

Observations on Double Object Construction in Luganda

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1. Introduction

There are different limits set by different languages as to the number of arguments a single verb may take. Double object construction is used here to refer to all verbs, derived or underived, that require two objects in syntax. Luganda, like many other Bantu languages, is one of the languages with an agglutinative verb structure head-marking that supports double object construction. These include applicative and causative constructions besides ditransitive verbs. These three verb construction are jointly analysed here because the grammatical relation of the arguments in the applicative and causative is largely predictable from the marking of arguments in the underived ditransitive verbs construction (Baker 1988).

This paper gives attention to unique features in Luganda grammatical relation-changing processes where the verb suffixes mark argument structure similar to or differently from other Bantu languages. It also explores the extent by which animacy hierarchy permits or restricts the order of objects in double object construction. I provide evidence that where there is an equal degree of animacy in objects, object NPs can take any position within the VP but the object that occupies a higher position is the Beneficiary or the Recipient and the Patient or Theme occupies the lower position.

Bantu languages normally obligatorily incorporate object pronouns on the verb whenever the primary object is deleted in double object constructions. I demonstrate that verb indexing of the primary object does not only require deleting of the primary object but also requires the primary object NP to optionally move out of its argument position to either the front or the adjunct position in Luganda. I also give evidence that when both the primary and secondary objects are indexed on the same verb, they are optionally deleted or moved or dislocated to the left. Data used here is drawn from ditransitive verbs, applicative and causative construction.

The work is presented in five sections. The section that follows this introduction is a brief overview of Luganda. I begin section two by looking at the object-verb agreement in double object construction and extend the discussion into another subsection where I discuss the relationship between animacy hierarchy and verb indexation in Luganda. In section three I consider the morphological properties of verbs under study and the syntax of sentences in which these verbs are used. Section four is dedicated to passivization in Luganda double object construction and the last section is the conclusion.

2. Luganda: A Brief Overview

Luganda belongs to the Bantu language subgroup of the Benue-Congo of the Niger-Congo language family. The unmarked word order is SVO with an option of having the object topicalised by fronting. Like other Bantu languages characterized by agglutination, Luganda has both prefixes and suffixes functional in nominal and verbal morphology. A very elaborate noun class system involves singular and plural patterns, agreement marking and patterns of pronominal reference. The verb comprises a verb root to which verb extensions are added to form the verb stem. These verb extensions affect the argument structure by determining the number of expressible nominal arguments the stem can

support. Prefixes that are added to the verb stem encode syntactically oriented information pertaining to agreement with subject and optionally with the object. Other information encoded may include negation and tense¹ as illustrated below:

NEG	SM	TM	OM	OM	ROOT	EXT	FV ²
Te	tu	li	ki	mu	kol	er	a
Not	we	GEN.FUT	it	her/him	work	for	Mood/Aspect

We shall not do it for him/her

Verbal extensions derive verbs that take two or more objects. So besides the traditional ditransitive verbs, many Luganda transitive as well as ditransitive verbs are very productive in deriving verbs that permit double object constructions. The lexical semantic properties of the elements that these verbs are composed of determine the ability of these verbs to be derived. The derived verbs that are under study are applicative and causative. Applicative are derived by affixing –er- or –ir- to the root³ for example *ku-kolera*, to work for, to make for, derived from *ku-kola* to work, to make, to do; *ku-limira*⁴ to dig for derived from *ku-lima* to dig. In Luganda when this derivational suffix –ir/-er is added to a transitive verb it does not only select a new order for its arguments but also introduces an extra argument. Causatives are derived by affixing –is- or –es- to the root for example *ku-lumisa*, to cause to bite (*incite*) derived from *ku-luma*, to bite, *ku-lemesa* to cause to fail (*hinder*) derived from *ku-lema* to fail.

