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Current issues in the morphosyntactic typology of Sub-Saharan languages

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1. Introduction

This paper does not aim at providing a general survey of morphosyntactic phenomena already signaled as particularly frequent or rare among Sub-Saharan languages, or showing a particular genetic or areal distribution in Sub-Saharan Africa. This has been already done in Creissels et al. (2008), and I do not systematically resume here the points discussed in Creissels et al. (2008) or others that have long been widely discussed elsewhere in the literature.

The present paper is conceived as an update. Important typological questions to which it has long been known that Sub-Saharan languages make a significant contribution (such as, among many others, serialization, pluractionality, logophoricity, or part-of-speech systems) are not necessarily dealt with, if it happens that I have nothing important to add to Creissels et al. 2008, or to other general surveys of African language structure. The idea here is rather to select topics on which recently published works shed some new light, or which I consider particularly promising on the basis of my own descriptive work on individual languages, or my participation in collective research projects.

The questions discussed in the following sections are grouped under the following five headings:

– Nouns and noun phrases (section 2)
– Argument structure and valency operations (section 3)
– Clause structure (section 4)
– Complex constructions (section 5)
– Information structure (section 6)

In the remainder of this text, when identifying the genetic affiliation of the languages I quote, I will in general limit myself to well-established genetic units, and avoid as far as possible reference to phyla whose delimitation is controversial (Niger-Congo, Nilo-Saharan) or for which there is now consensus that they do not constitute valid genetic units (Khoisan) – on this point, see Dimmendaal (2011: 307–331). When I happen to use "Niger-Congo," "Nilo-Saharan" or "Khoisan," these terms must be understood as abbreviations for 'the language families and language isolates that Greenberg grouped into the Niger-Congo/Nilo-Saharan/Khoisan phylum,' without any commitment to the genetic validity of the groupings in question.

2. Nouns and noun phrases

Several morphosyntactic mechanisms may contribute to making explicit the relationship between head nouns and their modifiers. Gender-number agreement of noun modifiers with their head is widespread among the languages of Sub-Saharan Africa (see section 2.1), and the indexation of genitival modifiers on their head (resulting in constructions such as lit. *the man his-car* for 'the car of the man') is well-attested too, but the languages of Sub-Saharan Africa also provide interesting data about two other possible strategies: a variety of the dependent marking strategy consisting in the systematic use of linkers in noun-modifier constructions (section 2.2), and a variety of the head-marking strategy consisting in the systematic use of a special "construct" form of the head noun (section 2.3). The following questions are also addressed in this section: the incorporation of attributive adjectives (section 2.4), dependency reversal in noun-attributive constructions (section 2.5), and the relationship between NP coordination and comitative adjunction (section 2.6).

2.1. Gender systems

A recent survey of gender systems in Sub-Saharan Africa (Di Garbo 2014) confirms the generalizations put forward by Creissels et al. (2008) about the two broad types of gender systems found in Sub-Saharan Africa: binary gender systems with the sex distinction as their semantic basis (*masculine* vs. *feminine*), found in all the branches of Afroasiatic, in several branches of Nilo-Saharan, and in several minor families or isolates, and so-called noun class systems (multiple gender systems in which biological gender plays no role), common across Niger-Congo, and found also in Kx'a and Tuu. In this section, I summarize some recent advances in the investigation of the gender systems of individual languages that are of interest for a general typology of gender systems.

2.1.1. Gender without semantic basis: the case of Uduk

Uduk has a binary gender system that according to Killian (2015: 67–68) is an exception to the commonly accepted generalization that systems of gender assignment always have some semantic core.

2.1.2. Gender and genericity

The term "generic" is used by linguists in two different meanings. It may refer to a hierarchy of nouns according to the greater or lesser extension of their lexical meaning (in this sense, *animal* is a generic (or superordinate) term in comparison with *dog*, *cat*, *lion*, etc.). But "generic" may also refer to the referential status of nouns in discourse. In this second meaning of generic, nouns are said to be used generically when they refer to kinds, as illustrated by *lion* and *human* in *Lions can be dangerous to humans* (as opposed for example to *The lions attacked the herd yesterday*, in which *lions* has specific reference). In this sense of generic, no noun is intrinsically generic, and generic reference can be carried by any common noun in appropriate contexts, irrespective of its status with respect to the hierarchical relationship of lexical meanings.

To the best of my knowledge, the possibility of a relationship between gender and the expression of generic reference (reference to kinds) has been discussed for the first time in the survey of Atlantic noun class systems edited by Konstantin Pozdniakov and myself (Creissels and Pozdniakov 2015).

A gender alternation expressing genericity in the sense of reference to kinds can be found in the noun class system of Fouta-Djalon Fula – but apparently not in other Fula varieties. The rule is that genericity is expressed by the combination of a zero suffix and the agreement pattern of class ON (which as a class lexically assigned to a subset of nouns is the human singular class):[1]

> In addition to the singular and plural noun forms, there is often a generic noun form that is neither singular nor plural. [...] The following table gives some examples of nouns with generic, singular, and plural forms:
>
> | SINGULAR | PLURAL | GENERIC | MEANING |
> |---|---|---|---|
> | *bareeru ndun* | *bareeji dîn* | *bare on* | 'dog' |
> | *biiniiri ndin* | *biiniije ɗen* | *biini on* | 'bottle' |
> | *otowal ngal* | *otoje ɗen* | *oto on* | 'car' |
> | *ñariiru ndun* | *ñariiji dîn* | *ñari on* | 'cat' |
> | *bareeru ndun* | *bareeji dîn* | *bare on* | 'dog' |
> | *saabiwal ngal* | *caabiije ɗen* | *saabi on* | 'key' |
> | *kotiraawo on* | *kotiraaɓe ɓen* | *koto on* | 'older brother' |
> | *leemunneere nden* | *leemunneeje ɗen* | *leemunne on* | 'orange' |
> | *bireediwal ngal* | *bireediije ɗen* | *bireedi on* | 'bread' |
>
> Often the generic form is the most commonly heard, and the singular is only used to emphasize that a single item is being referred to. The generic always takes the *on* article (*leemunne on*) regardless of the class of the singular (*leemunneere nden*). (Caudill and Diallo 2000: 25).

[1] In the examples provided in this extract from Caudill and Diallo (2000), noun forms are not segmented into a stem and a class suffix, but the forms in the third column are bare stems, and the agreement class to which noun forms belong is unambiguously indicated by the postposed article.

Among the languages whose noun class systems are described in Creissels and Pozdniakov (2015), Joola languages and Bijogo attest the possibility of another type of interaction between genericity in the sense of reference to kinds and noun class systems: in Joola languages and Bijogo, genericity conditions class agreement between subject nouns and subject indexes attached to verbs.

The way Bijogo uses class agreement to express generic reference is reminiscent of the French construction illustrated by *Les chiens, ça aboie* 'Dogs bark' (lit. 'The dogs it barks'), where a plural masculine noun is resumed by the neuter singular index *ça*, typically used to express vague reference. In Bijogo, vague reference is expressed by class ƊO, which not surprisingly includes *ŋoo* 'thing' as one of its members, and as illustrated in (1), one of the possible functions of the subject index of class ƊO is to indicate that a noun belonging to another class and fulfilling the subject function must not be understood as referring to an individual, but to a kind.

(1) Bijogo

a. *Kɔ-kpɛñ* *kɔ-tɔnɔŋ.*
CLko-silk_cotton_tree CLko.CPL-be_tall
'The silk cotton tree is tall.'
(deictic or anaphoric reference to an individual)

b. *Kɔ-kpɛñ* *ŋɔ-tɔnɔŋ.*
CLko-silk_cotton_tree CLŋo.CPL-be_tall
'Silk cotton trees are tall.'
(reference to kind)

(Segerer 2002: 109 and pers. com.)

The way Joola languages use class agreement to specify that a noun in subject function refers to the kind rather than to an individual is more surprising, at least at first sight. In Joola languages, when singular nouns that do not denote humans are used in subject function with specific reference, they can only be indexed on the verb by means of the index corresponding to their class prefix. When they carry generic reference, it is still possible to have morphological agreement (in which case there is no overt indication that the subject noun must be understood as generic), but it is also possible to cross-reference them by the human singular index, and this deviation from morphological agreement can only be interpreted as indicating that the subject noun does not refer to an individual, but to a kind. This construction, illustrated in (2), is particularly common in proverbs.

(2) Banjal

Fu-kun *ɪndɪ* *a-bʊgɔr* *ga-pɔrɔk.*
CLfu-fish_sp HAB.NEG CLa-beget CLga-fish_sp
'Fúkun fishes do not beget gaporok fishes.'
> 'Children are what they are made.'

