

# Conjoint Plural Object Concord in Zulu

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## Abstract

This paper focuses on the agreement system in Zulu. In particular, noun class and object concord, which is an agreement marking, are discussed. Zulu is spoken in the Republic of South Africa, and belongs to the Bantu language family. Zulu nouns are generally prefixed by a class marker, which suggests that class prefixes determine which noun class nouns belong to (Poulos and Bosch). Additionally, each class has a correspondent subject concord (SC) and object concord (OC). Both concords are prefixed to verbs to show an agreement with nouns.

This paper shows that OCs of singular and plural nouns are fairly simple whereas referring to more than two distinctive nouns is complicated. This kind of complex OCs are referred to as ‘Conjoint Plural Object Concord (CPOC)’ throughout this paper. There are two patterns of CPOC observed in Zulu, which are *ba* and *ku*. Nouns with the same humanness can be grouped and referred to with a CPOC.

It should be noted that some combinations of nouns do not allow us to make a CPOC. It is when [+human] and [-human] nouns are conjoined, which indicates that there is an animacy constraint. Thus, humanness decides the form of CPOC, and when nouns have different humanness, CPOC is not available. One of the ways to refer to [+human] and [-human] nouns together is to repeat the nouns as they are. Another way is to say the [+human] noun with its OC and repeat the [-human] noun. The third way is to say the [-human] noun with its OC and repeat the [+human] noun. The order of the full noun phrases and simple OC is not constrained by animacy hierarchy.

All in all, animacy is a factor that determines the form of CPOC in Zulu language.

## 1 Introduction

Zulu nouns are grouped into classes, in accordance with their prefixes (Nyembezi 1972). An appropriate class marker is prefixed to every noun, as in (1).

- (1) Ngi-bona um-fazi  
 I-see c1.prefix-woman  
 ‘I see a woman.’

The class marker of class 1 is *um-*, so ‘a woman’ belongs to class 1.

Additionally, each noun class has a corresponding subject marker, which is commonly referred to as a subject concord (SC).

- (2) U-malume u-bon-ile i-hhashi  
 c1a.prefix-uncle c1a.SC-see-PERF c5.prefix-horse  
 ‘Uncle saw a horse.’

Subject concords are prefixed to a verb stem, and the attachment takes place because a verb must show an agreement or a relationship with its subject noun to which it refers as shown in the example above. The SC of class 1a is *u-*, which agrees with *u-malume*, a class 1a noun.

The same occurs with object markers, which are known as object concords (OC). OCs are prefixed to a verb stem, and must agree with the referred nouns (Poulos and Bosch 1997). For example, the sentence in (3) implies the same situation as (1), but with an OC of ‘a woman’. Similarly, (4) describes the same situation as (2), except that (4) has an OC of ‘a horse.’

- (3) Ngi-ya-**m**-bona  
I-PRS-c1.OC-see  
'I see her (a woman).'
- (4) U-malume            u-**li**-bon-ile  
c1a.prefix-uncle    c1a.SC-c5.OC-see-PERF  
'Uncle saw it (a horse).'

Since 'a woman' belongs to class 1, the class 1 OC is prefixed to the verb as shown in (3). On the other hand, 'a horse' is a class 5 noun, so the class 5 OC, *li-* is attached (Nyembezi 1972). The morpheme between *ngi* and *m, ya* indicates that the tense of this sentence is present. It appears in positive sentences and also when the verb is not followed by a noun or an adjective.

This paper reports the formation of OC of nouns based on the elicitation sessions conducted by the author. The referents of the OCs are the conjoint forms of two distinct singular nouns from both the same and different classes in Zulu. These OCs will be referred to as 'conjoint plural object concord (CPOC)' throughout this paper. CPOC is rarely examined when compared with simple Zulu OC. For instance, Zeller (2012) has written about relationships between the OC and definiteness, relative clauses or double object constructions, but not particularly about CPOC. Given the opportunity to collect data from a native Zulu consultant, this paper aims to show the factors which determine the form of CPOC, by examining the elicited data. The results reveal that Zulu has two patterns of CPOC. Moreover, the results show that animacy hierarchy but not noun class determines the form of CPOC.

This paper is organized as follows: Section 2 considers two possible factors which may determine the form of CPOC, which are noun class and animacy hierarchy, and predicts CPOC outcomes corresponding to either possibility. Section 3 interprets the elicited data and generalizes the patterns of OC. Section 4 discusses the factors which determine the form of CPOC based on the data shown in section 3 and the remaining issues regarding the respondent as well as the order of nouns.

