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COMPLEX SENTENCES IN AFRICAN LANGUAGES
A tentative typology of syntactic integration and its exponents

B. CARON

Descriptions of complex sentences in African languages generally focus on the presence/absence of conjunctions, whether co-ordinating or subordinating. When considering complex sentences without conjunctions, other elements are active in the integration of the dependent clause (D) into the matrix clause (M). The paper will present a list of the various processes used by African languages to mark subordination.

Introduction

Complex sentences can be defined as speech units (= intonation units) comprising two or more clauses, each clause containing a predicate and its arguments. Two types or complex sentences involve connection for the first type and translation for the second.

*Connection* is the type of relationship that links two or more clauses with an equal status in the intonation unit (co-ordination).

*Translation*\(^1\) is the type of relationship where a clause (D) is integrated into another (M) as an argument (complement clause), circumstance (circumstantial, conditional, final, etc. clauses) of the predicate or a complement of an NP (adjectival ~ relative clause). D is the dependent (or subordinate) clause and M is the matrix (or main clause). This paper will focus on the formal exponents of the various translation processes.

When dealing with formal exponents of dependency, one tends to focus on segments specialised in expressing subordination, and called *conjunctions* by traditional grammars. However, a good number of complex sentences (as defined *supra*) in African languages don’t have conjunctions. In such cases, dependency doesn’t rely on mere ‘semantic’ implications between the two clauses, but on other exponents generally overlooked. These are:

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\(^1\) LLACAN (Langage, Langues et Culture d’Afrique Noire), UMR 7594 (CNRS, Inalco, Paris7) - 7, rue Guy-Môquet 94801 VILLEJUIF Cedex France. caron@vjf.cnrs.fr

\(^1\) This approach is influenced by Tesnière’s syntax (Tesnière, 1959) which has given birth to dependency grammars.
• other segmental morphemes that have a primary grammatical function in the dependent clause, and only express dependency secondarily: predicate forms (finite and non-finite); non-verbal predicates; pronoun systems; noun determiners;
• lexical properties of the matrix verb (i.e. verbs with obligatory complements taking clausal complements)
• prosodic features

Before examining these exponents, we will see briefly the various types of conjunctive structures to be found in some African languages.

Conjunctions

If we look at the distribution patterns of conjunctive structures, the possibilities are : 

\[
\begin{array}{cccc}
I & \text{JDC MC} & II & (\text{MC DC}) \\
III & \text{DC JMC} & IV & \text{MC JDC} \\
V &\text{JDC JMC} & VI & (\text{MC JDC}) \\
\end{array}
\]

\( J = \text{conjunction} ; \ DC = \text{dependent clause} ; \ MC = \text{matrix clause}. \)

We have put in brackets the combinations that, to our knowledge, are not attested. Let’s exemplify those that are.

\( \text{JDC MC} \quad (I) \)

This structure seems to be is the most common (natural ?) one.

Zande temporal clauses :

1. \[
\begin{array}{cccc}
\text{wà} & \text{nì} & \text{nì.zákù} & \text{ga.nì} \\
\text{AS} & \text{he} & \text{X.untie} & \text{clothes} \\
\text{ròko'} & \text{tì} & \text{kpòtà.nù} \\
\text{on} & \text{skin.his} \\
\text{mò} & \text{ki.yù} & \text{kà.bù.nù} & \text{ki.nù} \\
\text{you} & \text{cons.come} & \text{to} & \text{cons.be} \\
\text{kìngbù} & \text{wèrè} & & \\
\text{nakedness.his} & \text{like that} \\\n\end{array}
\]

\([\text{As soon as}, \text{he removes his clothes}]_{\text{DC}, \text{you look at him and see he is beautiful naked} .}_{\text{MC}}\)

Hausa concessive clauses :

2. \[
\begin{array}{cccc}
\text{kùù} & \text{Audù} & \text{yaa} & \text{gàjù} \\
\text{EVEN IF} & \text{Audu} & \text{he-Perf} & \text{get tired} \\
\text{yà} & \text{kaaràsù} & \text{aikìnsù} & \\
\text{he-Future} & \text{finish} & \text{work-of-he} \\
\end{array}
\]

\([\text{Even if}, \text{Audu is tired}]_{\text{DC}, \text{he will finish his work} .}_{\text{MC}}\)

Banda causal clauses :

\[B. \text{CARON - ACAL32, Berkeley, 23-26 March 2001}\]
3. mātā cè sì lò ānà || cè ró ēcī nò
   AS he Perf.-be in walking | he Perf.-overtake in front it
[[Since], he is in a hurry]DC, [he went in front.]MC.

