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COMPLEX SENTENCES IN AFRICAN LANGUAGES

A tentative typology of syntactic integration and its exponents

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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 of 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 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 :

I	JDC MC	II	(JMC DC)
III	DC JMC	IV	MC JDC
V	JDC JMC	VI	(JMC JDC)

*J = conjunction ; DC = dependent clause ;
MC = matrix clause.*

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

JDC MC (I)

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

Zande temporal clauses :

1.	<i>wà</i> AS	<i>n̄j</i> he	<i>nì.zákí</i> X.untie	<i>ga.n̄j</i> of.him	<i>ròko'</i> clothes	<i>tí</i> on	<i>kpótò.n̄jì</i> skin.his
	<i>mò</i> you	<i>ki.ȳg</i> cons.come	<i>kà.b̄j.n̄j</i> to.see.him	<i>kyndiri.n̄j</i> nakedness.his	<i>ki.ngbà</i> cons.be beautiful	<i>wéré.</i> like that	

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

Hausa concessive clauses :

2.	<i>koo</i> EVEN IF	<i>Audù</i> Audu	<i>yaa</i> he-Perf	<i>gàji,</i> get tired	<i>yâ</i> he-Future	<i>kaaràsà</i> finish	<i>aikìnsà.</i> work-of-he
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[[Even if]_J Audu is tired]_{DC} [he will finish his work.]_{MC}.

Banda² causal clauses :

² Banda examples are from (Cloarec-Heiss, 1986).

3.

<i>mā̀tā̀</i>	<i>cè</i>	<i>só</i>	<i>lɔ́</i>	<i>áná</i>	<i>cè</i>	<i>ró</i>	<i>ēcī</i>	<i>nà</i>
AS	he	Perf.-be	in	walking	he	Perf.-overtake	in front	it

[[Since]_J he is in a hurry]_{DC} [he went in front.]_{MC}.

DC_JMC (III)

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

4.

<i>Yaná̀</i>	<i>shìgā̀,</i>	<i>sai</i>	<i>ya</i>	<i>gan</i>	<i>tà</i>
he-Cont.	Enter	THEN	he-Rel.Perf.	see	her

[He was coming in]_{DC} [[when]_J he saw her.]_{MC}.

MC_JDC (IV)

This structure is possible with Hausa temporal clauses.

5.

<i>Nā̀</i>	<i>gamà</i>	<i>aikī̀</i>	<i>tun</i>	<i>bà</i>	<i>kà</i>	<i>zō</i>	<i>ba.</i>
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]_J you did not come.]_{DC}.

JDC_JMC (V)

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

6.

<i>dā̀</i>	<i>mukà</i>	<i>gà̀bā̀cē</i>	<i>sù</i>	<i>sai</i>	<i>sukà</i>	<i>gudù.</i>
AS	we-Rel.Perf.	get near	them	THEN	they-Rel.Perf.	run

[[When]_J we approached them]_{DC} [[then]_J they ran away.]_{MC}.

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

7.

<i>dā̀</i>	<i>an</i>	<i>tà̀mbà̀yē</i>	<i>nì</i>	<i>dā̀</i>	<i>nā̀</i>	<i>yà̀r̀da.</i>
IF	one-Perf.	ask	me	IF	I-Perf.	agree

[[If]_J they had asked me]_{DC} [[then]_J I would have agreed.]_{MC}.

and in Zande

8.

<i>kà</i>	<i>mó</i>	<i>nì.jmí.kó</i>	<i>arèmè,</i>	<i>ká</i>	<i>mò</i>	<i>dà</i>	<i>gbá'tá</i>	<i>yó.</i>
IF	you	X.kill.him	today	IF	you	arrive-XIV	town-loc.	Loc.

[[If]_J you had killed him]_{DC} [[then]_J 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 Aorists³. 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.

<i>nā</i>	<i>bā</i>	<i>shì</i>	<i>ruwā</i>	<i>yà</i>	<i>shā</i>
I-Perf	give	him	water	he-AOR	drink

[I have given him water]_{MC} [(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 event⁴.

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 Gbaya⁵ 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. Its

³ For examples of the use of the Aorist in Wolof, see (Robert, 1996).

⁴ This link between incompleteness and question will be seen further down when we study Hausa intonation patterns.

