

A Constraint on Complements in Swahili*

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1. Introduction

In his article "Surface structure constraints in syntax", Perlmutter (1970) discusses a surface structure constraint on the order of clitic pronouns in Spanish. This constraint performs a filtering function in that sentences in which the clitics do not conform to the constraint are discarded as ungrammatical. This constraint applies to the output of the transformational component, and no transformations apply after the constraint filters out the ungrammatical sentences. In this paper I will argue that Swahili grammar also contains a surface structure constraint which serves to filter out ungrammatical sentences. It may be stated as:

- (1) *_{NP}[S] VP

I will also demonstrate that Swahili grammar contains three rules, Extraposition, Pseudo-Clefting, and Nominalization, which function to prevent surface structures with sentential subjects from being derived.

The following sentences illustrate the type of sentences with which this paper is concerned. The (a) sentences are ungrammatical in Swahili, and the (b) sentences, the result of the application of some rule to the (a) sentences, are grammatical.

- (2) a. *Kuwa alikuja ilinishangaza.
That he-came surprised-me.
'That he came surprised me.'
b. Ilinishangaza kuwa alikuja.
It-surprised-me that he-came.
'It surprised me that he came.'
- (3) a. *Kuwa kuwa nilimwona jana ni kweli
That that I-saw-him yesterday is true
iliwafura hisha.
made-them-happy.
'That that I saw him yesterday is true made
them happy.'
b. Iliwafurahisha kuwa ni kweli kuwa nilimwona
It-made-them-happy that is true that I-saw-him
jana.
yesterday.
'It made them happy that it is true that I saw
him yesterday.'

- (4) a. *Kuwa alikuja ilinishangaza.
That he-came surprised-me.
'That he came surprised me.'
- b. Lililonishangaza ni kuwa alikuja.
(The thing)-which-surprised-me is that he-came.
'What surprised me is that he came.'
- (5) a. *Kuwa alifika mapema ni vizuri.
That he-arrived early is good.
'That he arrived early is good.'
- b. Lililo zuri ni kuwa alifika
(The thing)-which-is good is that he-arrived
mapema.
early.
'What is good is that he arrived early.'
- (6) a. *Kuwa alikuja ilinishangaza.
That he-came surprised-me.
'That he came surprised me.'
- b. Kuja kwake kulinishangaza.
Coming his surprised-me.
'His coming surprised me.'
- (7) a. *Kuwa alisoma ilimsaidia.
That he-studied helped-him.
'That he studied helped him.'
- b. Kusoma kwake kulimsaidia.
Studying his helped-him.
'His studying helped him.'

In each case the (a) sentence contains a complement in subject position, and in the (b) sentence that complement has been eliminated from subject position. Thus, it appears that the ungrammaticality of the (a) sentences lies in the occurrence of the complements in subject position. As seen in (2), (4), and (6), this filtering process involves at least three rules, each of which can act independently to remove a complement from subject position, thus making the sentences grammatical.

2. Discussion of the rules

a. The first rule, Extraposition, can be shown to exist in Swahili by demonstrating its interaction with another rule, Passive, which is definitely in the grammar of Swahili. This will be shown from the underlying structure, Figure I, to which agreement has been applied and the kuwa complementizer inserted, presumably transformationally. Fulani has been chosen as the equivalent of the abstract agent 'someone' in English. If it were assumed that Extraposition preceded Passive, the result of the application of Extraposition on the S_1 cycle gives Figure II and sentence (8).

Figure I.