(Sagna 2011)

This particularity of class agreement in Joola languages is interesting in the perspective of the general question of the status of names of kinds with respect to the distinction between common nouns and proper names. Generally speaking, it has been observed that names of kinds have some affinities with typical proper names, and this is consistent with the choice of a class A index in the construction illustrated in (2), since class A is in Joola the human singular class, and proper names of humans in subject role can only be cross-referenced by a class A index.

2.1.3. An extreme case of flexibility in gender assignment: Hamar

The gender system of Hamar as described by Petrollino (2016) shows several interesting typological particularities. First, in Hamar, gender is not an obligatory category of nouns (but almost all nouns can be marked for gender). Second, instead of being more or less arbitrarily assigned a gender value, as in most languages with a binary masculine vs. feminine gender distinction, inanimate nouns all have a masculine form and a feminine form, whose use is a particularly fascinating aspect of Hamar grammar.

With very few exceptions, Hamar nouns, irrespective of the animate vs. inanimate distinction, have four forms with distinct properties as agreement controllers: a "general form" unmarked for gender and number, a masculine singular form, a feminine singular form, and a plural form. The forms inflected for gender or number are definite. In other words, the gender distinction is restricted to the singular form of nouns; it appears neither in the general nor in the plural forms, see (3).

(3) Hamar

qáski	(general) 'dog'	*ooní*	(general) 'house'
qaskê	(singular masculine) 'dog'	*ɔɔnɛ̂*	(singular masculine) 'house'
qáskino	(singular feminine) 'dog'	*onnó*	(singular feminine) 'house'
qáskina	(plural) 'dogs'	*onná*	(plural) 'houses'

(Petrollino 2016: 110)

What justifies describing such a system in terms of a masculine vs. feminine distinction is that, with nouns referring to "higher animates" (human beings and animals that Hamar people breed), singular masculine and singular feminine invariably encode reference to male individuals and female individuals, respectively, see (4).

(4) Hamar

kána	(general) 'younger sibling'
kanâ	(singular masculine) 'younger brother'
kánno	(singular feminine) 'youner sister'
kánna	(singular feminine) 'younger siblings

(Petrollino 2016: 121)

Nouns for domestic animals and a few nouns referring to human beings depart however from this pattern by having two feminine forms: one with the regular meaning of reference to a female individual, the other with a collective meaning, see (5).

(5) Hamar

naasí	(general) ‘child’
naasâ	(singular masculine) ‘boy, son’
naanó	(singular feminine) ‘girl, daughter’
naasóno	(singular feminine) ‘group of children’
naaná	(plural) ‘children’

(Petrollino 2016: 120)

A handful of kinship terms are also exceptional in that they only have either a masculine or a feminine form.

As regards inanimate nouns, gender assignment entirely depends on how their referents are viewed by the speaker. For example, with nouns referring to places, masculine gender may suggest a specific position in a delimited area, whereas feminine is used for a more vague location. With mass nouns, masculine gender may encode ‘a small quantity of’, and feminine gender ‘a lot of’. Masculine gender may render solid mass nouns singulative, etc.

As regards lower animates (i.e., animals for which biological gender is not fundamental in Hamar culture), the link between gender assignment and biological gender is weak, and the *masculine* vs. *feminine* distinction rather tends to be used to encode size, with the typologically unusual association *masculine-small* and *feminine-big*. Note that masculine is the default form when speakers do not feel the need to insist on size, see (6).

(6) Hamar

átti	(general) ‘bird’
attê	(singular masculine) ‘(small) bird’
áttino	(singular feminine) ‘big bird’
áttina	(singular feminine) ‘birds’

(Petrollino 2016: 126)

2.1.4. Phonology-driven gender assignment: the case of Afar

Many languages have systems of gender assignment rules in which phonological criteria are variously involved. A particularly clear and straightforward case is that of Afar. Another interesting particularity of this system is the particular type of interaction between gender and number.

Like many Afroasiatic languages, Afar has a binary gender system (masculine vs. feminine). With the exception of a handful of human nouns for which a semantic rule of gender assignment takes precedence, gender assignment in Afar can be predicted by the following rules (Hassan Kamil 2015: 111):

- noun forms ending with an unstressed vowel are masculine,
- noun forms ending with a stressed vowel are feminine,
- noun forms ending with a consonant are masculine.

These rules operate regardless of the morphological status of the ending of nouns, and they operate on noun forms (not on lexemes!) regardless of the singular vs. plural distinction: the gender of plural noun forms is simply determined by their phonological form, and consequently does not necessarily coincide with the gender of the corresponding singular form.

(7) Afar

fiddimá (F)	'mat'	> *fíddim* (M)	'mats'
makiiná (F)	'machine'	> *makáayin* (M)	'machines'
báal (M)	'feather'	> *balwá* (F)	'feathers'
búyyi (M)	'well'	> *buyyá* (F)	'wells'

(Hassan Kamil 2015: 176, 179)

For example, the proximal demonstrative has two forms, *á* (M) and *tá* (F), and each of these two forms is indifferently used with singular and plural nouns, according to the gender value determined by the ending of the noun.

(8) Afar

a. *á kítab* (M) 'this book'
á fíddim (M) 'these mats'

b. *tá saagá* (F) 'this cow'
tá ʕaleelá (F) 'these mountains'

(Hassan Kamil 2015: 211–213)

2.1.5. The question of alliterative concord

As discussed by Corbett (2006: 87–90), 'alliterative agreement' can be understood in two different ways: this term may refer to "a characterization of morphological exponence," in systems in which agreement controllers have an inflectional marker correlated to their behavior in the agreement system, and phonologically identical segments are used as agreement markers on agreement targets. In this sense of "alliterative agreement," Niger-Congo systems of class agreement (but also many Indo-European systems of gender-number-case agreement) can be characterized as partially alliterative, since they involve both class agreement markers phonologically identical to the corresponding class membership markers found in noun forms, and class agreement markers phonologically distinct from the corresponding class membership markers of nouns. As rightly pointed out by Corbett, this characterization of agreement systems as ±alliterative is not an "all or nothing" classification. Moreover, it is worth emphasizing that a thorough description of Niger-Congo class agreement systems often leads to the conclusion that they are in fact much less alliterative than they may look at first sight, because class agreement markers that are roughly similar to the corresponding class membership markers of nouns often differ from them in an unpredictable way in details such as vowel quality or tone.

There is another possible view of alliterative agreement, for which Corbett proposes the term of "radical alliterative agreement" (another possible term would be "generalized

alliterative agreement"). In a noun class system with radical alliterative agreement, agreement markers would invariably copy the initial of the noun form acting as controller (in the case of prefixed agreement markers) or its ending (in the case of suffixed agreement markers), regardless of the status of the copied material in a morphological analysis.

In the general literature on gender, partial and wrongly interpreted data from the Ñun language Guñaamolo have played a prominent role in discussions of generalized alliterative agreement (see in particular Dobrin 1995), which means that the recent descriptions of Guñaamolo and other Ñun languages that put an end to this myth lead to the conclusion that the theoretical discussions in question were basically flawed, and consequently of very little value.

Sauvageot (1967) suggested that a radical alliterative agreement system might be found in Guñaamolo but this hypothesis does not stand up to scrutiny. For example, in Guñaamolo (Bao Diop 2015), *reeŋ* 'earth', *pɔrɔr* 'kitchen', *jɪh* 'dog' and *duluur* 'rice' all belong to class A, in which the agreement markers may be a or *nɔ ~ no*, depending on the nature of the agreement target. As argued by Cobbinah (2010), contrary to the claim by Sauvageot that was taken at face value in theoretical discussions of generalized alliterative agreement, Guñaamolo and the other Ñun languages that have been documented recently have just the unremarkable kind of partially alliterative system of class agreement commonly found throughout Niger-Congo.

To the best of my knowledge, among the Niger-Congo languages that have noun class systems, Landuma is the only one for which, on the basis of the available data, the hypothesis of a generalized alliterative agreement system deserves consideration (see Sumbatova 2003 and pers. com.).

2.2. Linkers in noun-modifier constructions

In their noun-modifier constructions, many languages of Sub-Saharan Africa variously use grammatical words or clitics (or phrasal affixes) adjacent to the word/phrase in modifier function, whose role is to enable this word/phrase to act as a noun modifier. Linkers in noun-modifier constructions may be invariable or express agreement with the head noun.

2.2.1. Specialized linkers

Linkers are particularly common in noun–genitive (or genitive–noun) constructions. For example, in many Bantu languages, a proclitic genitival linker consisting of an invariable element *-a-* preceded by a class agreement marker attaches to NPs in genitive role, whereas in Manding languages, the genitive–noun construction involves an enclitic postposition whose use is regulated by the semantic nature of the relationship between the genitival modifier and its head.[2]

[2] Manding languages have a typologically unusual variety of alienable vs. inalienable distinction. Cross-linguistically, the construction expressing inalienable possession tends to be available for a restricted set of "inalienably possessed nouns" only, whereas in Manding languages, there is no such restriction, and the animate vs. inanimate nature of the possessor plays a major role in the use of the linker in the genitival construction (Creissels and Sambou 2013: 242–251).