## 2 Possible factors for Conjoint plural object concord

This section shows that there are two possible factors for CPOC. Firstly, 2.1 represents nouns with their noun class, and 2.2 shows the OC in Zulu. The two factors include noun class and animacy hierarchy, and 2.3 and 2.4 state reasons for assuming them. Finally, 2.5 describes predictions for assuming each factor. Zulu data articulated by the native consultant is written with IPA whereas the data from literatures are based on Zulu orthography.

**2.1 Zulu noun** Zulu nouns are commonly grouped into 16 classes. Singular nouns are in odd numbered classes while even numbered classes consist of plural nouns. The exception is class 14 as it consists of miscellaneous<sup>1</sup> nouns, so they are not necessarily plural. Some examples are shown in the following table:

Table 1

Class	Prefix	Example	Class	Prefix	Example
1	umu-, um-	umu-ntu ('a person')	2	aba-, abe-	aba-ntu ('people')
1a	u-	u-dokotela ('a doctor')	2a	o-	o-dokotela ('doctors')
3	umu-, um-	umu-thi ('a tree')	4	imi-	imi-thi ('trees')
5	ili-, i-	i-kati ('a cat')	6	ama-, ame-	ama-kati ('cats')
7	isi-, is-	isi-sebenzi ('a worker')	8	izi-, iz-	aba-sebenzi ('workers')
9	in-, im-	in-dlovu ('an elephant')	10	izin-, izim-	izin-dlovu ('elephants')
11	ulu-, u-	u-fudu ('a tortoise')	10	izin-, izim-	izim-fudu ('tortoises')
14	ubu-, ub-	ubu-so ('face')			
15	uku-, ukw-	uku-dla ('food')			
17	uku-, ukw-	uku-nto ('something')			

'A person' has a class 1 prefix, *úmu-*, whereas 'people' has a class 2 prefix, *ábá-*. Both nouns have the

<sup>1</sup> There is no concrete characteristics.

same noun root, *-ntù*, with different prefixes. The same patterns can be observed for other combinations of odd-numbered and even-numbered classes except for class 14, 15 and 17.

**2.2** *Object Concord* When Zulu nouns are referred to with OCs, several patterns are observed: OCs are prefixed to a verb stem, and follow SCs. The data in Table 2 show the OCs, which were collected through the elicitation sessions<sup>2</sup> conducted by the author.

Table 2

Class	Referent (singular)	Object concord (singular)	Referent (plural)	Object concord (plural)
1/2	a person	mú	people	ǃá
	a boy	mú	boys	ǃá
1a/2a	a doctor	mú	doctors	ǃá
	a rhinoceros	wú	rhinoceroses	ǃá
3/4	a tree	wú	trees	ǃí
	a house	wú	houses	ǃí
5/6	a cat	lí	cats	wá
	a stone	lí	stones	wá
7/8	a worker	sí	workers	zí
	a seat	sí	seats	zí
9/10	a girl	ǃí	girls	zí
	an elephant	ǃí	elephants	zí
11/10	a tortoise	lú	tortoises	zí
	a stick	lú	sticks	zí
14	face	ǃú	a lot of faces	ǃú
	grass	ǃú	a lot of grass	ǃú
15	food	ǃú	a lot of food	ǃú
17	something	ǃú		

As shown in the table above, a pattern can be observed: the OC is the same within each noun class, except for class 1a. Although most OCs are different from ones of other noun classes, some classes have the same OC. For example, both class 8 and class 10 have *zí*.

The generalization of OC for each noun class is shown in Table 3:

Table 3

Class	Object concord (singular)	Object concord (plural)
1/2	mú	ǃá
1a/2a	mú/wú	ǃá
3/4	wú	ǃí
5/6	lí	wá
7/8	sí	zí
9/10	ǃí	zí
11/10	lú	zí
14	ǃú	ǃú
15	ǃú	ǃú
17	ǃú	

The only exception would be ‘a doctor’ in class 1a, as it has the same OC of class 1 while other nouns do not. This may be because most [+human] nouns have *mú* as their singular OC, and ‘a doctor’ refers to a human being. However, there are nouns such as ‘a worker’ in class 7 and ‘a girl’ in class 9, whose referents are human beings, but have other OCs. The reasons for having [+human] nouns not only in class 1 but in

<sup>2</sup> The detail of elicitation sessions will be given in Section 3.

other classes are unknown. This difference suggests that [+human] nouns do not always have *mú*.