2.1 Object-verb Agreement in Double Object Construction

2.1.1 Ditransitive

Baker (1988) argues that –pats- (give) is the only underived ditransitive in Chichewa. It takes two objects but the primary object is the only object that can trigger object agreement. The underived ditransitive verb in Luganda –kuw- (give) behaves differently from –pats- because either the primary or the secondary object or both can trigger agreement on the verb. This is illustrated below:

2. (a) Maama a-wa-dde taata ssente.
 Mother she.PRES-give-PERF⁵ father money
 ‘Mother has given father money’
- (b) Maama a-mu-wa-dde (taata) ssente.
 Mother she.PRES-him-give-PERF (father) money.
 ‘Mother has given him (father) money.’
- (c) Maama a-zi-wa-dde taata (ssente).
 Mother she.PRES-it-give-PERF father (money)
 Mother has given it father (money)
 ‘Mother has given it (money) to father.’
- (d) Maama a-zi-mu-wa-dde (taata, ssente)
 Mother she.PRES-it-him-give-PERF (father, money)
 ‘Mother has given it to him.’

It is also true to Luganda, as it is to some other Bantu languages that if the object is marked for agreement it may be optionally deleted or appear outside the VP. The NPs in the brackets in the above examples are outside the VP domain. As I will show in the proceeding sections, these loose NPs may

¹ The subject marker in most cases carries the tense features.

² Glossed as NEG- negation, SM- subject marker, TM- tense marker, GEN-FUT- General Future, OM- object marker, EXT- verb extension, FV- final vowel, PRES-Present Tense and PERF-Perfect Aspect.

³ The distribution of –er and –ir is phonologically motivated and I do not intend to discuss this in this paper.

⁴ It can also mean to dig around a plant or physically tall plants like banana trees or any tree-like plants, or weed

⁵ Glossed as PRES- Present Tense, APL-Applicative, CAUS-Causative, PERF-Perfect aspect, PASS-Passive.

optionally displace the lexical subject NP or occupy any pre-verbal position. However the option of SUBJ moving into lower positions, for instance into positions in the VP domain, the (Bresnan and Machombo's 1987) V-SUBJ-OBJ optional pattern is not allowed in Luganda.

2.1.2 *Applicative*

Verbs are derived by affixing either *-er-* or *-ir-* to the verb root. Like ditransitive, applicative require two objects and either or both objects can trigger agreement on the verb. The object indexed on the verb can optionally be deleted.

- (e) Peter a-kol-er-a taata keeki
Peter he.PRES-make-APL-FV father cake
'Peter made father a cake.'
- (f) Peter a-mu-kol-er-a (taata) keeki.
Peter he.PRES-him-make-APL-FV (father) cake
'Peter makes father a cake.'
- (g) Peter a-gi-kol-er-a taata (keeki).
Peter he.PRES-it-make-APL-FV father (cake)
'Peter made it (cake) for father.'
- (h) Peter a-gi-mu-kol-er-a (keeki, taata).
Peter he.PRES-it-him-make-APL.FV cake father).
'Peter is making it (cake) for him (father)'

There is no object-verb agreement between the objects and the verb in sentence 2 (e) and therefore the applicative obligatorily requires the two objects to be lexically present in the structure. There is agreement in sentences 2(f) and 2(g). The *-mu-* in 2(f) is the object marker for *taata*. Therefore *taata* is required to be deleted or appear outside the VP domain. In 2(h) there is agreement between both objects and the verb.

2.1.3 *Causatives*

When *-is-* or *-es-* is affixed to a verb root, the derived verb is causative and requires two objects. Either or both objects can trigger agreement on the verb and the object indexed on the verb can optionally be deleted or phonologically (not syntactically) occupy any position outside the VP.

- (i) Peter a-gi-koz-es-a taata (keeki)
Peter he.PRES-it-make-CAUS-FV father (cake)
'Peter makes father make it (a cake)'
- (j) Peter a-mu-koz-es-a keeki (taata)
Peter he.PRES-him-make-CAUS-FV cake (father)
'Peter makes him make a cake (father)'
- (k) Peter a-gi-mu-koz-es-a (keeki, taata)
Peter he.PRES-it-him-make-CAUS-FV (cake, father)
'Peter causes him to make it.'

There is agreement between *keeki* and the verb represented by *-gi-* in 2(i) and *-mu-* represents agreement between *taata* and the verb in 2(j). Both objects are indexed on the verb in sentence 2(k) and they are therefore rendered syntactically redundant in the structure.

2.2 Animacy Hierarchy and Verbal Indexation

Animacy plays the role in the ordering restrictions of post-verbal NPs of double object. Animate objects must be ordered before inanimate objects.

