On the Omission of Agreement: the EPP and null constants
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1.0 THE PRO GENERALIZATION

The possibility in language for null arguments is thought to be correlated with the presence of `rich agreement` (Taraldsen, 1978).

(1) a. John eats an apple
b. * [e] eats an apple.

(2) a. Gianni mangia una mela.
b. [e] mangia una mela.

Rizzi (1986) argued that the null element in such clauses as (2b) is a silent pronominal called pro. Let us call this generalization the pro Generalization:

| The pro Generalization: null arguments are permitted when corresponding rich agreement is available. |

Outline:

- Swahili verbal complex
- Agreement or pronominal clitic?
- Swahili Null subjects as pro
- Recognized cases of SA omission: Habitual and Continuative
- [-SA] clauses
- Rizzi’s Null Constant

2.0 SWAHILI VERBAL COMPLEX

<table>
<thead>
<tr>
<th>Subject</th>
<th>Verbal Complex</th>
<th>Object</th>
</tr>
</thead>
<tbody>
<tr>
<td>Juma</td>
<td>a – na – m – pend - a</td>
<td>Mariam</td>
</tr>
<tr>
<td>Juma</td>
<td>SA3s-PRES- OA3s- like - IND</td>
<td>Mariam</td>
</tr>
<tr>
<td></td>
<td>'Juma likes Mariam'</td>
<td></td>
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<tr>
<td>S-V-O</td>
<td></td>
<td></td>
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</tbody>
</table>

(3) Juma    a - na - m - pend - a Mariam   S-V-O
Juma   SA3s-PRES- OA3s- like - IND Mariam
'Juma likes Mariam'

(4) SA – T – (OA) – Verb – FV
    a – na – m – pend – a
    Minimal Indicative
    Verbal Complex

(5) A - na - m - pend - a Mariam Null Subject
    SA3s- PRES- OA3s- like- IND Mariam
    'He likes Mariam'
2.1 Agreement versus Pronominal Clitic

There is currently a debate underway about whether SA in Swahili is agreement between the subject and the verb or whether it is a subject pronoun. In the former case, SA is agreement (in pre-minimalist terms, it is the head of AgrSP) and the subject is a true subject (i.e., a DP in the specifier of AgrSP). In the latter case, SA is the DP in the specifier of AgrSP, and the preverbal DP is in a higher topic position.

2.2 Null subjects in Swahili as pro

Swahili null subjects have many of the characteristics of pro in Italian that differentiate it from PRO. For example, both Swahili null subjects and Italian pro alternate with overt DPs:

(9) pro alternates with overt DPs (unlike PRO)

a. Juma/pro a – na – zungumz – a ki – zungu Swahili
   Juma/ pro SA3s–PRES–speak–IND 7–English
   ‘Juma/pro speaks English.’

b. Gianni / pro parl–a Inglese Italian
   Gianni/ pro speak–SA3s, English
   ‘Gianni / pro speaks English.’

Furthermore, in both languages null subjects are possible in matrix, finite clauses (unlike PRO, which only occurs in non-finite clauses):
(10)  *pro* occurs in matrix, finite clauses (unlike *PRO*)

a.  
   pro  a – na – zungumz – a  ki – zungu  
   SA3s – PRES – speak – IND  7 – English  
   ‘he/she speaks English.’

b.  
   pro  parl – a  Inglese  
   speak – SA3s  English  
   ‘he/she speaks English.’

Similarly, null subjects in Swahili and *pro* in Italian can both occur in finite embedded clauses (unlike *PRO*, which occurs in non-finite embedded clauses):

(11)  *Pro* occurs in embedded finite clauses

a.  
   ni – na – fikiri [kwamba pro  a – na – zungumz – a ki – zungu]  
   SA1s – PRES – think  that   SA3s – PRES – speak – IND  7 – English  
   1s 3s  
   ‘I think [that he/she speaks English].’

b.  
   Pens – o  [che pro parl – a  Inglese ]  
   think – SA1s  that   speak – SA3s  English  
   ‘I think [that he/she speaks English].’

I therefore conclude that null subjects in Swahili are *pro*.
(see Khamisi, 1988 for further evidence that *pro* in Swahili occurs in subject, object and indirect object positions).