(9) Tswana

a. *mò-sádì* *w-á-mó-tsí*
CL1-woman CL1-LK- CL3-village
'woman of the village'

b. *lì-káù* *l-á-mó-tsí*
CL5-boy CL5-LK-CL3-village
'boy of the village'

c. *sì-fòfù* *s-á-mó-tsí*
CL7-blind_person CL7-LK-CL3-village
'blind person of the village'

d. *ŋàkà* *y-á-mó-tsí*
(CL9)doctor CL9-LK-CL3-village
'doctor of the village'

(pers. doc.)

(10) Mandinka

a. *wòtôo* *kódòo*
car.D money.D
'the money of the car' (i.e. 'the money necessary to buy the car')

b. *kèwôo* *lá* *kódòo*
man.D LK money.D
'the man's money'

c. *sàatéwòo* *àlìkáalòo*
village.D chief.D
'the chief of the village'

d. *ì* *lá* *àlìkáalòo*
they LK chief.D
'their chief'

(pers. doc.)

Linkers are also common in noun–relative clause constructions. In a typological account of Sub-Saharan languages, it is important to emphasize that the terminology used in many language descriptions blurs the important distinction between relative linkers and relative pronouns. I know of no uncontroversial instance of relative pronouns in the languages of Sub-Saharan Africa, in the sense of words occurring at the left edge of relative clauses but showing evidence of having been "extracted" from it. In general, the "relative pronouns" mentioned in descriptions of Sub-Saharan languages are relative linkers for which an analysis as pronouns fulfilling the relativized function in the relative clause does not have the slightest justification. Diachronically, there is often clear evidence that relative linkers originate from sequences *noun – demonstrative – relative clause* in which the demonstrative has grammaticalized as a purely syntactic element, losing its original deictic function. This is in

particular the case for the linker found in the noun–relative clause construction of Tswana, see (11).

(11) Tswana

a. *mò-sádì* *yó* *kí-mò-tʰúsítsè-ɲ́* *máàbání*
CL1-woman CL1.LK 1SG-CL1-help.PRF-REL yesterday
'the woman I helped yesterday'

b. *lì-káù* *lé* *kí-lì-tʰúsítsè-ɲ́* *máàbání*
CL5-boy CL5.LK 1SG-CL5-help.PRF-REL yesterday
'the boy I helped yesterday'

c. *sì-fòfù* *sé* *kí-sì-tʰúsítsè-ɲ́* *máàbání*
CL7-blind_person CL7.LK 1SG-CL7-help.PRF-REL yesterday
'the blind person I helped yesterday'

d. *ŋàkà* *é* *kí-ì-tʰúsítsè-ɲ́* *máàbání*
(CL9)doctor CL9.LK 1SG-CL9-help.PRF-REL yesterday
'the doctor I helped yesterday'

(pers. doc.)

In quite a few languages (among others, Tswana), the same linker introduces relative clauses and attributive adjectives, see (12).[3]

(12) Tswana

a. *mò-sádì* *yó* *mò-ʃá*
CL1-woman CL1.LK CL1-new
'new woman'

b. *lì-káù* *lé* *lì-ʃá*
CL5-boy CL5.LK CL5-new
'new boy'

c. *sì-fòfù* *sé* *sì-ʃá*
CL7-blind_person CL7.LK CL7-new
'new blind person'

d. *ŋàkà* *é* *ǹ-tʃʰá*
(CL9)doctor CL9.LK CL9-new
'new doctor'

(pers. doc.)

(13a) illustrates the obligatory repetition of the linker within the same NP, as many times as there are modifiers requiring it. (13b) shows that the head noun can be omitted, resulting in a "headless" NP in which the linker fulfills a pronominal function, much in the same way as determiners in the absence of the head noun they normally modify. These two examples also illustrate that, in spite of the fact that this relative/attributive linker is still homonymous with

[3] In other Southern Bantu languages, this linker is currently described as a prefix (or as the first element of complex prefixes), but in Tswana, its tonal behavior excludes it from being analyzed as either a prefix or a proclitic. For a detailed discussion of the relevant tone rules of Tswana, see Creissels 1998.

one of the demonstratives of Tswana (and probably evolved from this demonstrative), the distinction is ensured by the position of true demonstratives after all modifiers (including those introduced by the homonymous relative/attributive linker):

(13) Tswana

a. *mò-sádì* *yó* *mò-léèlé* *ˈyó* *mó-ǹtsʰò*
CL1-woman CL1.LK CL1-tall CL1.LK CL1-black

yó *ˈó-ɔ́pél-à-ŋ́* *ˈyó-lé*
CL1.LK CL1-sing- FV-REL CL1.DEM-DIST
'this tall woman with dark complexion who is singing'

b. *yó* *mò-léèlé* *ˈyó* *mó-ǹtsʰò*
CL1.LK CL1-tall CL1.LK CL1-black

yó *ˈó-ɔ́pél-à-ŋ́* *ˈyó-lé*
CL1.LK CL1-sing-FV-REL CL1.DEM-DIST
'the tall one (CL1) with dark complexion who is singing'

(pers. doc.)

Tswana also has a linker for numeral modifiers. It differs from the relative/attributive linker just presented, and its origin is a participial form of the verb *-lí* 'be' – see (14).

(14) Tswana

a. *bà-sádí* *ˈbá-lí* *bá-bèdí*
CL2-woman CL2-LK CL2-two
'two women' etymologically 'women they-being two'

b. *mà-káú* *ˈá-lí* *má-bèdí*
CL6-boy CL6-LK CL6-two
'two boys'

c. *dì-fòfù* *dí-lí* *pèdí*
CL8-blind_person CL8-LK (CL8)two
'two blind persons'

(pers. doc.)

2.2.2. Multipurpose linkers

As illustrated above, more or less specialized linkers in noun-modifier constructions are common in Sub-Saharan Africa. The question that arises is whether Sub-Saharan languages also attest situations comparable to that of West Iranian languages, with a multipurpose linker (traditionally called *ezafe* in Iranian linguistics) used for all kinds of noun-modifier relationships. Von Prince (2008) argues that some items traditionally analyzed as genitival linkers (including Swahili CL-*a*) are best analyzed as multipurpose noun-modifier linkers ("attributive linkers" in her terminology). However, her demonstration is not very convincing, since in the particular case of Swahili, most of the discussion relies on the use of CL-*a* with infinitives: Swahili infinitives have clear nominal properties, and, consequently, their

compatibility with CL-*a* is not contradictory with the identification of CL-*a* as a genitival linker.

Basari is to the best of my knowledge the Sub-Saharan language whose situation in this respect is closest to that of West Iranian languages, although the range of uses of the Basari linker is not as wide as that of the West Iranian ezafe.

According to Perrin (Forthcoming), in Basari, demonstratives, numerals, and adjectives are the only types of noun modifiers that do not require a linker. All the other types of noun modifiers are introduced by the same multipurpose linker: NPs in genitive function, possessives, preposition phrases in noun modifier function, the interrogative determiner *fɛ́* 'which?', quantifiers such as *mbáŋ* 'many', and relative clauses. This linker consists of a class prefix expressing agreement with the head noun and a constant element, which however may appear as *-r*, *-d* or *-nd* depending on a system of consonant alternation (represented in the glosses by means of Roman numerals) that is pervasive in the morphology of Basari.

(15) Basari

a. *ɛ-pátát-ɛl* *ɛ-d* *a-sɔ́ʃan* *ajɔ́*
CLɛl(II)-gun-CLɛl(II).D CLɛl(II)-LK CLan(I)-man CLan(I).DEM
'this man's gun'

b. *ɛ-pəŋá-ɛŋ* *ɛ-nd* *gər* *kərənú*
CLɛŋ(III)-road-CLɛŋ(III).D CLɛŋ(III)-LK LOC God
'the way (leading) to God'

c. *a-káyəta* *a-nd* *fɛ́*
CLaŋ(III)-book CLaŋ(III)-LK which
'which book?'

d. *ɔ-yɛ́kax* *ɔ-r* *ri-kánɔːl*
CLɔl(I)-good_things CLɔl(I)-LK do-CPL.1PL.CLɔl(I)
'the good things that we have done'

(Perrin, Forthcoming)

2.3. Construct forms of nouns

In this section, I argue that a notion of *construct form of nouns* generalizing the notion of *construct state* found in traditional Semitic grammars may help to capture similarities in the nominal system of languages that are not immediately apparent in current accounts.