**DC 〉MC  (III)**

This structure is not frequent but is attested in Hausa temporal clauses:

4. Yanà shīgā, sai ya gàn tì
   he-Cont. Enter THEN he-Rel.Perf. see her
[[He was coming in]DC, [[when], he saw her.]MC.

**MC 〉DC  (IV)**

This structure is possible with Hausa temporal clauses.

5. Nā gànà aikī tun bà kà zō ba.
   I-Perf. Finish work WHILE Nég. you-Perf. Come Nég
[[I finished my work before you even came. Lit. :]]
[I finished my work]MC, [[while], you did not come.]DC.

**jDC 〉MC  (V)**

Bilateral structures are quite common in Hausa temporal clauses, and more precisely in narration.

6. dà mukà gābācè sù || sai sukà gudù.
   AS we-Rel.Perf. get near them THEN they-Rel.Perf. run
[[When], we approached them]DC, [[then], they ran away.]MC.

Bilateral structures are to be found in irrealis conditionals too, in Hausa

7. dà an tāmbāyè ni || dà nā yàrdà.
   IF one-Perf. ask me IF I-Perf. agree
[[If], they had asked me]DC, [[then], I would have agreed.]MC.

and in Zande

8. kà mò mì,ji,mùkò  arèmè, || kù mò dà gbà’tà yò.
   IF you X.kill.him today IF you arrive-XIV town-loc. Loc.
[[If], you had killed him]DC, [[then], you would go to town.]MC.

**Segmental morphemes with other grammatical functions**

**Predicate inflections**
**Finite forms**

**Aorist**

Some African languages possess a specific tense that appears only in dependent contexts. Its function is more or less equivalent to our 'subjunctive'. Such are the Hausa and Wolof Aorists. The presence of the Aorist in the second clause of the following Hausa examples is sufficient to produce a final dependent clause without the use of a conjunction:

9. \[
\begin{array}{l|l|l|l}
\text{nā} & \text{bā} & \text{shī} & \text{ruwā} \\
\text{I-Perf} & \text{give} & \text{him} & \text{water} \\
\text{yā} & \text{shā} & \text{he-AOR} & \text{drink} \\
\hline
\end{array}
\]

\[\text{[I have given him water]}_{MC}\ [\text{[for him to drink.]}_{DC}.\]

The essential function of the Aorist is to point at a deficit in referential value. The mood-aspect-tense determinations are not sufficient for the clause to have a proper referential value. In order for the clause to be a proper speech unit (French énoncé), it needs to be completed by another clause. Failing that, the predicate must get its extra determination from the interlocutor (command, question) or from “higher powers” (wish), without being able to refer to a complete, actual event.

**Relative tenses**

The so-called Chadic « relative tenses » are not the only cases of verb inflexions that, on top of the usual function of exponents of tense-aspect-mood, function as an exponent of the dependency of the predicate of the clause in which it appears, from a matrix clause. In some languages (i.e. Ubangian languages) they work as a sort of « dependent mood ». In Gbaya for example, out of the 19 finite forms, 6 are linked forms that only occur in dependent clauses. In some languages (i.e. South Bauchi Chadic languages), conditionals are not introduced by a conjunction but are merely marked by a specific inflexion of the verb in the dependent clause, that is by a « linked verb form ».Raymond Boyd summarised very well the properties of these linked forms (my translation):

- A linked form possesses a subject (whether actually present or optional), and a free choice of complements. It organises the terms of a complete clause.
- The clause comprising the linked form is not a complete speech unit; a complete speech unit can only be obtained through the adjunction of a second complementary clause.
- The linked form signals this relation of dependency from the complementary clause, without the help of subordinating functionals.