- (l) Maama a-wa-dde taata ssente
 Mother she.PRES-give-PERF father money
- (m) *Maama a-wa-dde ssente taata.
 Mother she.PRES-give-PERF money father
- (n) Kabaka a-wa-dde omusajja omukazi.
 King he.PRES-give-PERF man woman
- (o) Kabaka a-wa-dde omukazi omusajja.
 King he.PRES-give-PERF woman man

Sentence (b) above is not correct because a less animate NP has taken a position higher than an NP with higher animacy. In Luganda, like in many Bantu languages, objects with higher animacy appear immediately after the verb as the primary object. Where objects have the same degree of animacy and one object is the Recipient and the other the Patient, the Recipient has to occupy the primary object position. As illustrated in (c) and (d) above. Both ‘man’ and ‘woman’ have an equal degree of animacy so any of them can be a primary object depending on the intended meaning. If the ‘man’ is the Recipient then (c) is the appropriate sentence but in (d) ‘man’ is the Patient and the ‘woman’ is the Recipient.

According to Givón (1988), indexation is frequently of the primary object, that is, with the OBJ1 of ditransitive verbs instead of with the secondary object. Givón points out that the argument playing a semantic role of Recipient or Experiencer is almost always human while the argument playing a possessed item or physical object is almost always nonhuman. Thus primary-object indexation has the effect of allowing indexation of the object that is generally higher in animacy. Indexation is associated with high rank on the grammatical relations hierarchy and therefore indicates the level of salience of arguments.

I have already demonstrated that Luganda verb indexation is open to both primary and secondary object. What I should add here is that when indexation of both objects is permitted at the same time, the secondary, which is generally less in animacy, is obligatorily indexed first. This suggests that animacy hierarchy is only relevant to account for the ordering of argument categories in syntax but not in morphology in Luganda. I will illustrate this in the next section.

My argument on indexation of both objects in Luganda is that all arguments are central to the clause in Luganda and therefore highly topical. Evidence for this comes from examples below where all object arguments can be topicalised and when they do they trigger indexation. The choice of which object to topicalise is open and discourse dependent but the untopicalised argument would not index.

- (p) Maama taata a-mu-wa-dde ssente.
 Mother father he.PRES-her-give-PERF money
 ‘Mother has given father money’
- (q) Maama ssente a-zi-wa-dde taata
 Mother money she.PRES-it-give-PERF father
 ‘Mother has given money to father.’

3. Morphology vs Syntax

As I have already mentioned, the unmarked word order in Luganda is SVO. According to (Baker 2002) order of morphemes in a complex word reflects the natural syntactic embedding of the heads that correspond to those morphemes. Katamba (2001) seems to agree with Baker when he argues that Luganda's earlier word order was SOV. This is based on the fact that the order argument markers are indexed on the verb, especially when the object is topicalised, is that the object marker follows the subject marker but precedes the verb stem. Following this line of argument we can equally generalise that much as the canonical word order of double object construction is SVO₁O₂, the SO₂O₁V was historically the norm in double object construction in Luganda. Evidence for that assumption comes from the illustration in the sentences below:

3. (a) Kabaka a-wa-dde omusajja omukazi.
 King he.PRES-give-PERF man woman
 'The King has given a man a woman.'
- (b) Kabaka a-mu-mu-wa-dde.
 King he.PRES-her-him-give-PERF
 'The King has given her to him.'

3 (b) is derived from 3(a). The first -mu- marks agreement between *omukazi* and the verb and the second -mu- for *omusajja*. Luganda cannot allow the first object marker *mu* in 3(b) to be interpreted as *omusajja* because *omusajja* is closest to the verb and if that interpretation is permitted the two syntactic NPs have to swap over positions. Thus we can have.

- (c) Kabaka a-wa-dde omukazi omusajja.
 King he.PRES-give-PERF woman man
 'The King has given a woman a man'

This interpretation is only allowed where object NPs have equal animacy hierarchy. However unlike in English, where dative shift is allowed, such displacement of NPs in Luganda double construction would affect the meaning of the entire sentence. The NP that occupies the position closest to the verb has to be the Beneficiary or the Recipient.