2.3.1. Generalizing the notion of "construct state of nouns" traditionally used in Semitic linguistics

In Semitic linguistics, the term of construct state applies to nouns immediately followed by another noun in the role of genitival modifier or by a bound pronoun in possessive function. For example, in Hebrew, *bajit* 'house' occurs as *be(j)t* when immediately followed by another noun in genitive function, as in *be(j)t sefer* 'school' ('house of book'); in the same context, *malkah* 'queen' occurs as *malkat*, as in *malkat ha-medina* 'the queen of the country'.

Cross-linguistically, it is relatively common that person markers cross-referencing the genitival dependent attach to the head of genitival constructions. Morphological marking of nouns encoding nothing more than the mere fact that they fulfill the role of head in a given type of noun–modifier construction is less common, but by no means limited to the Semitic languages. However, the range of noun dependents triggering the choice of a special form of their head varies across the individual languages that have this phenomenon.

This section is an update of Creissels (2009), where I proposed the term *construct form* as a general label for noun forms that are obligatory in combination with some types of dependents and cannot be analyzed as instances of cross-referencing in the genitive construction.

2.3.2. Some possible misunderstandings about the notion of construct form

Construct forms of nouns have in common with case forms that they are conditioned by the syntactic status of nouns, but case encodes the role of NPs as elements of broader constructions, irrespective of their internal structure, whereas construct forms encode information on the internal structure of NPs. Case is a particular variety of dependent marking, whereas construct forms are an instance of head marking.

Some authors neglect this distinction and consider construct forms as cases, which implies broadening the definition of case to any morphological variation of nouns carrying syntactic information. My position on this point is that the head vs. dependent marking distinction is crucial, in the description of individual languages as well as in typological perspective. Consequently, I do not retain the proposal to consider construct forms as cases.

In this connection, it must be emphasized that some descriptive traditions use terms that may suggest some analogy with the construct state of Semitic languages but refer in fact to very different phenomena.

In Berber languages, nouns have two forms traditionally termed states. One of them is generally termed annexed state, but some descriptions use construct state, suggesting a false analogy with the states of Semitic nouns. The point is that, contrary to Semitic states, the so-called states of Berber nouns are instances of dependent marking, not of head marking: they do not encode the relation between the noun and its dependents, but the function of the NP within a broader construction. In a broad typological perspective, the two so-called states of Berber nouns are simply cases – see Arkadiev (2015) for a recent discussion.

The term annexed state has also been proposed by Elders (2003) for a syntactically conditioned alternation affecting nouns in Kulango and some other Gur languages, by which nouns in isolation have an obligatory class suffix (or number suffix, in languages in which the class system is no longer active) but seem to lose this inflectional suffix in certain constructions. Crucially, this concerns nouns that are always in non-final position in the relevant construction but cannot be uniformly characterized as heads or dependents, since some constructions triggering the omission of the inflection of the first term have the order *head – dependent*, and some others have the order *dependent – head*. In (16) from Dagara, ‘goat’ in the suffixless form is the head of an attributive construction in (16b) and the dependent of a genitival construction in (16c).

(16) Dagara

a. *bʊ-ɔ* (pl. *bʊʊ-d*)
goat-CL
'goat'

b. *bʊ̀ bɛ́d-ʊ*
goat big-CL
'big goat'

c. *bʊ̀ zʊʊ-d*
goat tail-CL
'goat's tail'

(Delplanque 1997: 60)

In Dagara and other Gur languages showing this kind of alternation, if one accepts that in (16b) 'goat' is the head of an attributive construction,[4] the use of the uninflected noun illustrated by (16b) can be compared to the construct state of Semitic languages, since it characterizes the noun fulfilling the role of head in a head–dependent construction, but this does not hold for the use illustrated by (16c). The relevant notion here is rather that of compounding, and the construction of (16b) is in fact an instance of incorporation of attributive adjectives (Section 2.4).

2.3.3. Construct forms of nouns in Nilotic languages

In African linguistics, construct forms of nouns have so far been identified mainly in East African languages belonging to the Nilotic family (see among others Andersen (2002) on Dinka, which includes detailed references on previous works dealing with this topic in other Nilotic languages). However, a variety of terms have been used to label construct forms of nouns in descriptions of individual languages:

> Such a form also occurs in some other Western Nilotic languages, and in descriptions of those languages it has been variously labeled "genitive" (Kohnen 1933:28 on Shilluk, Okoth-Okombo 1982:32 on DhoLuo), "appertentive" (Gregersen 1961:83 on DhoLuo), "status constructus" (Tucker and Bryan 1966:83), "antigenitive" (Andersen 1988:284 on Päri), and "modified noun form" (Reh 1996:116 on Anywa). (Andersen 2002: 13)

Since the existence of construct forms of nouns is widely acknowledged in Nilotic languages, it is not necessary to insist on Nilotic illustrations. By contrast, it is worth emphasizing here that construct forms of nouns are not uncommon elsewhere in Sub-Saharan Africa, although they are not identified as such in the descriptions of the languages in which they are found.

[4] One might argue that this is a genitival construction, lit. 'goat's bigness' (see section 2.5 on dependency reversal in noun-attributive constructions), but class agreement provides evidence against this analysis, at least in a strictly synchronic perspective. Note however that, within the frame of this alternative analysis, the recognition of the uninflected form of nouns as a construct form is excluded even more radically, since the use of the uninflected form of nouns would uniformly characterize nouns in the role of dependent.

2.3.4. Construct forms of nouns in other East African languages

In the northeastern part of Sub-Saharan African, outside of the Nilotic language family, a construct form of nouns has been identified in the Cushitic language Iraqw (Mous 1993) and in the Omotic language Konso (Orkaydo 2013).

The case of Konso is particularly interesting, since the construct form of Konso nouns is marked by a tonal alternation, a situation relatively common in Sub-Saharan Africa. This tonal change affects nouns modified by a numeral, a relative clause, a noun in genitive function, or a possessive prefix (Orkaydo 2013: 252).

2.3.5. The construct form of Tswana nouns

In Tswana, the nouns whose basic tonal contour ends with two successive H tones (which constitute an important proportion of Tswana nouns, perhaps the majority) show a tonal alternation …HH ~ …HL that must be recognized as morphological, since its conditioning cannot be stated in purely phonological terms. In this alternation, the variant ending with ...HL must be analyzed as a construct form. Interestingly, Tswana shows that the use of a construct form of the nouns and of a linker introducing the modifier may combine in the same construction.

For example, in (17a), *sìtswáná* 'Tswana culture, language, etc.' is the head of the NP *sìtswánà sé básìbúàŋ́* 'the Tswana they speak > the way they speak Tswana', and consequently, the contact with the linker *sé* introducing the relative clause triggers the use of the construct form *sìtswánà*. In (17b), *sìtswáná* is in contact with the same linker *sé*, but the linker introduces a dependent of *sìtílɔ́* 'chair',[5] not of *sìtswáná*; in (17b), *sìtswáná* has no dependent, and consequently the construct form would not be correct.

(17) Tswana

a. *χà-kí-rátí* *sì-tswánà* *s-é* *bá-sì-búàː-ŋ́*
NEG-1SG-like CL7-Tswana.CSTR CL7-LK CL2- CL7-speak-REL
'I do not like the Tswana they speak (the way they speak Tswana).'

b. *χà-kí-rátí* *sì-tílɔ́* *s-á-sì-tswáná*
NEG-1SG-like CL7-chair.CSTR CL7-GEN-CL7-Tswana

s-é *bá-sì-rékílèː-ŋ́*
CL7-LK CL2- CL7-buy.PRF-REL
'I do not like the Tswana chair they bought.'

(pers.doc.)

In Tswana, nouns with a basic tonal contour ending with …HH must take the construct form characterized by the contour …HL when immediately preceding one of the following types of dependents:

– a demonstrative
– a genitival dependent

[5] The construct form *sìtílɔ́* is licensed by the genitival dependent *sásìtswáná.*

– an adjective or a relative clause introduced by a linker homonymous with the demonstrative (and historically cognate with it – see Section 2.2)
– the interrogative determiner *-fĩ*
– the negative determiner *-pɛ́*
– the determiner *-sìlí* 'other'

2.3.6. The construct form of Eton nouns

Van de Velde (Forthcoming) analyzing relativization in Eton, argues that, in this language, the so-called "augment" (a nominal prefix whose original function was admittedly the expression of definiteness distinctions) has only subsisted as an obligatory element of the 'noun + relative clause' construction, and consequently fulfills a purely syntactic function in the present state of the language.