### 3.0 SA OMISSION IN THE LITERATURE

Scotton (1969) describes a phenomenon in the dialects of Baganda and Baluhya speakers in the 1960s.

(12)  
   a.  
   mi      na – sem – a  ta–kuw–a  dereva   
   I 1s  
   ‘I am saying that I will be a driver.’     ‘I played ball.’

b.  
   li – chez – a  m – pila  
   ‘I am saying that I will be a driver.’     ‘I played ball.’

Similarly  Duran (1975) notes that Kipsigi speakers of Swahili allow SA omission (p.76), but no quantitative data are provided. So we do not know how prevalent this phenomenon is.

### 3.1 Well-described Agreement-less clauses

#### 3.1.1 Habituals

Agreement is obligatorily absent in Habitual clauses, cf. 13b, where the presence of SA renders the habitual sentence ungrammatical (examples from Keach, 1995):

(13)  
   a.  
   wa – tu wa Kenya   hu – wa – pend–a wa – toto  
   2-person of Kenya  HAB–OA2–like–IND  2–child  
   ‘People of Kenya like children’

b.  
   * wa–tu wa Kenya  wa – hu – wa – pend–a wa – toto  

Furthermore, as Keach (1995) reports, the subject in a habitual clause is obligatorily overt:

(14)  
   a.  
   ulevi                hu – ondo – a     akili  
   drunkenness HAB–remove–IND sense  
   ‘drunkenness removes common sense’
b. * hu – ondo – a akili
   HAB–remove–IND sense

Thus habituals are always [-SA], and always contain an overt subject. Additionally, they may occur in embedded clauses:

(15) a – li – ni – ambi–a [kwamba wa – tu wa Kenya
   SA₃s–PAST–OA₁s–tell–IND that 2-person of Kenya

hu – wa – pend–a wa – toto]
   HAB–OA₂–like–IND 2–child

‘He told me [that people of Kenya like children]’

3.1.2 Continuatives

The continuative construction is a regular ‘tensed’ clause that is used in narratives. Ka occurs in the same position that tense occupies; in complementary distribution with other tense markers. It is thus considered a regular tense in the traditional Swahili literature (see Ashton, 1947; Polomé, 1967).

(16) a. a – ka –kimbi–a na – o
   SA₃s–CONT–run–IND with–rel.
   ‘(And then) he ran off with them.’

b. * a – li – ka – kimbi – a
   SA₃s–PAST–CONT–run–IND

c. * a – ka – li – kimbi – a
   SA₃s–CONT–PAST–run–IND

A continuative clause usually takes SA like other tensed clauses, as in (17a) below. However, Ashton (1947) notes that the SA marker may be omitted in certain contexts (cf. 17b, where I have used Ø to indicate that SA has been omitted). She describes the resulting interpretation as expressing ‘some emotional quality like mild surprise’ (p.134):

   ‘He stole the children and he ran off with them.’

b. a – li – ib – a wa–toto Ø ka – kimbi–a na – o¹
   ‘He stole the children and actually ran off with them.’

Thus, continuative clauses may be either [+SA] or [-SA].

4.0 [-SA] Clauses

My data come from a naturalistic database Nairobi Swahili speakers. The subjects of the study were four Swahili-speaking children, but during the course of the project this phenomenon of SA

¹ The reference of rel is fixed through discourse. OA is not obligatory in this case because the verb kimbia ‘run’ is intransitive. Substituting a transitive verb in this position such as piga ‘hit’ yields obligatory OA.
omission became apparent. At that point I began focusing on the adults and trying to record non-child-directed speech. In addition to the naturalistic data, I provide evidence from native speaker judgments.

4.1 Frequency

Of the 1470 indicative verbal clauses coded, 72 (4.9%) are missing SA. Other underspecified clauses (clauses missing tense and clauses missing both tense and SA) account for a combined 1% of indicative clauses. The remaining 94% of indicative clauses are full clauses.

Table 5. Proportions of different clause types in adult Swahili.