**2.3 Noun class** Zulu nouns are generally prefixed by an appropriate class marker. Nouns in different noun classes have distinctive prefixes. This indicates that prefixes determine which noun class a noun belongs to. Moreover, subject and object concords must agree with the nouns that they refer to in class (Poulos and Bosch 1997). An example of Zulu, which shows the agreement of nouns and concords, is shown below:

- (5) Abe-lungu                      ba-ya-si-thanda  
       c2.prefix-the white men    c2.SC-PRS-c7.OC-like  
       ‘The white men like it (hospital).’

*Abe-lungu* means ‘the white men’, which is the plural form of *um-lungu* (‘a white man’). Since it is a class 2 noun, class 2 subject concord (SC), *ba-*, is prefixed to the verb. Also, the referent in this sentence is a class 7 noun, *isi-bhedlela* (‘a hospital’), so its OC is *si-*, which is one for class 7 (Nyembezi 1972). The concords attached to the verb are required to show agreement with the referents.

Moreover, each class has a different OC, as it was explained in 2.2. This indicates that the noun class and OC may be tightly bonded with each other, so noun class can be considered important in Zulu, especially when forming concords. Thus, noun class may be a factor in determining the form of CPOC.

**2.4 Animacy hierarchy** Animacy plays an important role in many languages. It can be defined with three different scales; human, animate and inanimate. Aissen (2002) suggests scales in which higher ranked direct objects are more likely to be case-marked whereas lower ones are not necessarily case-marked. The importance of the scales differs from language to language; in Sinhalese, direct objects high in animacy hierarchy are case-marked, while in Hebrew, direct objects are case-marked when they are high in definiteness hierarchy.

The following is the animacy scale:

- (6) Human > Animate > Inanimate

Human related ([+human]) nouns belong to the “human” end of the scale. The referents of animated nouns are alive and sentient, and [+human] nouns are not included in here. Inanimate nouns include all the other nouns such as objects and plants.

Animacy hierarchy may be a factor for CPOC because plural subject markers are dependent on animacy in one of the Bantu languages, Sesotho. De Vos and Mitchley (2012) observe that in Sesotho, subject markers of [+HUMAN] nouns are *ba-* whereas [-HUMAN] ones are *di-*, and [+HUMAN] and [-HUMAN] nouns can never be conjoined in this language. Thus, animacy hierarchy can be a factor which determines CPOC in Zulu as well.

**2.5 Predictions** Assuming noun class as a factor to determine the form of CPOC, it of conjoined distinctive singular nouns from the same class would be the OC of their plural counterpart. For instance, *úmùtì* (‘a tree’) and *úmùzi* (‘a house’) are class 3 nouns, so the OC would be the plural counterpart of class 3, which is class 4. Also, the OC of conjoined singular nouns from different classes may be unpredictable since there are several possibilities. Specifically, when a class 5 noun and a class 7 noun are conjoined, the OC that refers to them could be the one for class 5 or 7, or an entirely different one.

In contrast, when supposing animacy hierarchy as the determining factor of the CPOC form, combinations of the same and different animacies may display distinctive behaviors when they are referred to as a CPOC. For example, when nouns from the class 3 are conjoined, they would have the same form of CPOC as the one for class 5 nouns, as long as they have the same animacy.

Another prediction would be that class 5 and class 7 nouns can be conjoined when they share the same animacy, [+human] or [-human]. In other words, a [+human] class 5 noun cannot be conjoined with a [-human] class 7 noun. In general, it may be the case that [+human] nouns cannot be grouped with nouns which do not have a feature of humanness ([-human]) as in Sesotho (see 2.4).

### 3 Data

**3.1 Methodology** The Zulu data used in this paper were collected from a native speaker of Zulu, who volunteered to participate in elicitation sessions. The voluntary respondent was an exchange student from Republic of South Africa, who did not have any linguistic background. She is fluent in English, and could translate words or phrases from English to Zulu and the other way around. Moreover, she was capable of elaborating or providing relevant comments.

All of the sessions took place at International Christian University in Tokyo, and were conducted in English. The elicited data were recorded with a Marantz PMD-661 Solid State digital recorder, and the consultant wore a Shure WH30-XLR microphone.

During the sessions, the conductor asked the native consultant to say either ‘I see it.’ or ‘I see them.’, as the referents are changed each time. For example, the conductor asks “There are a woman and a girl walking down the street. How would you say ‘I see them.’?” and the consultant answers to the question. Simultaneously, the conductor transcribes the consultant’s answer to IPA

In this data section, no class 17 nouns are shown; while the translation of ‘something’, *uku-nto*, was stated as a class 17 noun in one of the grammar books, the word is no longer used, according to the native consultant. During the elicitation sessions, another word meaning ‘something’ commonly used by Zulu speakers was used instead. However, because it was not a class 17 noun, the conductor failed to elicit class 17 nouns.