⁵ Cf. Roulon-Doko, « Le gbaya », in (BOYD, 1995).

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 Bambarra⁶ dependent clause, the participle is the only exponent of dependency :

10.

<i>à</i>	<i>dònnen</i>	<i>dùgu</i>	<i>kónɔ</i>	<i>tásuma</i>	<i>fàgara.</i>
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/-r̄*, glossed -OF in the examples) which suffixes only to nouns in Hausa, is an exponent of the non-finite state of the predicate.

11.

<i>řùbùtun</i>	<i>wàsìkà</i>	<i>yanà</i>	<i>dà</i>	<i>àmfan̄.</i>
WRITING-OF	letter	he-Cont	with	usefulness

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

Infinitives

Hausa infinitives⁷ 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.

<i>zubař dà</i>	<i>ruwā</i>	<i>à kân</i>	<i>hanyā</i>	<i>yanà</i>	<i>dà</i>	<i>ban</i>	<i>haush̄.</i>
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

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.

<i>à</i>	<i>mana</i>	<i>kun</i>	<i>à</i>	<i>lá,</i>	<i>à</i>	<i>b'à</i>	<i>tù.</i>
he	CONDITION	join	him	at	he-Cont.	him	stab

[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 *nē/cē* 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.

<i>yā</i>	<i>tāshì</i>	<i>yā</i>	<i>fāra</i>	<i>hawā</i>	<i>kēnan</i>	<i>sai</i>	<i>manōmā</i>	<i>sukà</i>	<i>tā dà</i>	<i>kāi...</i>
he-Perf	leave	he-Perf.	Start	riding	IT IS	then	farmers	they-Rel.Perf.	lift	head

[He had hardly left and started riding]_{DC} [[when], the farmers lifted their head...]_{MC}.⁸

15.

<i>zamansù</i>	<i>kēnan</i>	<i>mukà</i>	<i>shìga.</i>
coming-of-them	IT IS	we-Rel.Perf.	enter

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

Noun determiners

In Bambarra, *míŋ* 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 *míŋ* and a resumptive pronoun in the matrix clause:

16.

<i>mùso</i>	<i>jé</i>	<i>mìsí</i>	<i>'míŋ</i>	<i>'jé</i>	<i>wàrá</i>	<i>j</i>	<i>á</i>	<i>fàa</i>
woman	pos.perf.	COW	THAT	see	lion	pos.perf.	SHE	kill

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 :

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

17.

<i>hākīmī</i>	<i>yâ</i>	<i>gàřgàdē</i>	<i>sù</i>	<i>cēwā</i>	<i>sù</i>	<i>biyā</i>	<i>hàřājìn</i>
chief	he-Fut	warn	them	that	they-Aor	pay	taxes

[The chief will warn them]_{MC} [[that they]_J should pay the taxes.]_{DC}.

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 language⁹

18.

<i>ɔ-ka-na</i>	<i>ɔ-nɛ-jirimma</i>	<i>ɔ-ka-na</i>	<i>ɔ-nɛ-tean</i>	<i>wa-ki-pij</i>
O-cons-say	O-LOG.obj-get down	O-cons-say	O-LOG.obj-wait	LOG.SUBJ-cons-cook

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 : (*ɔ-nɛ-jirimma*) is dependent on the first one due to the presence of the object logophoric *nɛ-*. 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 3rd one through the use of *nɛ-*. 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 *-ā* when pre-pausal, *-ē* 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 aiwatař 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 *nèmi* of the verb *nèmā*, “look for”, which forces for the Aorist to be interpreted as a subjunctive (cf. *supra*).

19.

<i>tô</i>	<i>sù</i>	<i>nèmi</i>	<i>à</i>	<i>aiwatař</i>	<i>musù</i>	<i>dà</i>	<i>hakà</i>
well	they-Aor	look for	4pl	implement	Dat-they	with	thus

[...] 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 **amìncē**, “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.

20.

[...]	<i>kàmař</i> like	<i>yaddà</i> way that	<i>tsarin</i> organisation	<i>mulkìn</i> power-Gen.Link
	<i>ƙasař</i> country-Gen.Link	<i>nàn</i> here	<i>yā</i> he-Perf	<i>amìncē</i> agree
	<i>anā</i> 4pl-Cont	<i>yî.</i> doing		

[... as] the government of this country has agreed for them to do (lit. has agreed they do).

