

Not all genitive questions, however, must be encoded with the (OWN) construction. A question like (222a) may also be encoded with the (AGR) construction. Its response can be encoded either with the (OWN) construction (222b) or with the (AGR) construction (222c). However, a headless genitive clause can only be encoded with the (OWN) construction (222d) but not with the (AGR) construction, as the ungrammaticality of (222e) attests.

(222) a. jitumi ja-mani jire? [GT00727]
7.servant 7.AGR-who 7.that
'Whose servant is that?'
b. jitumi kʸa-pfumu [GT00727]
7.servant 7.OWN-9.chief
'the chief's servant'
c. jitumi ja-pfumu [GT00727]
7.servant 7.AGR-9.chief
'the chief's servant'
d. kʸa pfumu [GT00727]
7.AGR-9.chief
'the chief's'

e. *ɟa-pfumu [GT00727]
7.AGR-9.chief
'the chief's'

3.4 Summary

In part three of this study I have provided an analysis of genitive constructions in Gitonga with nominal possessors. There are three types of genitive constructions in Gitonga: the agreement construction, the generic genitive construction, and the ownership construction – I provide a schema for the three types and the relations each encodes in TABLE 16.

TABLE 16: GENITIVE CONSTRUCTIONS WITH NOMINAL POSSESSORS

Construction Type	Relations Encoded
Agreement (AGR)	• Possessions with a human possessor: Kinship, Body Parts, Possessions, and Socio-cultural Relations. • Time-Space Relations.
Generic Genitive (GEN)	• Possessions with a non-human possessor: Kinship, Body Parts, Possessions, and Socio-cultural Relations. • Part/Whole, Type, Content, and Partitive. • Descriptive Possessives. • Ordinal Numbers.
Ownership (OWN)	• Possessions with a human or non-human possessor: Kinship, Body Parts, Possessions, and Socio-cultural Relations. • Time-Space Relations.

The semantic properties of the genitive noun (the possessor) determine the morphosyntactic form of the genitive construction in Gitonga. Of these, the Agreement (AGR) and the Ownership (OWN) constructions agree with the noun class of the head noun (the possessed/possessum) whereas the generic genitive construction (GEN) consists of a general morpheme that lacks agreement. TABLE 17 presents the forms that each of the genitive constructions takes for each of the noun classes.

TABLE 17: NOUN CLASS AGREEMENT FOR GENITIVE CONSTRUCTIONS

Noun Class	Noun Class Prefix	AGR	GEN	OWN
1	N-/mu-/Ø	wa-	ɲa-	kʷa-
2	va-	va-	ɲa-	pa-
3	N-/Ø	wa-	ɲa-	kʷa-
4	mi-	ja-	ɲa-	kʸa-
5	ri-	ra-	ɲa-	tʰa-
6	ma-	ja-	ɲa-	kʸa-
7	ɟi-/ɟ(a)-	ɟa-	ɲa-	kʸa-
8	si-/s(a)-	tsa-	ɲa-	tsa-

9	ji-/Ø	ja-	ɲa-	kʸa-
10	dzi-	dza-	ɲa-	tsa-
14	wo-	ɣa-	ɲa-	kʷa-
15	ɣu-	ɣa-	ɲa-	kʷa-

4 Conclusion

In this study I have provided an analysis of the elements of the noun phrase and their agreement patterns in Gitonga. While the noun phrase syntax of Bantu languages, and in particular Gitonga, remains an underexplored area of study, a great deal of attention and scholarship has been devoted to the topic of noun class agreement in Bantu. This work complements previous investigations of Gitonga, particularly by Lanham (1955) and Gowlett (2003). One limitation in the methodology of the present study was the availability of only one speaker of Gitonga as language consultant, and as such all the data provided here (except where otherwise noted) comes from the native-speaker intuitions of only one person. That my one consultant moved away and became unavailable for further elicitation meant that some of the later findings could not be checked exhaustively and nor could additional examples of a particular form be elicited.

In part one of this study I analyzed simple noun phrases. I began with a survey of the noun classes, their prefixes, their agreement patterns, and a general description of the semantic categories that each encompasses. I outlined the different types of modifiers in the Gitonga noun phrase: demonstratives, adjectives, numerals, and pronominal possessives.

From a morphosyntactic standpoint, several issues brought up in this work present viable avenues for further, more in-depth inquiry. These include:

(i) The concept of the determiner in Gitonga. Lusekelo (2009) mentions that though a number of Bantuists consider the demonstrative and the possessive to be the determiners in Bantu languages, there is no clear consensus. The question of what constitutes a determiner in Gitonga is one worth pursuing considering that the rationale for categorizing the demonstrative and the possessive as determiners in Bantu is their proximity to the head noun and their occurrence pre-nominally in the noun phrase. However, in Gitonga it is the demonstrative and the numeral – but not the possessive – that can occur pre-nominally in a noun phrase. I explored this issue to a certain extent in section 2.7.

(ii) The double agreement marker in the numeral. In section 2.7 I noted that when a demonstrative and a numeral modify a head noun, the numeral emerges with a prefix additional to its noun class agreement prefix – this additional prefix has the form of the possessive. The extent to which this double-marking would occur in different orders within the noun phrase has not yet been explored.

(iii) Pronominal possessors with the Ownership (OWN) construction. In only one example, sentence (57), a form that appears to be a pronominal possessor with the ownership morpheme (‘kyaŋgo’) emerges. The extent to which these forms defer in use and meaning from the regular pronominal possessors is something that remains to be investigated – especially when considering that, with nominal possessors, the ownership (OWN) behaves differently from the agreement (AGR) and the generic genitive (GEN) constructions in terms of the relations they encode and the semantic properties of the genitive noun.

(iv) The loss of agreement marker in the demonstrative in a Noun + Possessive + Demonstrative noun phrase. In section 2.7 I provide a form (56) in which a demonstrative immediately following a possessive emerges without a noun class marking or any prefix of any kind attached to its base form. However, in a Noun + Possessive + Rel. Modifier + Demonstrative noun phrase (59), the phrase-final demonstrative agrees with the noun class of the head noun. Additional forms of these two types, with the dependents in different places in the noun phrase, may disambiguate this phenomenon.

(v) The form and function of the Ownership (OWN) construction. Though section 3.3 is dedicated entirely to the relations encoded by the ownership construction (OWN), there is no reference in the literature to types of genitive constructions where the alienable/inalienable and/or human/non-human possessor distinctions are not relevant. It may be the case that what in this study I identify as a genitive construction (the ownership construction) may not be a genitive at all but rather a different type of construction altogether.

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