**3.2 Conjoint Plural Object Concord** The OC of different nouns from same class display certain patterns, as shown in the following table:

Table 4

Class	Referent (English)	Referent (Zulu)	Sentence	Object concord
1	a boy	úmfànà	Ngì-já-bá-bóná.	bá
	a woman	úmfàzi	I-PRS-c2.OC-see ‘I see them.’	
1a	a doctor	údògòtèlā	Ngì-bóná ú-dókótèlā nó-bédzānè.	NA
	a rhinoceros	úbédzānè	I-see c1a.prefix-doctor and.c1a.prefix-rhinoceros ‘I see a doctor and a rhinoceros.’	
3	a doctor	údògòtèlā	Ngì-já-bá-bóná.	bá
	a nurse	únèsi	I-PRS-c2.OC-see ‘I see them.’	
3	a tree	úmùti	Ngì-já-ķú-bóná.	ķú
	a house	úmùti	I-PRS-c15.OC-see ‘I see them.’	
5	a stone	íts <sup>h</sup> è	Ngì-já-ķú-bóná.	ķú
	an egg	í!àndà	I-PRS-c15.OC-see ‘I see them.’	
7	a worker	ísísèbènzi	Ngì-bóná ísí-sèbènzi nésí-ts <sup>h</sup> à.	NA
	a dish	ísíts <sup>h</sup> à	I-see c7.prefix-worker and.c7.prefix-dish ‘I see a worker and a dish.’	
9	a seat	ísí!àlò	Ngì-já-ķú-bóná.	ķú
	a dish	ísíts <sup>h</sup> à	I-PRS-c15.OC-see ‘I see them.’	
9	an elephant	índzòβù	Ngì-já-ķú-bóná.	ķú
	a goat	ímbùzi	I-PRS-c15.OC-see ‘I see them.’	
11	a tortoise	úfùdù	Ngì-já-ķú-bóná.	ķú
	a stick	úts <sup>h</sup> ì	I-PRS-c15.OC-see ‘I see them.’	

There are two patterns of OCs observed. Conjoined class 1 nouns and the second pair of 1a use *bá*, whose form is the same as class 2 OC. In the meantime, all the other nouns except for the first pair of class 7 are referred to with *ķú*, which is the same as class 15 OC. The first pairs for class 1a and 7 have no OC, as OC cannot be formed for these cases.

OC of nouns from different classes are elicited as in table Table 5:

Table 5

Class	English	Zulu	Sentence	Object concord
1 + 3	a person, a tree	úmúntù, úmùti	Ngi-bóná úmú-ntù nómù-ti. I-see c1.prefix-person and.c3.prefix-tree 'I see a person and a tree.'	NA
1 + 5	a person, a cat	úmúntù, ik'ati	Ngi-bóná úmú-ntù né-k'ati. I-see c1.prefix-person and.c5.prefix-cat 'I see a person and a cat.'	NA
1 + 7	a person, a worker	úmúntù, ísísèbènzì	Ngi-já-bá-bóná. I-PRS-c2.OC-see 'I see them.'	bá
3 + 5	a tree, a cat	úmùti, ik'ati	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
3 + 7	a tree, a house	úmùti, úmùzi	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
3 + 14	a tree, grass	úmùti, úts <sup>h</sup> áni	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
3 + 15	a tree, food	úmùti, úgúndķà	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
5 + 7	a cat, a seat	ik'ati, ísílalò	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
5 + 14	a cat, grass	ik'ati, úts <sup>h</sup> áni	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
5 + 15	a cat, food	ik'ati, úgúndķà	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
7 + 14	a dish, beer	ísíts <sup>h</sup> à, úts <sup>h</sup> wàlà	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
7 + 15	a dish, food	ísíts <sup>h</sup> à, úgúndķà	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
14 * 15	beer, food	úts <sup>h</sup> wàlà, úgúndķà	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú

The results show the same two patterns, as the two nouns from the same class are conjoined like in Table 3. The exceptions are the first two rows where OC cannot be formed. *bá* and *ķú* were the two OC observed in Table 3. The reason for not eliciting 1 + 14 and 1 + 15 is because it was observed that class 1, which consists mostly of [+human] nouns, do not form an OC when conjoined with [-human].

The following table is identical with Table 4, except animacy hierarchy is written for each combination.