- (d) Kabaka a-wa-dde omusajja ssente.
 King he.PRES-give-PERF man money
 'The King has given man money'
- (e) Kabaka a-zi-mu-wa-dde
 King he.PRES-it-him-PERF
 'The King has given it to him.'

3(e) above illustrates the fixed order of argument markers where we can have only one interpretation. We cannot have *ssente* occupying the position closest to the verb because *omusajja* has a higher animacy level than *ssente* therefore *omusajja* has to occupy the Obj1 position. Support for this restriction in ordering arguments in a verb comes from Baker's (1985) Mirror Principle which suggests that languages have to be consistent in the ordering of morphemes in a single word and that the ordering of morphemes reflects the properties of UG.

There appears to be no restriction on what object NP can be dislocated and what position it can occupy in Luganda. However that freedom does not affect the restriction to the ordering of arguments in the verb. This is in agreement with the (Bresnan & Mchombo 1995) Lexical Integrity Hypothesis which states that words are built out of different structural elements and by different principles of composition than syntactic phrases. According to this hypothesis morphological constituents of words are lexical (eg stems) and sublexical categories (eg affixes) while the syntactic constituents of phrases

have words as the minimal units; and the syntactic ordering principles do not apply to morphemic structures. As a result, the order of morphemes is fixed regardless of whether syntactic word order is free or not. This can be illustrated further with object topicalisation in the sentences below:

- (f) Ssente maama a-zi-wa-dde taata
 Money mother she.PRES-it-give-PERF father
 Money mother has given it father.
 'Mother has given it (money) to father.'
- (g) Taata maama ssente a-zi-mu-wa-dde⁶
 Father mother money she.PRES-it-him-give-PERF
 'Mother has given the money to father.'

We have seen in the above data that where both objects are topicalised the positions occupied by NPs do not affect the way these NPs are indexed on the verb, in what looks like a mismatch between the morphology and syntax in double object construction. As we have already seen, indexed NPs can optionally be deleted in (b) above and the result is a one word sentence like the one below:

- (h) A-zi-mu-wa-dde.
 She.PRES-it-him-give-PERF
 'She has given it to him.'

The ordering of pronominal prefixes in verbs that violates the Luganda verb template results into ungrammatical sentences like these below. The affixes for the arguments by themselves do not accurately indicate who is doing what to whom.

- (i) *Omusolo taata maama gu-mu-ya-we-er-a.
 Tax father mother it-him-she-give-APPL-FV
 *Tax father mother it she paid for him.
- (j) *Maama omusolo taata ya-mu-gu-we-era.
 Mother tax father she.PAST-him-it-give-APPL-FV
 *Mother tax father she paid him for it.

4. Passivisation in Luganda Double Object Construction

In some Bantu languages, ditransitive verbs can allow only the primary object to become the subject of the passive sentence. Kroeger (2004) uses these Chichewa data to illustrate this.

4. (a) Ngombe zi-na-pats-a mbuzi nsima.
 Cows they-PAST-give-ASP goats cornmeal
 'The cows gave the goats cornmeal'
- (b) Mbuzi zi-na-pats-iddwa nsima (ndi ngombe)
 Goats they-PAST-give-PASS-ASP cornmeal (by cows)
 'The goats were given cornmeal (by the cows)'
- (c) *Nsima i-na-pats-idw-a mbuzi (ndi ngombe)
 The cornmeal was given to the goats (by the cows)

⁶ This can sometimes be ambiguous because the Agent and Recipient belong to the same noun class. So it can equally be translated as Taata being the Agent and Maama the Recipient. In such a circumstance the right interpretation can only be got from the context of the discourse. Otherwise this ambiguity is not there when the Agent and Recipient belong to different noun classes.

The only reason why 4(c) above would be ungrammatical in Luganda is not because the secondary object has appeared as the subject of the passive but because the agent is optionally included in the sentence. As illustrated in the data below, Luganda allows either of the two objects to appear as subject in ditransitive verbs.