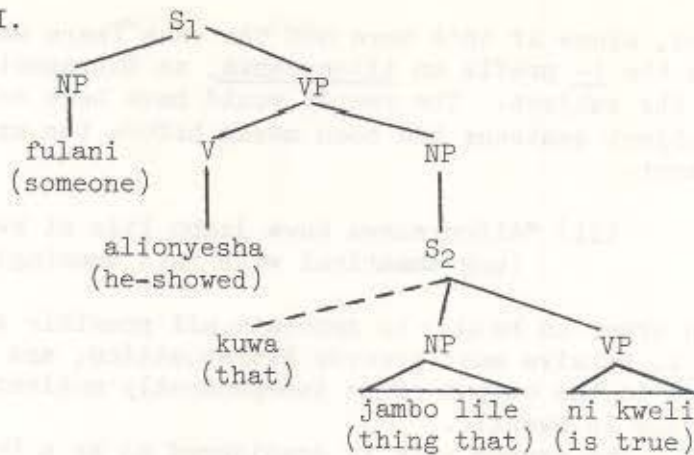
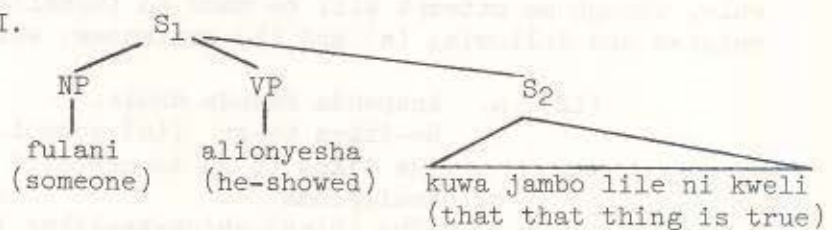


Figure II.



- (8) Fulani alionyesha kuwa jambo lile ni kweli.
 Someone showed that thing that is true.
 'Someone showed that that thing is true.'

Now, however, Passive cannot apply to this structure, as the NP which dominated S_2 is deleted with the application of Extrapolation. This would eliminate the derivation of a possible sentence from I, sentence (9).

- (9) Ilionyeshwa (na fulani) kuwa jambo lile ni kweli.
 It-was-shown (by someone) that thing that is true.
 'It was shown that that thing is true.'

This sentence could not be generated by the above ordering of Extrapolation and Passive. If, however, the order is reversed, this sentence results from Passive being applied first on S_1 , giving the ungrammatical (10).

- (10) *Kuwa jambo lile ni kweli ilionyeshwa (na fulani).
 That thing that is true was-shown (by someone).
 'That that thing is true was shown.'

Then Extrapolation applies, giving the desired (9).

- (9) Ilionyeshwa na fulani kuwa jambo lile ni kweli.

In the step preceding (10) an agreement transformation has applied, changing the subject prefix on the verb from a- to i-. Verbs with sentential subjects take the i- (Class 9) prefix. This agreement rule must apply each time the subject of a verb is

changed, since if this were not the case there would be no way to obtain the i- prefix on ilionyeshwa, as Extrapolation would have moved its subject. The result would have been sentence (11) if the subject sentence had been moved before the application of agreement.

- (11) *Alionyeshwa kuwa jambo lile ni kweli.
(ungrammatical with this meaning)

So, in order to be able to generate all possible sentences in Swahili, Passive must precede Extrapolation, and since Extrapolation applies to the output of an independently motivated rule, it must be a rule in Swahili.

b. The second rule is considered to be a Pseudo-Clefting rule, though no attempt will be made to formalize it. This rule relates the following (a) and (b) sentences, which are paraphrases.

- (12) a. Anapenda kwenda shule.
He-likes to-go (to) school.
'He likes to go to school.'
b. Analopenda ni kwenda shule.
(The thing)-which-he-likes is to-go (to) school.
'What he likes is to go to school.'
- (13) a. Kitabu changu ni kikubwa.
Book my is big.
'My book is big.'
b. Kilicho kikubwa ni kitabu changu.
(The thing)-which-is big is book my.
'What is big is my book.'

This rule must also follow Passive. Figure I on the preceding page is the underlying form from which this will be determined. Pseudo-Clefting may apply on S_2 giving Lililo kweli ni jambo lile, but it is the S_1 cycle that is important in this argument. If it were assumed that Pseudo-Clefting preceded Passive, the result of its application on S_1 gives

- (14) Aliloonyesha ni kuwa jambo lile ni
(The thing)-which he-showed is that thing that is
kweli.
true.
'What he showed is that that thing is true.'

Passive can no longer apply because the copula verb ni cannot be passivized. There is, however, a passive sentence derivable from the above structure. It is only possible to generate this sentence if the rule of Passive precedes the Pseudo-Clefting rule. Passive and agreement applied on S_1 results in (15):

- (15) *Kuwa jambo lile ni kweli ilionyeshwa na fulani.
That thing that is true was-shown by someone.
'That that thing is true was shown by someone.'