Table 4'

Combination	English	Zulu	Sentence	Object concord
<b>human + human (Class 1)</b>	a boy a woman	úmfānà úmfāzi	Ngi-já-bá-bóná. I-PRS-c2.OC-see 'I see them.'	bá
<b>human + animal (Class 1a)</b>	a doctor a rhinoceros	údògòtèlā úbédzānè	Ngi-bóná ú-dókótélā nó-bédzānè. I-see c1a.prefix-doctor and.c1a.prefix-rhinoceros 'I see a doctor and a rhinoceros.'	NA
<b>human + human (Class 1a)</b>	a doctor a nurse	údògòtèlā únèsi	Ngi-já-bá-bóná. I-PRS-c2.OC-see 'I see them.'	bá
<b>object + object (Class 3)</b>	a tree a house	úmùti úmùzi	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
<b>object + object (Class 5)</b>	a stone an egg	íts <sup>hè</sup> í!āndā	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
<b>human + object (Class 7)</b>	a worker a dish	ísísèbènzì ísíts <sup>hà</sup>	Ngi-bóná ísí-sèbènzì nésí-ts <sup>hà</sup> . I-see c7.prefix-worker and.c7.prefix-dish 'I see a worker and a dish.'	NA
<b>object + object (Class 7)</b>	a seat a dish	ísíłālò ísíts <sup>hà</sup>	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
<b>animal + animal (Class 9)</b>	an elephant a goat	índzòbù ímùzì	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú
<b>animal + object (Class 11)</b>	a tortoise a stick	úfùdù úts <sup>hì</sup>	Ngi-já-ķú-bóná. I-PRS-c15.OC-see 'I see them.'	ķú

As shown above, the reason class 1a and 7 nouns are not being able to form an OC would be animacy, as both cases have a human related noun and something else conjoined.

Table 6 consists of four different combinations, which are sorted by the level of animacy. The four combinations include human + human, animal + animal, animal + object, and object + object.

Table 6

Class	Combination	English	Zulu	Object concord
<b>1</b>	human + human	a boy, a woman	úmfānā, úmfāzi	bá
<b>1a</b>	human + human	a doctor, a nurse	údògòtèlā, únèsi	bá
	animal + animal	a rhino, a rabbit	úbédzānè, únóg <sup>w</sup> ādzā	ķú
	animal + object	a rhino, sugar	úbédzānè, úfùgèlā	ķú
	object + object	sugar, sweet potato	úfùgèlā, ubhatata	ķú
<b>3</b>	object + object	a tree, a house	úmùti, úmùzi	ķú
<b>5</b>	animal + animal	a cat, a mouse	ík'āti, ígú <sup>d</sup> ānè	ķú
	animal + object	a cat, an egg	ík'āti, í!āndā	ķú
	object + object	a stone, an egg	íts <sup>hè</sup> , í!āndā	ķú

7	human + human	a worker, a speaker	ísísèbènzì, ísík <sup>h</sup> ùlùmì	ǃá
	object + object	a seat, a dish	ísíǃàlò, ísíts <sup>h</sup> à	ǃú
9	human + human	a girl, a professional praiser	íntómbì, imbongi	ǃá
	animal + animal	an elephant, a goat	índǃòǃù, ímbùzì	ǃú
11	animal + animal	a tortoise, a butterfly	úfùdù, uvemvane	ǃú
	animal + object	a tortoise, a stick	úfùdù, úts <sup>h</sup> ì	ǃú
	object + object	a stick, a spoon	úts <sup>h</sup> ì, úk <sup>h</sup> ézò	ǃú

There are two OC observed, which are *ǃá* and *ǃú*. [+human] nouns are not grouped with [-human] ones as they cannot form OC.

The following table is identical to Table 5, but lists combinations for animacy:

Table 5'

Class	Animacy	English	Zulu	Sentence	Object concord
1 + 3	human + object	a person, a tree	úmúntù, úmùtì	Ngi-ǃóná úmú-ntù nómu-tì. I-see c1.prefix-person and.c3.prefix-tree 'I see a person and a tree.'	NA
1 + 5	human + animal	a person, a cat	úmúntù, ík'àtì	Ngi-ǃóná úmú-ntù né-k'àtì. I-see c1.prefix-person and.c5.prefix-cat 'I see a person and a cat.'	NA
1 + 7	human + human	a person, a worker	úmúntù, ísísèbènzì	Ngi-já-ǃá-ǃóná. I-PRS-c2.OC-see 'I see them.'	ǃá
3 + 5	object + animal	a tree, a cat	úmùtì, ík'àtì	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
3 + 7	object + object	a tree, a house	úmùtì, úmùzì	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
3 + 14	object + object	a tree, grass	úmùtì, úts <sup>h</sup> àní	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
3 + 15	object + object	a tree, food	úmùtì, úgúndǃà	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
5 + 7	animal + object	a cat, a seat	ík'àtì, ísíǃàlò	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
5 + 14	animal + object	a cat, grass	ík'àtì, úts <sup>h</sup> àní	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
5 + 15	animal + object	a cat, food	ík'àtì, úgúndǃà	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
7 + 14	object + object	a dish, beer	ísíts <sup>h</sup> à, úts <sup>h</sup> wàlà	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú
7 + 15	object + object	a dish, food	ísíts <sup>h</sup> à, úgúndǃà	Ngi-já-ǃú-ǃóná. I-PRS-c15.OC-see 'I see them.'	ǃú