This situation is interesting to compare to that described by Jenks, Makasso and Hyman (Forthcoming) for Basaá. In both languages, a prefix *í-* analyzable as the reflex of the Bantu augment is found with nouns modified by a relative clause. However, according to Jenks, Makasso and Hyman's description, contraty to Eton, this prefix is not obligatory in Basaá, and it encodes definiteness distinctions. Consequently, Basaá and Eton can be analyzed as illustrating successive stages in the same grammaticalization process, with some interesting typological particularities:

– In Basaá, according to Jenks, Makasso and Hyman, the use of the augment to express definiteness distinctions has been restricted to nouns modified by a relative clause. Typologically, definiteness distinctions conditioned by the presence of a given type of noun modifier are not unknown, but this constitutes a somewhat unusual phenomenon (in Baltic and Slavic languages, which are the best-known cases of languages illustrating this kind of situation, the conditioning factor is rather the presence of an adjective).
– As regards Van de Velde's analysis of Eton, head marking (or in other words, the use of a construct form of nouns) in the 'noun + relative clause' construction is rarely if ever mentioned in the literature: quite obviously, construct forms of nouns (i.e., noun forms signaling that the noun combines with a given type of modifier) are more typically found with nouns heading genitival constructions.

2.3.7. The construct form of Hausa nouns

Hausa has a construct form of nouns characterized by a suffix *-n* (singular masculine or plural) or *-r̃* (singular feminine), commonly called a "genitive linker". This suffix occurs when the noun is the head of a genitival construction, as in (18a) and (18c). It must also be used when the noun takes a possessive suffix other than first-person singular, see (18e) and (18f). It results from the cliticization of a pronoun *na*/*ta* co-referent with the head noun in the synonymous construction illustrated by (18b) and (18d).

(18) Hausa

a. *kàre-n* *Daudà* (cf. *kàree* ‘dog’)
dog-CSTR.SG.M Dauda
‘Dauda’s dog’

b. *kàree* *na* *Daudà*
dog that_of.SG.M Dauda
‘Dauda’s dog’

c. *saanìya-r̃* *Daudà* (cf. *saanìyaa* ‘cow’)
cow-CSTR.SG.F Dauda
‘Dauda’s cow’

d. *saanìyaa* *ta* *Daudà*
cow that_of.SG.F Dauda
‘Dauda’s cow’

e. *kàre-n-sà*
dog-CSTR.SG.M-3SG.M
‘his dog’

f. *saanìya-r̃-sà*
cow-CSTR.SG.F-3SG.M
‘his cow’

(pers.doc.)

A difficulty in the analysis of *-n* ~ *-r̃* as the mark of a construct form of Hausa nouns is however that the same suffix characterizes attributive adjectives preceding nouns in the construction illustrated by *fari-n kàree* ‘white dog’ or *fara-r̃ saanìyaa* ‘white cow’ (*fari* and *fara* are the masculine and feminine forms, respectively, of the adjective ‘white’). See Creissels (2009) for a discussion and a possible solution.

2.3.8. The construct form of Wolof nouns

In Wolof, a construct form of nouns characterized by the suffix *-u* (sg.)/*-i* (pl.) is used exclusively for nouns followed by a genitival dependent. It occurs with no other type of dependent, and, contrary to Semitic construct forms, it does not occur with possessive affixes or determiners either.

The construct form of Wolof nouns shares with Semitic construct forms a constraint of strict contiguity with the dependent noun. This means that other dependents of the head noun in the construct form must follow the genitival dependent, and that, if the dependent noun itself has dependents that must precede it, they must be placed to the left of the head noun, as illustrated by (19).

(19) Wolof

a. *fas* *w-u* *ñuul*
horse CLw-LK be_black
‘black horse’

b. *suma* *nijaay*
1SG maternal_uncle
'my uncle'

suma	*fas-u*	*nijaay*	*w-u*	*ñuul*
1SG	horse-CSTR	maternal_uncle	CLw -LK	be_black

'the black horse of my uncle' (lit. 'my horse of uncle black')

d. **fas-u* *suma* *nijaay*
horse-CSTR 1SG maternal_uncle

(pers.doc.)

2.3.9. Construct forms of nouns in Mande languages

In Mende (South Western Mande), the initial of nouns shows a consonant alternation triggered by the syntactic status of the noun. One of the two forms can be characterized as a construct form, since it is automatically used whenever the noun is immediately preceded by a dependent, whereas the other (the free form) occurs whenever the noun is the first element of an NP, or is not accompanied by any dependent, as illustrated by (20).

(20) Mende

a. *ndopô* 'child', *tokó* 'arm', *ngíla* 'dog' (free forms)

b. *ndopó-i* *loko-í*
child-D CSTR.arm-D
'the child's arm'

c. *ndopó-i* *yilɛ-í*
child-D CSTR.dog-D
'the child's dog'

(pers.doc.)

Most accounts of Mende morphology suggest describing the initial of the construct form in terms of "lenition" of the initial of the free form, but as shown in Creissels (1994: 152–168), the construct form must rather be characterized by the absence of an underlying nasal present at the initial of the free form. In Mende, a nasal with exactly the same morphophonological properties but prefixed to verbs is the manifestation of a third-person object pronoun, and comparison with Kpelle shows that, before being reanalyzed as the mark of the free form of nouns, the nasal prefixed to nouns was a definite article.

However, this is only part of the story. The construct form of Mende nouns is also marked tonally: as can be seen from (20), Mende nouns used as heads in genitive–noun constructions, in addition to a change in their initial consonant, show a uniform L tonal contour, regardless of the lexical tone they show in their free form. Interestingly, the historical processes that led to a segmental marking of the construct form of Mende nouns must be relatively recent (since they are easy to reconstitute by comparing Mende with the other South Western Mande languages) whereas the existence of tonally-marked construct forms of nouns must be very ancient in the Mande language family. Construct forms of nouns marked by an L or LH

replacive morphotoneme are found in the two major branches of the Mande family (see among others Creissels (2016a) on Soninke (West Mande), Khachaturyan (2015: 53) on Mano (South Mande)),[6] and a tonally marked construct form of nouns can safely be reconstructed at Proto-Mande level. (21) illustrates the action of the LH replacive morphotoneme that marks head nouns in the genitival construction of Soninke.[7]

(21) Soninke

a. *móbílì* 'the car' → *Múusá mòbìlî* 'Moussa's car'
Moussa car.CSTR

b. *dòròkê* 'the cloth' → *Múusá dòròkê* 'Moussa's cloth'
Moussa cloth.CSTR

c. *qálìsî* 'the money' → *Múusá qàlìsî* 'Moussa's money'
Moussa money.CSTR

d. *kìtáabè* 'the book' → *Múusá kìtàabê* 'Moussa's book'
Moussa book.CSTR

(pers. doc.)

2.3.10. Construct forms of nouns in Dogon languages

A major typological feature of Dogon languages (Heath 2008; McPherson 2013) is the complexity of tonal alternations affecting nouns and triggered by the presence of various types of modifiers. For example, in Tommo So, alienably possessed nouns have a L tonal overlay replacing their lexical tones – Ex. (22).

(22) Tommo So

a. *gìnɛ́* 'house', *ìsé* 'dog' (free forms)

b. *Sáná gìnɛ̀*
Sana house^{L}
'Sana's house'

c. *Àrámátá ìsɛ̀*
Ramata dog^{L}
'Ramata's dog'

(McPherson 2013: 183–184)

In Jamsay, alienably possessed nouns undergo no tonal modification, but inalienably possessed nouns have an H(H...)L tonal overlay replacing lexical tones. (23) illustrates the

[6] Following the Russian terminological tradition, Khachaturyan calls this construct form 'izafet'. This is etymologically correct, since *'iḍāfah* is the term used in Arabic grammars for the noun–genitive construction in which the head noun occurs in the construct form. However, this can be misleading, since for most general linguists, this term rather evokes linkers of the kind found in West Iranian languages and called *ezafe* in Iranian linguistics – see Section 2.2.2.

[7] The final modulation on the last vowel of nouns in the construct form is the manifestation of a floating L tone that marks the definite form of Soninke nouns.

tonal contrast between *dě*ː ‘father’ in its free form and in the form tonally modified by the presence of an inalienable possessor.

(23) Jamsay

a. *Dě*ː *sàː-rá-m.*
father have.NEG.1SG
‘I do not have a father.’

b. *Séydù dêː*
Seydou father^{HL}
‘Seydou’s father’

(Heath 2008: 237)

2.3.11. Concluding remarks

In Sub-Saharan Africa, construct forms of nouns are found in languages that have no close genetic or areal link. The examples give an idea of the possible variations in the distribution of construct forms (which however almost always includes the role of head in noun–genitive (or genitive–noun) constructions, Eton being the only exception to this generalization I am aware of). They also illustrate the variation in their morphological marking: the construct form may involve the addition of a segmental marker to the free form, as in Hausa or Wolof, the deletion of a morphological element present in the free form, as in Mende, or tonal alternations (Mande, Dogon, Konso, Tswana). Diachronically, although not all these construct forms are historically transparent, they illustrate a variety of scenarios that may result in the emergence of a construct form of nouns:

– The construct form of Tswana nouns probably results from the morphologization of tonal sandhi processes.
– In Hausa, the construct form of nouns is marked by a suffix resulting from the encliticization of a resumptive pronoun in a genitive construction whose literal equivalent in English would be something like ‘the dog that.of the man’ for ‘the man’s dog’.
– In Mende, the construct form of nouns is marked by the absence of a prefix present in the free form that diachronically can be characterized as a frozen definite article, whereas in Eton, it is the construct form of nouns that is marked by a prefix analyzable as a frozen definite article.