Now Pseudo-Clefting may apply, giving

- (16) Lililoonyeshwa ni kuwa jambo lile
 (The thing)-which-was-shown is that thing that
 ni kweli.
 is true.
 'What was shown is that that thing is true.'

Therefore, Pseudo-Clefting must follow Passive, and exist as a rule in Swahili.

c. The third rule, Nominalization, is different from the other two rules in that it is not a movement rule. It is also much more restricted than the others. This transformation changes a sentence to a verbal noun complex, which becomes a noun phrase, with the sentence node and thus the complementizer being deleted. A verbal noun complex consists of the nominalization of a verb to what is actually its infinitive form, followed by a possessive agreeing in number and person with the original subject noun. If this was not a pronoun, the possessive or the word meaning 'of', kuwa (agreeing with the verbal noun), will be followed by the original subject noun. This transformation is only possible with sentences that do not themselves embed a sentence, as it cannot occur where the subject noun phrase is complex. Also, nominalization cannot apply with the copula verb kuwa, nor the verb 'to have', kuwa na. Sentence (17) is ungrammatical in Swahili, though its equivalent in English is well-formed.

- (17) *Kuwa kwetu wanafunzi kulimshangaza.
 Being our students surprised-him.
 'Our being students surprised him.'

In Swahili, an equivalent sentence would have to be expressed in the following manner:

- (18) Ilimshangaza kuwa tulikuwa wanafunzi.
 It-surprised-him that we-were students.
 'It surprised him that we were students.'

To obtain this sentence, Extraposition has applied to the original structure.

It is possible to show that the result of Nominalization is a noun phrase and not a sentence; that is, that the sentence node deletes as a result of the application of the rule. First, Extraposition, which moves sentences, cannot apply to a sentence that has undergone Nominalization. Thus, (19) is ungrammatical.

- (19) *Ilinishangaza kuja kwake.
 It-surprised-me coming his.
 '*It surprised me his coming.'

Second, when these verbal noun complexes are in subject position, the subject prefix on the verb is ku-, agreeing with the noun

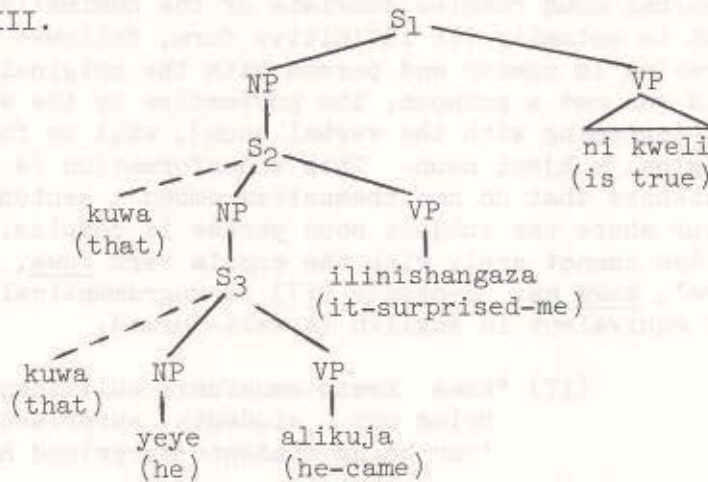
phrase, and not *i-*, which is the subject prefix used on verbs which have sentential subjects.

- (20) a. *Kupika kwake ilikuwa nzuri.
 Cooking his was good.
 'His cooking was good.'
 b. Kupika kwake kulikuwa kuzuri.
 Cooking his was good.
 'His cooking was good.'

3. Role of the rules in removing subject complements

It will be shown from Figure III how each of the rules acts to eliminate complements from subject position, thereby forming grammatical sentences.

Figure III.



With no transformations other than agreement and *kuwa* insertion applied to this structure, the sentence is ungrammatical, as predicted by (1).

- (21) *Kuwa kuwa alikuja ilinishangaza ni kweli.
 That that he-came surprised-me is true.
 'That that he came surprised me is true.'