<b>14 + 15</b>	object + object	beer, food	úts <sup>hw</sup> àlà, úgúndl̥à	Ngì-já-ǰú-bóná. I-PRS-c15.OC-see 'I see them.'	ǰú
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This table shows that the conjoined nouns from different classes form an OC in accordance to animacy hierarchy. The first two rows have [+human] and [-human] nouns conjoined, so OC cannot be formed. All the other nouns have combinations matching humanness, so OC is either *ǰá* or *ǰú*. Although most [+human] nouns are from class 1 and 2, class 7 and 9 include some as well. The conjoined class 1 and class 7 nouns represented in the table above form *ǰá*, which is the OC for [+human] nouns.

Based on the results of the elicitation sessions, the OC in Zulu can be generalized as follows:

Table 7

Combination of nouns	Object concord
<b>human + human</b>	<i>ǰá</i>
<b>animal + animal, animal + object, object + object</b>	<i>ǰú</i>
<b>human + animal, human + object</b>	NA

The combination of [+human] nouns uses *ǰá* as the OC while the combinations of [-human] nouns use *ǰú*. When [+human] is conjoined with [-human], they cannot be referred to with an OC.

When [+human] and [-human] nouns are referred to, OC CPOC cannot be formed but full noun phrases are used as in the following examples:

## (7) Human + Animal

- i. Ngì-bóná úmú-ntù nén-dǰòǰù.  
I-see c1.prefix-person and.c9.prefix-elephant  
'I see the person and the elephant.'
- ii. Ngì-ja-mú-bóná nén-dǰòǰù.  
I-PRS-c1.OC-see and.c9.prefix-elephant  
'I see him/her and the elephant.'
- iii. Ngì-ja-jí-bóná nómú-ntù.  
I-PRS-c9.OC-see and.c1.prefix-person  
'I see it and the person.'

## (8) Human + Object

- i. Ngì-bóná-úmú-ntù nésí-làlò.  
I-see-c1.prefix-person and.c7.prefix-chair  
'I see the person and the chair.'
- ii. Ngì-ja-mú-bóná nésí-làlò.  
I-PRS-c1.OC-see and.c7.prefix-chair  
'I see him/her and the chair.'
- iii. Ngì-ja-sí-bóná nómú-ntù.  
I-PRS-c7.OC-see and.c1.prefix-person  
'I see it and the person.'

One of the ways to refer to [+human] and [-human] nouns is to repeat the nouns as in (i). Another one is to say the pronoun of [+human] noun and repeat the animal or object as in (ii). The third way is to say the pronoun of [-human] nouns and repeat the [+human] noun as in (iii).

## 4 Discussion

**4.1** *Factor for Conjoint Plural Object Concord* Two predictions were postulated in section 2, assuming either noun class or animacy hierarchy as a possible factors of the form of CPOC. Based on the data shown in Section 3, it could be concluded that animacy hierarchy determines CPOC in Zulu. Regardless of noun class, there are only two patterns of OC observed. *ǰá* appears for conjoined [+human] nouns, and *ǰú* for [-human] nouns.

If noun class was the determining factor, conjoined nouns from the same class would behave differently from conjoined nouns from different classes. In section 2.5, CPOC of two different class 3 nouns was predicted to be the OC of class 4, which is the plural counterpart of class 3. According to this prediction, OC of conjoined class 5 nouns may have the OC of class 6 as it is correspondent to class 5. ‘??’ indicates the predictive form.

$$\begin{aligned} ?? \text{ cl3} + \text{cl3} &= \text{cl4} \\ ?? \text{ cl5} + \text{cl5} &= \text{cl6} \end{aligned}$$

The results show that the CPOC is not their plural counterpart, but it is *ǀkú* in both cases.

$$\begin{aligned} \text{cl3} + \text{cl3} &= \text{ǀkú} \\ \text{cl5} + \text{cl5} &= \text{ǀkú} \end{aligned}$$