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1 For examples of the use of the Aorist in Wolof, see (Robert, 1996).
2 This link between incompleteness and question will be seen further down when we study Hausa intonation patterns.

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morphosyntax includes, in the form of an amalgam, a morpheme of dependency. (BOYD, 1995 : 22)

Non-finite forms
There is a whole range of non-finite forms (participles, gerunds, gerundives; infinitives) whose definition tends to be very much language-specific. However, the principle of a nominalised form being used in conjunction with dependency is constant.

Participles
In the following Bambarra\(^6\) dependent clause, the participle is the only exponent of dependency:

10. å dünne dâgu kîn tâsum fâgara.
he come-in-PARTICIPLE town into fire go-out-Perf.

[(When) he had entered the town]\(_{DC}\) [(the fire went out]\(_{MC}\).

Verbal nouns
In the following Hausa example, the verbal noun in the complement clause is suffixed with the genitive link (-n/-ř, glossed -OF in the examples) which suffixes only to nouns in Hausa, is an exponent of the non-finite state of the predicate.

11. ŋobutun wàsikà yanà dà ãmfàni.
WRITING-OF letter he-Cont. with usefulness

[Writing letters]\(_{DC}\) [is useful]\(_{MC}\).

Infinitives
Hausa infinitives\(^7\) are uninflected finite forms appearing in non-finite contexts (where verbal nouns can generally be substituted for them). Since they cannot be used in an autonomous clause, they are another exponent of dependency. In the following example the infinitive appears in the same context (final and complement subordinate clauses) as verbal nouns:

12. zuba dà ruwà â kàn hanyâ yanà dà ban haushì.
pouring out water on road he-Cont. with giving anger

[Throwing away water on the road]\(_{MC}\) [is a nuisance]\(_{DC}\).

Non-verbal predicative markers

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\(^6\) Gérard Dumestre, Bambara complex sentences, paper given to Llacan on 15/12/00.

\(^7\) Paul Newman (Newman 2000) coined this term to refer to what Claude Gouffé called “Formes Verbales libres” (Free Verbal Forms).
Conditional

We mentioned that in some Chadic languages, the conditional clauses were merely marked by a linked verb form. In Bambarra, the situation is the same except that what expresses the conditional is the predicative particle *mana*:

13.  

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>ã mana</em></td>
<td>he CONDITION</td>
</tr>
<tr>
<td><em>kun ã lá,</em></td>
<td>join him at</td>
</tr>
<tr>
<td><em>ã b'ã tà.</em></td>
<td>he-Cont. him stab</td>
</tr>
</tbody>
</table>

[If it reaches him]_{MC} [it stabs him (with its horn)]_{DC}.

Hausa ke nan (temporal clauses)

Hausa *kè nan* is a quasi synonym of the stabiliser *neɛɛ* and can be translated as “this is...”. It is used in the following sentences as a topic marker that enhances the ‘backgrounding’ of the temporal clauses. The predicates of the dependent temporal clauses can be finite (as in the first example) or non-finite (as in second one).

14.  

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>yà tãshi</em></td>
<td>he-Perf leave</td>
</tr>
<tr>
<td><em>yà fàra</em></td>
<td>he-Perf. Start</td>
</tr>
<tr>
<td><em>hawa ñan</em></td>
<td>riding IT IS</td>
</tr>
<tr>
<td><em>saì manómà</em></td>
<td>then farmers</td>
</tr>
<tr>
<td><em>sùkà</em></td>
<td>they-Rel.Perf. lift</td>
</tr>
<tr>
<td><em>tà dà</em></td>
<td>head</td>
</tr>
</tbody>
</table>

[He had hardly left and started riding]_{DC} [(when) the farmers lifted their head...]_{MC}.

15.  

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>zamansù</em></td>
<td>coming-of-them</td>
</tr>
<tr>
<td><em>kènan</em></td>
<td>IT IS</td>
</tr>
<tr>
<td><em>mukà</em></td>
<td>we-Rel.Perf. enter</td>
</tr>
<tr>
<td><em>shiga</em></td>
<td></td>
</tr>
</tbody>
</table>

[They had hardly sat down]_{DC} [(when) we entered.]_{MC}.