<table>
<thead>
<tr>
<th>Full Clauses</th>
<th>[-SA] clauses</th>
<th>[-T] clauses</th>
<th>Bare Stems</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1380 (93.9%)</td>
<td>72 (4.9%)</td>
<td>14 (0.9%)</td>
<td>4 (0.3%)</td>
<td>1470</td>
</tr>
</tbody>
</table>

The Usual Suspects:
1. Phonological Drop
2. Null Agreement Prefix

The silent element in [-SA] clauses is syntactically active, as seen in the following [-SA] examples. In (18), the null subject is the antecedent to the reflexive prefix –ji-. In (19), the null subject is the controller for the embedded PRO.

(18) Ø na – ji – on – a
    PRES – REF. – see – IND
    ‘(I) see myself.’

(19) Ø i na – ju – a  PRO, ku – onge – a?
    PRES – know – IND  INF – speak – IND
    ‘Do (you) know how to speak?’

4.2 Temporal Specification

[-SA] clauses occur with a variety of tense markers:

(20) Ø na – tak – a  ch–ai?
    PRES–want–IND 7–tea
    ‘(Do you) want tea?’

(Present tense)

(Hamisi, HAW05)

(21) Ø ta – ku – chun – a
    FUT–OA₂₅ – pinch–IND
    ‘(I) will pinch you’

(Future tense)

(Mot, MUS10)
ile ni nini Ø me – lal – a pa – le ?
that is what PR.PERF – sleep – IND LOC – there (Present Perfect)

‘What is that that has slept over there?’
(lit: that is what has slept there?)

4.3 Implicit Reference
In [-SA] clauses in Swahili, there is no restriction on the implicit reference of the subject. Dropped SA markers can refer to 1st, 2nd and 3rd person referents:

(23) Ø ta – ku – chapa – a
    FUT–OA2s – slap–IND
    ‘(I) will slap you’

(Sam, MUS10)

(24) Ø na – ju – a ku–wach–a kelele ?
    PRES–know–IND INF–leave–IND noise
    ‘(Do you) know how to stop making noise?’

(Ala, MUS09)

(25) n–dege Ø na – ruk – a
    9-bird PRES–fly up–IND
    ‘The bird is flying up’

    SA3s–PAST t–OA1s–tell–IND that SA3s–CONT–run – IND
    ‘He told me that he then ran off’

    SA3s–PAST –OA1s–tell–IND that Ø –CONT – run – IND
    ‘He told me that (he) then ran off’

4.4. Embedding on [-SA] clauses
There is a dispreference for embedding [-SA] clauses:

4.5. Overt Subjects in [-SA] Clauses
Full clauses: Subject is overt 16.7% of the time (230 out of 1380)
[-SA] clauses: Subject is overt 40.3% of the time (29 out of 72).

My consultants consider this sentence ungrammatical. My judgment is somewhat less clear, but certainly degraded.
Our theory of identification predicts that null subjects should be completely absent in [-SA] clauses because of the absence of an identifier. However, null subjects are still the predominant form in [-SA] clauses – a fact that our theory of identification cannot account for. Below are examples of [-SA] clauses with overt subjects as well as with null subjects:

(27) a. wewe Ø ta–kul – a ch–akula? Overt Subject
    You FUT–eat–IND 7–food
    ‘Will you eat food?’

    b. ndege Ø na – ruk – a Overt Subject
       bird PRES–climb–IND
       ‘The bird is climbing.’

(28) a. ndio, Ø ta – i – beb – a Null Subject
    yes FUT–OA–carry–IND
    ‘Yes, (I) will carry it.’

    b. Ø na – tak – a ice Null Subject
       PRES – want–IND ice
       ‘Do (you) want ice?’

Questions:
- How is the EPP satisfied in a [-SA] clause, given that both agreement and an overt subject may be missing?
- What is the silent element in a [-SA] clause?
- How is identification accomplished in the absence of agreement?

5.0 ANALYSIS OF [-SA] CLAUSES

5.1 Silent elements in syntax: which one fits the [-SA] clause?

pro: no agreement, therefore no identifier.