First it will be shown how Extrapolation moves complements from subject position. Since Extrapolation moves embedded sentences, it cannot apply on the S_3 cycle. Moving to the S_2 cycle, its application there gives the ungrammatical (22).

- (22) *Kuwa ilinishangaza kuwa alikuja ni kweli.
 That it-surprised-me that he-came is true.
 'That it surprised me that he came is true.'

Also ungrammatical is the result of the application of Extrapolation only on the S_1 cycle.

- (23) *Ni kweli kuwa kuwa alikuja ilinishangaza.
 Is true that that he-came surprised-me.
 'It is true that that he came surprised me.'

Though the literal translations of the above sentences are grammatical in English, they are all ungrammatical in Swahili. The only possibility for producing a grammatical Swahili sentence from Figure III using only Extraposition is to apply that rule on both the S_2 and S_1 cycles. This gives

- (24) Ni kweli kuwa ilinishangaza kuwa alikuja.
 Is true that it-surprised-me that he-came.
 'It is true that it surprised me that he came.'

As in English, Extraposition in Swahili has the constraint that a sentence cannot be moved more than one sentence up to the right. Therefore, extraposition of S_3 to S_1 produces an ungrammatical sentence.

- (25) *Kuwa ilinishangaza ni kweli kuwa alikuja.
 That it-surprised-me is true that he-came.
 *'That it surprised me is true that he came.'

Similarly, if S_3 is extraposed to S_1 and then S_2 is moved to S_1 , the result is ungrammatical.

- (26) *Ni kweli kuwa alikuja kuwa ilinishangaza.
 Is true that he-came that it-surprised-me.
 *'It is true that he came that it surprised me.'

These sentences are all ungrammatical, except (24), because they violate the surface structure constraint. Only when all subject complements are extraposed do the sentences become grammatical.

Next it will be shown how Pseudo-Clefting works to remove subject complements. This rule applied to S_3 gives an unacceptable sentence.

- (27) ?Aliyekuja ni yeye.
 (He)-who-came is him.
 'He who came is him.'

This is probably because of the pronoun feature on the subject noun, as a similar sentence with a non-pronoun subject is acceptable.

- (28) a. Mwalimu alikuja.
 Teacher he-came.
 'The teacher came.'
 b. Aliyekuja ni mwalimu.
 (He)-who-came is teacher.
 'He who came is the teacher.'

Assuming that Pseudo-Clefting does not apply on S_3 , its application on S_2 gives

- (29) *Kuwa lililonishangaza ni kuwa
 That (the thing)-which-surprised-me is that
 alikuja ni kweli.
 he-came is true.
 'That what surprised me is that he came is true.'

Again, there is a complement in subject position causing the sentence to be ungrammatical. Pseudo-Clefting can now apply on S_1 giving

- (30) Lililo kweli ni kuwa lililonishangaza
 (The thing)-which-is-true is that (the thing)-
 ni kuwa alikuja.
 which-surprised-me is that he-came.
 'What is true is that what surprised me is that
 he came.'

The complement has been moved from subject to object position. The non-application of Pseudo-Clefting on S_2 would result in an ungrammatical sentence.

- (31) *Lililo kweli ni kuwa kuwa alikuja
 (The thing)-which-is true is that that he-came
 ilinishangaza.
 surprised-me.
 'What is true is that that he came surprised me.'

Pseudo-Clefting, then, applies to allow derivation of sentences which would otherwise be filtered out by the surface structure constraint.

Nominalization, as was seen in (6) and (7), removes the sentence node from subject position. Thus, this rule also acts as one of the rules that function to support the surface structure constraint.

4. Conclusion

It has been shown that Swahili grammar must contain a surface structure constraint, (1), which filters out sentences containing sentential subjects. It has also been shown that Swahili contains three rules, Extraposition, Pseudo-Clefting, and Nominalization, which function to remove sentences from subject position, allowing for the derivation of grammatical sentences which otherwise would be filtered out by the surface structure constraint. Since all sentences conforming to (1) are ungrammatical, this fact could be accounted for by making each of the three rules obligatory. However, the same fact can be stated simply by the constraint (1), and since this requires only one statement of this fact about Swahili, it is much more desirable in a grammar than a condition on three separate rules.

Footnote

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Reference

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