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 :

21.

[...]	<i>àlummàř</i> community	<i>Musuluncî</i> Muslim	<i>sunā</i> they-Cont	<i>sôn</i> want-GEN.LINK	
<i>à</i> 4pl-Aor	<i>aivatař</i> implement	<i>musù</i> Dat-they	<i>dà</i> with	<i>shāřî'àř</i> justice	<i>Musuluncî.</i> Muslim

[...] the Muslim community want the Muslim law to be implemented for them.

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.

22.

[...]	<i>dòmìn</i> because	<i>yanā</i> he-Cont	<i>dà</i> with	<i>iyālî</i> family	<i>sunā</i> they-Cont	<i>zuwā</i> coming	<i>dàgà</i> from	<i>bāya.</i> back
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[...] because he has a family who will come later.

23.

[...]	<i>ya</i> he-Rel.Perf	<i>sāmu</i> meet	<i>mài</i> that of	<i>aikìn</i> work-Gen	<i>rāna</i> day	<i>yanā</i> he-Cont	<i>jirānsà</i> waiting-of-he	[...]
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[...] he met the night shift worker who was waiting for him [...]

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

M	<i>domin yana da</i>	<i>iyali</i>
D		<i>iyali suna zuwa daga baya</i>

M	<i>ya samu</i>	<i>mai aikin rana</i>	
D		<i>mai aikin rana</i>	<i>yana jiransa</i>

Intonation

Conjunctive intonation marks

In Bambarra, 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.

24.	<i>bàì</i> Neg.Perf.-he	<i>kàmā̀t̀à</i> be proper	<i>Tankò</i> Tanko	<i>yà</i> he-Aor	<i>ki</i> refuse	<i>biyàn</i> paying-of	<i>hà̀r̀ā̀j̀ì</i> taxes	<i>ba.</i> Neg
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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.

25. *wàtàkīlā zāi sàyi baƙàǎ, ita mōtāǎ.*
 may be Fut.-he buy black-Def. she car-Def.

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

Example (26) is a proverb :

26. *Tā hi bābù, kàkàǎ wajen ùbā.*
 she-Perf. exceed nothing grand-mother side-of father

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 :

27. *Audù (dai), yanà cîn nāmà kullun.*
 Audu (TOP) he-Cont. eating meat always

Audu, he keeps eating meat.

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 ».

28.

<i>kà m̀ ga.ngà ku a.Bààrà</i>	<i>yò té, m̀ kà.zàngá f̀yà.ỳà.</i>
if I leave.neg. at pl.Bahr	there neg. je XIV.miss behind.them

[I dont want to go with the people of Bahr]_{MC} [I will get nothing from them.]_{DC}

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.

<i>èbèè</i>	<i>kè</i>	<i>gbògbò</i>	<i>bè</i>	<i>zá</i>	<i>ngá</i>	<i>zè</i>	<i>gáfú</i>
you	emph.	dur.-be strong	you	Perf.-put	friend-of	you	out

[If you are strong]_{MC} [you throw your friend out.]_{DC}.

References

BOYD, Raymond (éd.) Le système verbal dans les langues oubanguiennes LINCOM EUROPA, 1995.

Cloarec-Heiss, France. Dynamique et équilibre d'une syntaxe : le banda-linda de Centrafrique, (vol 2). Paris - Cambridge : SELAF-CUP, 1986.

Frajzyngier, Zygmunt. Grammaticalization of the Complex Sentence. A case study in Chadic., (vol 32). Boulder : Boulder University, 1996

Gouffé, Claude. Notes de cours. 1979

Newman, Paul. The Hausa Language: An Encyclopedic Reference Grammar. New Haven, London : Yale University Press, 2000.

Robert, Stéphane. Aspect zéro et dépendance situationnelle: l'exemple du wolof. in Muller, C., Dépendance et intégration syntaxique (subordination, coordination, connexion). Tübingen : Niemeyer, 1996, p. 153-162.

Tesnière, Lucien. Eléments de syntaxe structurale. Paris : Klincksieck, 1959.