It is also worth noting that there is no correlation between the relative order of nouns and their modifiers and the use of construct forms, since construct forms are equally attested in noun–modifier and modifier–noun constructions.

2.4. Incorporation of attributive adjectives

2.4.1. Introductory remarks

In most languages, adjective–noun compounding is limited either to lexicalized combinations (as in *blackbird*) or to bahuvrihi compounds (as in *redbreast*). Adjective–noun compounding

as a regular and productive morphological process creating words equivalent to the attributive adjective–noun phrases found in most languages is not common. Attention has been drawn to this phenomenon by Dahl (2004: 225–235, 2015: 127–131), who argues that "combinations of adjectives and nouns may become tightened and integrated into a one-word construction without losing their productivity." He mentions Lakota, Burmese, Chukchi, and Elfdalian (Scandinavian), as having tighter combinations of adjectives and nouns that are not constrained in the ways compounds usually are, and also notes that Celtic, Romance, and Southern Ute have a contrast between tighter preposing constructions and looser postposing ones, the formers being consequently analyzable as instances of quasi-compounding (combinations of words that in some respects behave as if they were the two elements of a single compound word).

Although this is rarely made explicit in the available grammatical descriptions, phenomena interpretable in terms of quasi-compounding in attributive adjective–noun combinations are pervasive in the languages of Sub-Saharan Africa. Moreover, languages in which the integration of attributive adjectives and nouns into one-word constructions is obligatory can be found at least within the Mande and Gur language families.

Creissels (2003) argues that Sub-Saharan languages provide evidence against mainstream approaches to lexical categories that put on a par adjectives and adverbs (and sometimes adpositions) with nouns and verbs, and rather support the view that there are only two basic lexical categories (nouns and verbs), since adjectives and adverbs do not necessarily have the ability to "project" phrasal categories.

In Sub-Saharan languages, the recognition of "adjectival phrases" with an internal structure comparable to that of NPs or VPs is problematic, since the possibilities of expansion of attributive adjectives are most of the time limited to a single word expressing intensity. For example, typical Sub-Saharan languages may have attributive adjectives equivalent to English *proud*, but cannot use them in constructions similar to *a man proud of his son*, whose equivalent is a relative clause construction involving a verb cognate with an adjective (*a man who takes-pride of his son*).

To take another example, Bambara has an adjective *júgú* 'bad' that can be juxtaposed to nouns as an attributive modifier, but there is nothing in Bambara syntax (and as far as I know, in the syntax of other Sub-Saharan languages) that could be compared to the use of *bad* as the head of an adjective phrase including a complement NP such as *as bad as NP* in English. In Bambara, *a dog as bad as yours* can only be rendered as lit. *a dog whose badness and that of your dog are equal*, as in (24).

(24) Bambara

a. *wùlù-júgú*
dog-bad
'bad dog'

b. *wùlû mîn júgú-yâ ní í ká wùlû tá ká kán*
dog.D REL bad-ABSTR.D and 2SG LK dog.D that_of POS be_equal
'a dog as bad as yours'

(pers.doc.)

2.4.2. Incorporation of attributive adjectives in Soninke (Mande)

As regards the morphological incorporation of attributive adjectives, Soninke (West Mande) illustrates the clearest possible case of a language with noun–adjective compounding, since in this language (Creissels 2016a), the distinction between phrases and compounds is particularly clear-cut.

Crucially, Soninke nouns have a distinction between an autonomous form that can function as a word without any additional material, and a non-autonomous form occurring exclusively when the nominal lexeme is a non-final formative of a complex lexeme. For example, the non-autonomous form of *yìràamê* 'cloth' is *yìràn-* (as in the compound *yìràn-gáagàanâ* 'cloth seller', where *gáagàanâ* is an agent noun derived from *gáagà* 'sell').

Morphologically, Soninke adjectives are not different from nouns, and can fulfill the same syntactic functions. For example, *qúllè* 'white' can be found in all nominal positions with the type of meaning expressed in English as *a/the white one*. Simply, much in the same way as for example in French and other Romance languages, this use of adjectives requires some discursive conditioning. Adjectives can also combine with nouns expressing the concept they modify, as in *yìràn-qúllè* 'white cloth', but as shown by this example, noun–adjective combinations expressing the kind of modification typically expressed by attributive adjectives can only take the shape of compounds with the noun in its non-autonomous form:

(25) Soninke

a. *Ń dà yìràamê-n qóbó.*
1SG TR cloth-D buy
'I bought a/the cloth.'

b. *Ń dà qúllè-n qóbó.*
1SG TR white-D buy
'I bought a/the white one.'

c. *Ń dà yìràn-qúllè-n qóbó.*
1SG TR cloth-white-D buy
'I bought a/the white cloth.'

(pers.doc.)

Crucially, it is also possible to combine adjectives with nouns in their autonomous form, but adjectives following nouns in their autonomous form can only be interpreted as secondary predicates, not as attributive modifiers. In (26a), *yúgú-* is the non-autonomous form of 'man', whereas in (26b), *yúgò* is the autonomous form of the same noun:

(26) Soninke

a. *Yúgú-xásè-n kàrá.*
man-old-D die
'The/An old man died.'

b. *Yúgò-n* *qàsé-n* *kàrá.*
man-D old-D die.
'The man died old.'

(pers.doc.)

In Manding languages (which belong to another branch of the Mande language family), adjectives are divided into two classes: all simplex adjectives and a minority of derived adjectives form morphological compounds with the noun they qualify, exactly like the adjectives of Soninke, whereas most subtypes of derived adjectives combine with nouns in a way that cannot be analyzed in terms of morphological compounding – see for example Creissels and Sambou (2013: 229–230) on the morphological behavior of attributive adjectives in Mandinka.

2.4.3. Incorporation of attributive adjectives in Gur languages

One can find among Gur languages noun–attributive adjective constructions that show no evidence of morphological compounding, but very clear cases of noun–adjective compounding are also attested in various branches of the Gur language family.

Gurmanche (Ouoba 1982) is a case in point. In Gurmanche, nouns have obligatory class suffixes, for example *dāa-gā* (pl. *dāa-mú*) 'market, *tí-bū* (pl. *tīi-dí*) 'tree'. In compound nouns, the modifying noun occurs without its class suffix, for example *dāa-tī-bū* (pl. *dāa-tīi-dí*) 'market tree' (i.e., tree belonging to a variety commonly found in markets) vs. *dāa-g tí-bū* 'tree of the market', *dāa-g tīi-dí* 'trees of the market', if 'market' has specific reference (Ouoba 1982: 157). In this language too, adjectives are morphologically nouns, with the difference that adjectival stems can combine with any of the class suffixes found in the language. In most Niger-Congo languages with similar noun class systems, in the construction 'noun + attributive adjective', both the noun and the adjective have their class affix, and there is agreement between them. By contrast, in Gurmanche (and quite a few other Gur languages), such constructions constitute single words (with just one class suffix) in which the adjectival lexeme can be described as inserted between the noun stem and its class suffix, for example with *ciám-* 'big':

(27) Gurmanche

a.	*tí-bū*	'tree'	+ *ciám-* 'big'	> *tī-ciám-bū*	'big tree'
b.	*tīi-dí*	'trees'	+ *ciám-* 'big'	> *tī-cián-dī*	'big trees'
c.	*diē-gū*	'house'	+ *ciám-* 'big'	> *diē-cián-gū*	'big house'
d.	*diē-dī*	'houses'	+ *ciám-* 'big'	> *diē-cián-dī*	'big houses'

(Ouoba 1882: 131–133)

The compound nature of the noun–attributive adjective construction is equally obvious in Dagara as described by Delpanque (1997), although the author of this description writes nouns and their attributive modifiers as distinct words and does not even mention the possibility of an analysis in terms of compounding.

An explicit and well-motivated acknowledgement of the compound nature of the noun–attributive adjective construction can be found in Dombrowsky-Hahn's description of Syer, a language belonging to the Senufo branch of the Gur family (Dombrowsky-Hahn 2015: 228).