Noun determiners

In Bambarra, *mìŋ* is a deictic which determines the pivot noun in a relative clause. There is no relative pronoun per se; the only thing that constitute the relative clause are this noun determinant *mìŋ* and a resumptive pronoun in the matrix clause:

16.  

<table>
<thead>
<tr>
<th>Item</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>mùso</em></td>
<td>woman pos.perf.</td>
</tr>
<tr>
<td><em>jè</em></td>
<td>COW</td>
</tr>
<tr>
<td><em>mísì</em></td>
<td>THAT</td>
</tr>
<tr>
<td><em>‘mìŋ’</em></td>
<td>see</td>
</tr>
<tr>
<td><em>‘jè</em></td>
<td>lion pos.perf.</td>
</tr>
<tr>
<td><em>á</em></td>
<td>SHE</td>
</tr>
<tr>
<td><em>fàa</em></td>
<td>kill</td>
</tr>
</tbody>
</table>

The lion killed the cow that the woman had seen (lit. the woman saw the cow, the lion killed it).

Pronoun systems

pronoun shift in reported speech

In reported speech, the shift to 3rd person pronouns in reported speech is another exponent of the dependent status of the complement clause, as in the following Hausa example, where in the complement clause, the subject pronoun switches to *sù*, “they” instead of *kù*, “you pl.” expected in direct speech:

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8 NB: in this example, there is no conjunction in the two dependent clauses marked with *kè nan* but there is one *(saì)* in the matrix clause.

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Logophoric pronouns

More specific of African languages is the existence of logophoric pronouns showing that the author of the speech and that of the reported speech are the same person. In the process, the clause where a verb has a logophoric pronoun as a subject or a direct object is linked to the preceding clause. The following example is from Bijogo, a West-Atlantic language.

He told [her] she should take him [the jar] down [from his head] she said he should wait for her to finish washing the plates.

This example shows that logophoricity only works between a verb form and a previous independent form. When the previous verb form is dependent, a logophoric pronoun is not necessary to convey co-reference: (o-ne-jirimma) is dependent on the first one due to the presence of the object logophoric ne-. The third form subject is co-referent with the subject of the second form without the use of a logophoric pronoun because the second form is dependent. Likewise, the fourth form is dependent on the third one through the use of ne-. For the subject of the last verb form to be co-referent with the nearest preceding independent form (form #3), it must have a logophoric subject.

Lexical properties:

Valence structure of the matrix verb

Hausa verb forms do not show any exponent of tense, aspect or mood, but vary according to the verb class they belong to, and presence/absence of a direct object. This is most visible with grade 2 verbs (the so-called ‘mutable verbs’) whose final vowel is -i when pre-pausal, -e when followed by a pronominal object and -i in case of a nominal object. When a grade 2 verb is followed by a complement clause, it takes the pre-nominal form. In the following example, the complement clause à aiwataf musù dà hakà, “let them implement it for them” is not introduced by a complementizer and has no other exponent of its subordinate status than the form nêmi of the verb nêmâ, “look for”, which forces for the Aorist to be interpreted as a subjunctive (cf. supra).

[...]

 [...] well, let them look for it to be implemented for them.

---

9 The example was given and analysed by Guillaume Segerer in a paper given to Llacan on 28/4/2000.
For some verb classes, no sign of rection is visible, and only the position of the clause following the matrix verb makes a complement of it. In the following example, the verb *aminê*, “agree” can remain unchanged whether pre-pausal or followed by a complement. In this case, the complement clause is introduced by no complementizer or rection marker and the tense of its verb does not belong to the « dependent mood » paradigm.

In the following example, the verb *l'mbª*, "agree" can remain unchanged whether pre-pausal or followed by a complement. In this case, the complement clause is introduced by no complementizer or rection marker and the tense of its verb does not belong to the « dependent mood » paradigm.