PRO: PRO generally does not alternate with overt DPs:

(29) a. I entered the race [PRO/*Me feeling strong and confident]
    b. PRO/*John to win the race is important
    c. John tried [PRO/*John to win the race]

NP-trace: NP-trace also does not alternate with overt DPs:

(30) a. Johni seems [t, to have left]
    b. *John seems [he to have left]

Furthermore, NP-traces must be antecedent-bound in order to fulfill the ECP:

(31) a. Johni, I like [t]
    b. *I like [t]

We saw earlier that approximately 60% of [-SA] clauses have a null subject with no overt preverbal DP, and are thus not antecedent-bound:

(32) [t] ta –end–a koti–ni
    _____| fut–go–IND koti–loc
    no antecedent ‘(I) will go to court’
Wh-trace: wh-traces are variables, and can be bound by quantified antecedents. This is not possible with [-SA] clauses.


b. ??/∗ Wa – tu w–ote ∅ na – pig – a kelele 2-person 2-all PRES–hit–IND noise

This suggests that the null element in subject position is NOT a variable, and thus cannot be a wh-trace. Thus the silent element in a [-SA] clause is none of these.

5.2 Dismissing the Usual Suspects
Two possible analyses of agreement omission
- phonological drop
- zero agreement.

Both the Phonological drop hypothesis and the zero agreement hypothesis predict no syntactic differences between full clauses and [-SA] clauses

1. In [+SA] clauses, overt subjects can be quantified or not, but in [-SA] clauses overt subjects cannot be quantified.
2. A [+SA] clause can be the answer to a wh- question, but a [-SA] clause cannot.
3. [+SA] clauses can occur in embedded contexts, but [-SA] clauses cannot.

5.3 Mezzo Summary
Properties of [-SA] clauses
- SA omission is optional,
- Overt subjects alternate with null subjects,
- The silent element is syntactically active,
- All tenses and person specifications are possible,
- They cannot occur in embedded context,
- No quantified antecedent is possible,

5.4 Rizzi’s Null Constant
Properties (e-f) above are suspiciously like properties of topics. Rizzi (1992) proposes a topic construction in which an anaphoric topic operator binds a null constant (a new silent element). This nc is in subject position, satisfying the EPP. It obtains identification through a binding relation with the topic operator. Additionally, the nc provides a link for the discourse topic (via the operator) into the sentence.
The null constant is an element that Rizzi defines as:
- a definite description
- [–anaphoric, –pronominal]
- a non-variable
- an R-expression
(see also Lasnik & Stowell’s 1991 *null epithet*)

Rizzi claims that
...the licensing of null constants is not freely available, but is restricted to a designated kind of A’-binder, the anaphoric operator (an element inherently characterized as an operator but different from quantificational operators in that it does not assign a range to its bindee; rather, the anaphoric operator seeks for an antecedent, to which it connects its bindee); anaphoric operators are typically but not necessarily null.

The anaphoric operator is typically, but not necessarily, null. This accounts for the optionality of overt ‘subject’ in [-SA] clauses, if in fact this is the correct analysis. Thus what we see as subjects in [-SA] clauses are not subjects but the overt instantiation of the anaphoric topic operator.

5.5 Swahili NC
The analysis for Swahili [-SA] clauses that I propose is as follows:

(36) \[
\begin{array}{c}
\text{Discourse Topic} \\
\text{TopP} \\
\text{Operator} \\
\text{AgrSP} \\
\text{nc AgrS’} \\
\text{Ø TP} \\
\text{T’} \\
vP
\end{array}
\]

This accounts for all of the properties of [-SA] clauses in the following manner:

a. Subject can be overt or null  
   (The anaphoric topic operator can be optionally null or overt.)
b. Can occur with all tenses   
   (Tense is irrelevant to the topic construction described above.)
c. Cannot occur in embedded context  
   (Topics cannot be embedded as the left periphery is occupied.)
d. Subject cannot be a quantifier  
   (The null constant is a non-variable, and topics in general cannot be quantificational (Rizzi, 1997))
6.0 CONCLUDING REMARKS

Agreement may be omitted in Nairobi Swahili, resulting in [-SA] clauses. These clauses appear to violate the pro Generalization in that subjects occur in the absence of agreement (or any other identifier). This is permissible because the subject is not in fact pro, but another silent element: a null constant. The null constant is bound by an anaphoric topic operator, which occur optionally null. This is consistent with the fact that preverbal DPs in [-SA] clauses cannot be quantified, and that [-SA] clauses cannot occur as the answer to wh-questions or in embedded contexts.

REFERENCES