2.5. Dependency reversal in noun–attributive constructions

This section is based on Van de Velde (2011). This unpublished paper represents a decisive step toward a better understanding of a phenomenon that had already drawn the attention of linguists describing Sub-Saharan languages, but had never been delimited properly, which resulted in some ambiguity as regards its exact definition and cross-linguistic extent.

As illustrated by (28b) and (28c), to be compared with (28a), in a number of central African languages, attributive constructions have the form of a genitival construction in which the attributive modifier is construed as the head.

(28) Basaá

a. *lì-wándá* *lí=kíŋɛ̂*
CL5-friend CL5.LK=chief
'the friend of the chief'

b. *lì-kéŋgɛ́* *lí=m-ût*
CL5-clever CL5.LK= CL1-person
'a clever person'

c. *mà-kéŋgɛ́* *má=b-ôt*
CL6-clever CL6.LK=CL1-person
'clever people'

(Hyman 2003)

Outside of Africa, this cross-linguistically rare phenomenon has been observed among others in Aleut and Chinook (Malchukov 2000).

Dependency-reversal noun-attributive (DRNA) constructions must be carefully distinguished from another type of possessive-like attributive construction, illustrated by English *a thing of beauty*, which is cross-linguistically much more widespread (and found in particular in many Sub-Saharan languages).

DRNA constructions are less easy to distinguish from the type illustrated by English *a bear of a man*, but this latter type is a highly marked strategy bound to expressivity, whereas DRNA constructions are the most neutral and often the only strategy for noun qualification. Moreover, the head in *a bear of a man* denotes an entity, whereas the head in DRNA constructions denotes a quality.

Crucially, in the Bantu languages that have DRNA constructions, it is not possible to distinguish adjectives from nouns according to the criterion that noun classes are assigned to nouns lexically, and to adjectives via agreement rules. In DRNA constructions, both the class expressed by the qualifier and that expressed by the qualified are lexically assigned. Moreover, the qualified agrees with the qualifier exactly like a genitival modifier with its head, and it is the qualifier that (exactly like the head noun in uncontroversial noun–genitive constructions) determines the behavior of the qualifier–qualified construction in class agreement.

The specificity of DNRA constructions is particularly clear in Eton and neighboring languages. In other Bantu languages spoken in the extreme northwest of the Bantu area, and in some non-Bantu Benue-Congo languages spoken further to the north, the languages become more analytic and the evidence less clear, and the DRNA construction is often in competition with alternative constructions.

Gbaya is another case in point. Although the particularly clear kind of evidence provided by class agreement in Eton or Basaa is not available in Gbaya, Van de Velde concludes that the evidence supporting the recognition of a DRNA construction is particularly strong in Gbaya. He further states that the same applies to the other Ubangian languages he has examined, whereas in the other language families, clear instances of a DRNA construction are only found in a few languages adjacent to the Ubangian languages. By way of a conclusion, he hypothesizes that DRNA arose in the Ubangian languages and spread from there.

2.6. NP coordination

2.6.1. NP coordination and comitative adjunction in Manding languages

The Mandinka preposition *nîŋ* (with an allomorph *ní* conditioned by the nature of the following word) is the usual translational equivalent of English *with* introducing comitative adjuncts, and of English *and* in NP coordination, but is not used for the coordination of other categories. This is a common feature among Sub-Saharan languages, but in some respects, this preposition *nîŋ* and its cognates in other Manding languages show cross-linguistically uncommon properties that contrast with those commonly found in the languages that share with Manding languages the use of a comitative marker to encode NP coordination.

As illustrated by the Wolof preposition *ak* 'with' in (29), the situation commonly found in the languages of Sub-Saharan Africa is that *with*-phrases are found in two distinct constructions in which they encode related but not identical meanings:

- *With*-phrases may immediately follow an NP with which they form a constituent, in which case they encode that the semantic role assigned to the NP in the *with*-phrase is identical to that of the preceding NP), as in (29a).
- *With*-phrases may also occupy the same position as other adpositional phrases in oblique role, in which case they encode a comitative meaning, as in (29b).

(29) Wolof

a. *Jend-al* *ceeb* *ak* *diwlin!*
buy-IMPER rice with oil
'Buy rice and oil!'

b. *Dem-al* *ak* *moom!*
go-IMPER with 3SG
'Go with him!'

(pers.doc.)

By contrast, in Mandinka, it is not possible to distinguish a construction in which *nîŋ* would unambiguously express NP coordination from another in which it would unambiguously mark

comitative adjuncts. The reason is that, contrary to Wolof [*ak* N] sequences, Mandinka [*nîŋ* N] sequences cannot occupy the same postverbal position as other adpositional phrases, and can only be found immediately after a noun phrase with which they form a constituent [N_1 *nîŋ* N_2].

As illustrated by (30), in Mandinka, the [N_1 *nîŋ* N_2] construction can be found with a clearly coordinative meaning in all the positions that can be occupied by NPs in a Mandinka clause: subject (30a), object (30b), complement of a postposition (30c), and genitive (30d). By "coordinative meaning", I mean that the referents of N_1 and N_2 are interpreted as sharing the semantic role assigned to NPs occupying this position.

(30) Mandinka

a. *[Mùsôo-lú nîŋ díndíŋ-ò-lú] tú-tà súwòo kónò.*
woman.D-PL with child-D-PL remain-CPL house.D in
'The women and the children remained at home.'

b. *Ŋá [ñòô níŋ tìyóo] sèné.*
1SG.CPL millet.D with peanut.D cultivate
'I cultivated millet and peanuts.'

c. *À yè kódòo díi [súŋkútòo ní à fúláŋ-ò-lú] là.*
3SG CPL money.D give girl.D with 3SG peer-D-PL POSTP
'He gave money to the girl and her peers.'

d. *Ì fùtá-tà [Fúládúu níŋ Kàabú] nàanéwòo tó.*
3PL reach-CPL Fuladuu with Kaabu boarder.D LOC
'They reached the border between Fuladuu and Kaabu.'

(pers. doc.)

However, as illustrated by (31), [N_1 *níŋ* N_2] sequences can be found in the same syntactic positions in contexts in which it is clear that that the semantic role assigned to NPs occupying the position in question is assigned to N_1 only, and N_2 can only be interpreted as expressing accompaniment or manner.

(31) Mandinka

a. *[Nóosòo níŋ dèenàan-óo] nǎa-tà.*
nurse.D with baby.D come-CPL
'The nurse brought the baby (came with the baby).'

b. *[À níŋ càkôo-lú] yé à lá nàafúlóo kàsáarà.*
3SG with prostitute.D-PL CPL 3SG LK wealth.D squander
'He squandered his wealth with prostitutes.'

c. *[Kàmbàanôo níŋ bòr-óo] nǎa-tà.*
boy.D with running.D come-CPL
'The boy came running.' lit. 'The boy with running came.'

d. *[Súŋkútòo níŋ kùmbóo] nǎa-tà.*
girl.D with crying.D come-CPL
'The girl came in tears.' lit. 'The girl with crying came.'

e. *[Kùcâa ní à lá kùmóo] lè kà fálîŋ.*
sorrel.D with 3SG LK sharpness.D FOC ICPL sprout
'Sorrel sprouts with its sharpness.'

(pers. doc.)

Crucially, N_2 in such [N_1 *nîŋ* N_2] sequences does not behave differently from N_2 in [N_1 *nîŋ* N_2] sequences expressing semantic role sharing. Movement to postverbal position is possible, but only if *nîŋ* is immediately preceded by a pronoun resuming N_2, and this transformation is possible regardless of the precise meaning carried by the construction – compare (32) with (30b) and (30c) above. This constitutes clear proof that in all cases, *nîŋ* N_2 can only exist as part of a [N_1 *nîŋ* N_2] constituent.

(32) Mandinka

a. *ŋ̀á ñǒo*$_i$ *sènè, [à*$_i$ *níŋ tìyôo].*
1SG. CPL millet.D cultivate 3SG with peanut.D
'I cultivated millet, and also peanuts.' lit. 'I cultivate millet, it with peanuts.'

b. *Kàmbàanóo*$_i$ *nǎa-tà, [à*$_i$ *níŋ bòrôo].*
boy.D come-CPL 3SG with running.D
'The boy came running.' lit. 'The boy came, he with running.'

(pers. doc.)

To summarize, *nîŋ* 'with' can only occur in [N_1 *nîŋ* N_2] sequences that have the syntactic status of NPs. In this respect, [N_1 *nîŋ* N_2] sequences are similar to English [N1 and N2] sequences or their equivalent in other European languages. However, semantically, the [N_1 *nîŋ* N_2] construction is not a coordinative construction: the semantic role corresponding to the position occupied by [N_1 *nîŋ* N_2] is assigned to N_1, whereas N_2 is assigned the role of companion of N1. The role of companion does not exclude role sharing with N1 (and consequently, the associative construction of Mandinka can be used as the translation equivalent of English NP coordination), but it does not imply it either, and the precise interpretation of the associative construction entirely depends on semantic and/or contextual factors.