If the matrix verb is in the Continuous, which is a non finite tense, it appears in a nominal form, and as a consequence, the dependency of the complement clause on the matrix verb can be marked by the suffixation of the genitive link `-n/-ř` on the predicate:

Portmanteau sentences

Another case where dependency is shown only by rection is that of portmanteau sentences, where an NP is both direct object of the matrix verb and subject of the dependent clause. This structure is commonly found in African language to form a subclass of relative clauses.

The two clauses sharing an NP can be represented like this – using the standard Hausa spelling:

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Intonation

Conjunctive intonation marks

In Bambarr, if a pause with a low tone is added between two clauses, these two clauses are integrated into a complex sentence. The same type of intonation phenomenon can be observed in Hausa impersonal completives, in relation with the intonation pattern of the antitopic (« afterthought »).

Antitopics and dependency

Hausa Impersonal completives

In this type of Hausa completives, the semantic subject of the impersonal (=empty subject) verb is a left-dislocated clause, which is not introduced by any complementizer.

<table>
<thead>
<tr>
<th>Neg.Perf.-he</th>
<th>be proper</th>
<th>Tanko</th>
<th>he-Aor</th>
<th>refuse</th>
<th>paying-of</th>
<th>taxes</th>
<th>Neg</th>
</tr>
</thead>
<tbody>
<tr>
<td>bài</td>
<td>kámātā</td>
<td>Tankò</td>
<td>yà</td>
<td>kì</td>
<td>biyàn</td>
<td>hùrājì</td>
<td>ba.</td>
</tr>
</tbody>
</table>

It is not good for Tanko to refuse to pay taxes.

The intonation pattern of this type of sentence is the same as that of sentences with an antitopic, where the same suspensive intonation separates the matrix (impersonal) clause from the complement clause, as it separates the rheme of the clause from the antitopic. This intonation pattern is characterized by a very sharp rising at the end of the first segment (matrix clause or rheme), followed by a pause which strongly breaks the general downdrift pattern of Hausa declarative sentences.10

Hausa antitopics

In the text of the examples illustrating antitopic structures in Hausa, the (right-dislocated) antitopic is separated by a comma from the rest of the sentence. This comma corresponds to the rising intonation and the pause (= suspensive intonation). The following example is taken from Newman (2000) :

---

10 Recordings of the examples were made and analysed with SIL Speech analyser. For technical reasons and lack of space, the acoustic data distributed at the conference could not be included in the final version of the paper.

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It is possible that he will buy the black one, the car.

Example (26) is a proverb:

She’s better than nothing, the grand mother on the father’s side.

The common intonation pattern shows that the real syntactic function of the complement clauses is ‘antitopic’, instead of the very unsatisfactory ‘semantic subject’ which is generally used for them.

Hausa topicalised sentences

The same suspensive intonation pattern (marked by a comma in the example) is generally observed between a topic and the following rheme:

We associate the suspensive intonation pattern with incompleteness. A parallel can be drawn again between incompleteness and question, since the suspensive intonation pattern closely resembles the final rising in yes/no questions. In both cases, what is at stake is incompleteness of determination.

Conclusion: semantic, discursive, pragmatic properties.

As we have seen, there is a relationship between the structure of complex sentences and the thematic structure of the speech unit.

Clauses at the onset of the speech unit function as thematic units. As the function of causal-temporal clauses is to set the background for the matrix clause, it is no surprise that it should appear before the matrix clause. If the order is changed, the result is an antitopic. Raymond Boyd [Boyd, 1995] states that for Zande causal-temporal clauses, the order MC DC is exceptional and functions as an « afterthought ».

It would not be a surprise if the intonation structure associated with the thematic functions of the speech units were used to convey the relationship between matrix and dependent clauses. A closer study of the intonation of complex sentences devoid of any apparent exponent of dependency would probably provide interesting clues, as in Banda bare conditional clauses:
29. \( \text{Îbèè kè gãqãq} \text{è\ yè\ mgà zè gàfù} \)

\[
\begin{array}{c}
\text{emph.}\quad \text{dur.-be strong} \\
\text{Perf.-put}\quad \text{friend-of}\quad \text{you}\quad \text{out}
\end{array}
\]

[If you are strong]_MO_ [you throw your friend out.]_DC_

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