- (d) Maama a-were-ddw-a ssente.
 Mother she.PRES-give-PASS-FV money
 'Mother has been given money.'
- (e) Ssente zi-wereddwa maama.
 Money it.PRES-give-PASS.FV mother
 'The money has been given to mother'
- (f) *Ssente zi-were-ddw-a maama taata.
 Money it.PRES-give-PASS-FV mother father
 'Money has been given to mother (by father)'
- (g) *Maama a-were-ddw-a ssente taata.
 Mother she.PRES-give-PASS-FV money father
 'Mother has been given money by father'

The reason for the ungrammaticality of sentences 4(f) and 4(g) above is because Luganda does not allow the option of having the Agent in passive sentences in double object construction. The redundancy of the Agent can also be reflected in sentences 4(a) and 4(b) where the Agent is not indexed on the verb. If the information about the agent is required, however, a lexically objectless active sentence like below has to be added.

- (h) Ssente zi-wereddwa maama. (Taata y'a-zi-mu-wa-dde.)
 Money has been given to mother. (Father has given it to her.)
- (i) Maama a-wereddwa ssente. (Taata y'a-zi-mu-wa-dde.)
 Mother has received money. (Father has given it to her)

Although this paper is concerned with double object constructions in Luganda, before I extend the assumption I have made above any further I need to show that the agent is required in single object constructions (transitive verbs). However it may sometimes be optionally omitted if the information about the Agent is not necessary.

- (j) Embuzi e-tome-dde omusajja
 Goat it-PRES-knock-PERF man
 'The goat has knocked (butted) the man.'
- (k) Omusajja a-tome-ddw-a embuzi
 Man he-knock-PAS-FV goat
 'The man was knocked by the goat.'

The above illustration provides evidence that Agents are only allowed in passive construction of single object construction in Luganda but not permissible in double object construction in general.

We could equally sum up that while languages like English allow only the indirect object to be passivized in double object construction, Luganda allows both long and short passive operations in ditransitive, applicative and causative construction. Luganda permits both passive operations in double object construction. We observe similar effect in languages like Kinyarwanda. However, Luganda

differs from Kinyarwanda in that, as we have already noted, Agents are obligatorily absent in passive constructions in double object constructions and do not manifest any nominal agreement with the verb.

- (l) Taata a-lum-is-iza omusajja embwa.
 Father he.PRES-bite-CAUS man dog
 ‘Father caused the dog to bite the man’
- (m) Embwa e-rum-is-iddwa omusajja.
 Dog it.PRES-bite-CAUS-PASS-FV man
 ‘The dog has been incited to bite the man.’
- (n) Omusajja a-lum-is-iddw-a embwa.
 Man he.PRES-bite-CAUS-PASS-FV dog
 Lit: The man has been made to be bitten by the dog.

The above sentences would be unacceptable in Kinyarwanda because Kinyarwanda passive operations in causative constructions would require an Agent in overt syntax (Baker 1988, Bresnan & Moshi 1990).

- (o) Ibàrùwa i-ra -andik -ir-w-a umukoóbwa n’ùhuûgu.
 Letter SP-PR-write -APPL-PASS-ASP girl by boy
 ‘The letter is written for the girl by the boy.’
- (p) Umukoóbwa a -ra -andik-ir-w-a ibàrùwa n’ùhuûgu.
 Girl SP-PR-write-APPL-PASS-ASP letter by boy
 ‘The girl is having the letter written for her by the boy.’

5. Conclusion

The analysis made in this paper has highlighted some word order aspects of double object construction in Luganda. I have demonstrated that much as Luganda exhibits a high level of free word order, subject NPs are not allowed to occupy any position in the VP. It can be displaced by any NPs that have moved out of their internal VP positions but it cannot move into any position in the VP domain. I have also shown that either or both object NPs can be indexed on the verb and that an object that is indexed optionally occupies any position outside their internal argument positions. The restriction on the positions occupied by arguments in syntax as being different from the restrictions imposed on the way these arguments are represented in the morphological make up of the verb. There is less freedom in the morphology than in the syntax. I have used topicalisation to illustrate that these NPs can occupy any position left of the VP and that both object NPs can move to the left periphery at the same time and distribute themselves among other local NPs, for example the subject without affecting the ordering of pronominal prefixes in the verb. Where NPs have different levels of animacy, NPs with higher degrees of animacy appear as the primary object and where NPs have the same degree of animacy either NP can occupy the primary object position which is the position closer to the verb that governs it.

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