Furthermore, CPOC of a class 5 noun and a class 7 noun was predicted to have OC of class 5, class 7 or entirely different OC.

$$\begin{aligned} ?? \text{ cl5} + \text{cl7} &= \text{lí} \\ ?? \text{ cl5} + \text{cl7} &= \text{sí} \\ ?? \text{ cl5} + \text{cl7} &= \text{OC of another class} \end{aligned}$$

The elicited data prove that it is *ǀkú* when class 5 and 7 nouns are conjoined and referred to as a CPOC. Thus, it was not an OC of either class 5 or 7, but another one.

$$\text{cl5} + \text{cl7} = \text{ǀkú}$$

If animacy hierarchy was the determining factor, nouns with the same animacy would behave distinctively from nouns with different animacy. CPOC of class 3 nouns was predicted to be the same as the one for class 5 nouns, as long as all four nouns had the same animacy.

$$\begin{aligned} ?? \text{ cl3 [+human]} + \text{cl3 [+human]} &= \text{cl5 [+human]} + \text{cl5 [+human]} \\ ?? \text{ cl3 [-human]} + \text{cl3 [-human]} &= \text{cl5 [-human]} + \text{cl5 [-human]} \end{aligned}$$

As shown in Table 3, the CPOC is *ǀkú* for both pairs when all nouns are [-human].

$$\begin{aligned} \text{cl3 [-human]} + \text{cl3 [-human]} &= \text{ǀkú} \\ \text{cl5 [-human]} + \text{cl5 [-human]} &= \text{ǀkú} \\ \text{cl3 [-human]} + \text{cl5 [-human]} &= \text{cl5 [-human]} + \text{cl3 [-human]} \end{aligned}$$

In this case, since class 3 and class 5 do not consist of [+human] nouns, predictably, CPOC of [+human] nouns remains questionable. As most [+human] nouns belong to class 1, 1a, 2 and 2a, CPOC of [+human] nouns will be discussed with data of conjoined class 1 nouns and class 1a nouns. As long as they share the same animacy ([+human] in this case), it is predicted that CPOC of class 1 nouns and that of class 1a nouns may be the same.

$$?? \text{ cl1 [+human]} + \text{cl1 [+human]} = \text{cl1a [+human]} + \text{cl1a [+human]}$$

The results demonstrate that CPOC of [+human] class 1 nouns is *ǀá*, and the same CPOC is used for conjoined [+human] class 1a nouns. These examples indicate that animacy hierarchy determines the form of CPOC.

$$\begin{aligned} \text{cl1 [+human]} + \text{cl1 [+human]} &= \text{ǀá} \\ \text{cl1a [+human]} + \text{cl1a [+human]} &= \text{ǀá} \\ \text{cl1 [+human]} + \text{cl1a [+human]} &= \text{cl1a [+human]} + \text{cl1 [+human]} \end{aligned}$$

Additionally, section 2.5 predicts that CPOC of class 5 and 7 nouns can be formed if they share the

animacy. In other words, they cannot be referred to as a CPOC if they have different animacy.

?? *cl5 [+human] + cl7 [+human] = possible*

?? *cl5 [-human] + cl7 [-human] = possible*

?? *cl5 [+human] + cl7 [-human] = N/A*

?? *cl5 [-human] + cl7 [+human] = N/A*

The elicited data show that CPOC is *ǀkú* for class 5 and 7 nouns when they both are [-human].

*cl5 [-human] + cl7 [-human] = ǀkú*

Again, a question remains as to what happens with class 5 and 7 nouns when they are both [+human] and when they have different animacy from each other. Since the elicited data do not have all the combinations for class 5 and 7 nouns, other examples are used to discuss nouns from different classes with the same or different animacy.

?? *cl1 [+human] + cl7 [+human] = possible*

?? *cl1 [+human] + cl3 [-human] = N/A*

?? *cl5 [-human] + cl1 [+human] = N/A*

As in Table 4, CPOC of class 1 and 7 nouns with [+human] is *ǀá*. Moreover, OC for [+human] class 1 noun and [-human] class 3 noun as well as OC for [-human] class 5 noun and [+human] class 1 noun cannot be formed. These examples show that it is animacy hierarchy which determines the form of CPOC.

*cl1 [+human] + cl7 [+human] = ǀá*

*cl1 [+human] + cl3 [-human] = N/A*

*cl5 [-human] + cl1 [+human] = N/A*

To confirm that animacy hierarchy is the factor, nouns from the same class with different animacy should be discussed. The reason for this discussion is all the pairs of nouns with different animacy used in this section are from different noun class. Differences in noun class may have influenced the form of CPOC. Class 1a has [+human] and [-human] nouns, and the data show all combinations; [+human] + [+human], [-human] + [-human] and [+human] + [-human]. It is predictable that CPOC for nouns with different animacy cannot be formed based on the findings discussed above.

?? *cl1a [+human] + cl1a [-human] = N/A*

The results prove that CPOC of [+human] and [-human] nouns from class 1a cannot be formed.

*cl1a [+human] + cl1a [-human] = N/A*

Therefore, it is animacy hierarchy that determines the CPOC in Zulu.

## 4.2 Remaining issues

**4.2.1 Single respondent** Since all of the elicitations were conducted with a single respondent, other native speakers of Zulu may have different system of forming CPOC. De Vos and Mitchley (2012) mentions that the respondents used several strategies during their interviews, so there was no regular pattern observed, as each respondent uses a different subject agreement marker. Additionally, the respondent is a fluent speaker of English, which suggests that her language might have been influenced by English grammar. It is necessary to elicit data from more than one consultant in order to get more precise and accurate data.

**4.2.2 Order of Nouns** It may be the case that the order of nouns has an influence on formation of OC. Eight different orderings of ‘a boy’, ‘a woman’, ‘boys’ and ‘women’ were elicited in order to confirm whether noun order is influential.

Table 8

English	Zulu	Object concord
a boy, a woman	úmfànà, úmfàzi	ǃá
a woman, a boy	úmfàzi, úmfànà	ǃá
a boy, women	úmfànà, ábáfàzi	ǃá
women, a boy	ábáfàzi, úmfànà	ǃá
boys, a woman	ábáfànà, úmfàzi	ǃá
a woman, boys	úmfàzi, ábáfànà	ǃá
boys, women	ábáfànà, ábáfàzi	ǃá
women, boys	ábáfàzi, ábáfànà	ǃá

As shown in the examples above, the order of nouns is not a prominent factor as the OC remains the same. The problem, however, is that both of the nouns are [+human] nouns from the same noun class. Other nouns from different classes or animacy scales should have been elicited in order to have clearer results regarding the influence of word order. Word order influence on OC formation is an area to be explored in future research.

## 5 Conclusion

Lastly, the elicited data clearly show that animacy hierarchy is the determining factor for CPOC in Zulu. CPOC of [+human] nouns is *ǃá* and that of [-human] nouns is *ǃú* whereas it cannot be formed for [+human] and [-human] nouns as shown in (9), (10) and (11).

- (9) cl1 [+human] + cl1 [+human] = *ǃá*  
 cl1 [+human] + cl7 [+human] = *ǃá*  
 → [+human] + [+human] = *ǃá*
- (10) cl3 [-human] + cl3 [-human] = *ǃú*  
 cl5 [-human] + cl7 [-human] = *ǃú*  
 → [-human] + [-human] = *ǃú*
- (11) cl1a [+human] + cl1a [-human] = NA  
 cl1 [+human] + cl3 [-human] = NA  
 → [+human] + [-human] = NA

In all cases, noun class does not play a role as CPOC of nouns from the same class and different classes behave in the same way.

## 6 Appendix

Table 9 consists of some Zulu nouns with English translation on their left. The leftmost column indicates the noun class of each word. As shown, singular nouns belong to odd numbered classes while plural nouns are in even numbered ones.

Table 9

Class	English (singular)	Zulu (singular)	English (plural)	Zulu (plural)
1/2	a person	úmntù	people	ábántù
	a boy	úmfànà	boys	ábáfànà
1a/2a	a doctor	údògòtèlà	doctors	ódògòtèlà
	a rhinoceros	úbédzànè	rhinoceroses	óbédzànè
3/4	a tree	úmùti	trees	ímìti
	a house	úmùzi	houses	ímìzi
5/6	a cat	ík'àti	cats	ámák'àti
	a stone	íts'è	stones	ámáts'è
7/8	a worker	ísìsèbèzi	workers	ábásèbèzi
	a seat	ísìfàlò	seats	ízìfàlò
9/10	a girl	íntómbi	girls	ámántómbàzànè
	an elephant	índzòβù	elephants	ízìndzòβù

<b>11/10</b>	a tortoise	úfùdù	tortoises	ízímfùdù
	a stick	úts <sup>h</sup> i	sticks	ízít <sup>h</sup> i
<b>14</b>	face	úbúsò		
	grass	úts <sup>h</sup> áni		
<b>15</b>	food	úgúndlǎ		

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