Additional proof that Mandinka [N_1 *nîŋ* N_2] phrases are only superficially similar to English [N_1 and N_2] comes from the fact that [N_1 *nîŋ* N_2] lends itself to manipulations that are not possible with dedicated coordinative constructions. In particular, as shown by (33), N_1 and N_2 can be dissociated in focalization, relativization, and negation.

(33) Mandinka

a. *[Í nîŋ Músáa] bè kúwòo táamándì-lá.*
2SG with Musaa COP problem.D fix-INF
'Musaa and you will fix the problem.'

or ‘You will fix the problem with Musaa.’

b. *[Í-tè lè nîŋ Músáa] bè kúwòo táamándì-lá.*
2SG-EMPH FOC with Musaa COP problem.D fix-INF
‘YOU will fix the problem with Musaa.’

c. *[Í nîŋ Músáa lè] bé kúwòo táamándì-lá.*
2SG with Musaa FOC COP problem.D fix-INF
‘You will fix the problem with MUSAA.’

d. *[í nîŋ mîŋ] bé kúwòo táamándì-lá.*
2SG with REL COP problem.D fix-INF
‘the person with whom you will fix the problem’

e. *[mîŋ nîŋ Músáa] bè kúwòo táamándì-lá.*
REL with Musaa COP problem.D fix-INF
‘the person who will fix the problem with Musaa’

f. *[Í nîŋ Músáa] tè kúwòo táamándì-lá.*
2SG with Musaa COP.NEG problem.D fix-INF
‘Musaa and you will not fix the problem.’
or ‘You will not fix the problem with Musaa.’

(pers. doc.)

2.6.2. A rare type of inclusory coordination in Tswana

Inclusory coordination constructions are constructions consisting of two nominal terms with the following characteristics:

- the first term refers to a group including an individual *I1*;
- the second term refers to an individual *I2*;
- the construction refers to a plural individual whose individual parts are *I1* and *I2*.

In an inclusory coordination construction, the second term of the construction restricts the meaning of the first one rather than extending it, as in ordinary additive coordination constructions.

A classical example of inclusory coordination is Russian *my s toboj* lit. ‘we with you’, to be interpreted as ‘you and I’: by itself, *my* ‘we’ can refer to any group including the speaker, and the second part of the construction restricts the reference of *my* by specifying that the only other member of the group is the addressee. A similar construction is found in some varieties of French, for example *nous deux ma femme* lit. ‘we two my wife,’ to be interpreted as ‘my wife and I’.

Cross-linguistically, inclusory coordination constructions are common with speech act participants in the role of *I1*, and the examples discussed in the general literature on coordination are almost always of this type. It is therefore interesting to observe that Tswana has a construction that fully meets the definition of inclusory coordination formulated above, but in which the first term is a proper name combined with a class prefix (the prefix of class 2a *bó*-) that expresses associative plural when used with proper names.

(34) Tswana

a. *bó-kítsɔ́*
CL2a-Kitso
'Kitso and his companion(s)'

b. *bó-kítsɔ́ lí-m̀pʰɔ́*
CL2a-Kitso with-(CL1)Mpho
'Kitso and Mpho' lit. 'Kitso-and-others with Mpho'

(pers.doc.)

For more details on this construction and on the associative plural marker of Tswana, see Creissels (2016b).

3. Argument structure and valency operations

3.1. Transitivity prominence

Languages differ in the extent to which they make use of transitive coding, in other words, in their degree of transitivity prominence. For example, like English or French, Wolof extends the transitive coding typically found with verbs such as *break* to a verb like *forget* (whose argument structure cannot be described in terms of agent/patient), whereas in Mandinka, *forget* has an extended intransitive construction in which one of the arguments is an oblique argument.

(35) Wolof

a. *Xale b-i toj na weer b-i.*
child CLb-D break PRF.3SG glass CLb-D
'The child has broken the glass.'

b. *Xale b-i fàtte na sama sant.*
child CLb-D forget PRF.3SG my name
'The child has forgotten my name.'

(pers.doc.)

(36) Mandinka

a. *Díndíŋ-ò yè wéeróo tèyí.*
child-D CPL.TR glass.D break
'The child has broken the glass.'

b. *Díndíŋ-ó ñìná-tà ŋ́ kòntóŋ-ò lá.*
child-D forget-CPL.INTR 1SG name-D POSTP
'The child has forgotten my name.'

(pers.doc.)

It has long been known that English or French have a much stronger tendency to employ transitive verbs than for example German or Russian. Say (2014) provides a precise picture of the variation in transitivity prominence across European languages. As regards Sub-Saharan Africa, some precise data are now available due to the Leipzig Valency Classes Project, whose database contains data from 36 languages worldwide, among which four languages of Sub-Saharan Africa: Mandinka, N||ng, Yoruba, and Emai. Haspelmath (2015) discusses the classification of the 36 languages according to their degree of transitivity prominence on the basis of the sample of 80 verb meanings that were systematically collected for all the languages of the project.

Quite obviously, the four languages enumerated above do not constitute a representative sample of the languages of Sub-Saharan Africa. It is nevertheless interesting to observe that three of them are among the top five in terms of transitivy prominence: Emai (2), N||ng (3), and Yoruba (5). Mandinka occupies the 20th position of 36, immediately after Italian, which means that its moderate degree of transitivity prominence is comparable to that of West European languages.

Further investigation will be necessary before putting forward generalizations about the variation in transitivity prominence across Sub-Saharan languages. However, on the basis of my experience with West African languages, my impression is that the very high degree of transitivity prominence exhibited by Yoruba and Emai is more representative of the situation found across West Africa than the moderate degree of transitivity prominence exhibited by Mandinka. The first results of a work in progress on a sample of Atlantic and Mande languages suggest a sharp contrast between a very high degree of transitivity prominence characteristic of Atlantic languages, and a moderate degree of transitivity prominence characteristic of Mande languages. It is tempting to hypothesize a correlation with the contrast between the restricted inventories of adpositions typically found in Atlantic languages and the rich inventories of adpositions found in Mande languages.

3.2. Valency orientation

Nichols et al. (2004) define a typological parameter of valency orientation accounting for the formal treatment of verb pairs such as *die/kill*, *fall/drop*, *break (intr.)/break (tr.)*, etc. Individual languages make variable use of different strategies, among which the following ones are particularly common:

- Augmentation: the transitive member of the pair is derived from the intransitive member, as Mandinka *jăa* ‘become dry’> *jà-ndí* ‘make dry’.
- Reduction: the intransitive member of such pairs is derived from the transitive member, as Joola Fooñi *liw* ‘wake s.o. up’ > *liw-o* ‘wake up (intr.), or Soninke *kárá* ‘break (tr.) > *káré* (*kárá*+*i*) ‘break (intr.).
- Ambitransitivity: the transitive and the intransitive members have the same form, as Mandinka *tèyí* ‘break (tr. & intr.)’, *kúníŋ* ‘wake up (tr. & intr.), *făa* ‘die/kill’
- Suppletion: the two members of the pair are formally unrelated, as Wolof *dee* ‘die’/*rey* ‘kill’.

As discussed by Nichols et al. (2004), some languages show a marked preference for a particular strategy, but this is not necessarily the case, and languages can therefore be

classified as more or less 'transitivizing' or 'detransitivizing': typical transitivizing languages have a marked preference for the augmentation strategy, whereas typical detransitivizing languages show a marked tendency toward the reduction strategy. Russian is a typical detransitivizing language, whereas Japanese is a typical transitivizing language. Across the world's languages, transitivizing languages are common and have a wide geographical distribution, whereas detransitivizing languages are less common.

The language sample used by Nichols et al. (2004) includes ten Sub-Saharan languages: Ewe, Acholi, Efik, Fula, Hausa, Maasai, Ngbandi, Nharo, Somali, and Swahili. They find a marked preference for the transitivizing strategy in Fula and Swahili, and a marked preference for the detransitivizing strategy in Maasai. The other seven Sub-Saharan languages of the sample show no marked preference either for the transitivizing or detransitivizing strategy.

Further investigation will be necessary before putting forward a typology of Sub-Saharan languages with respect to the feature of valency orientation, and I would like to emphasize that this will not be an easy task, since quite obviously, this feature shows no stability within the limits of genetic units. For example, within the Mande family, Mandinka does not use the detransitivizing strategy at all and makes remarkably wide use of the ambitransitive strategy, whereas Soninke makes wide use of the detransitivizing strategy and has relatively few ambitransitive verbs. Similarly, within the Atlantic family, Wolof has a relatively high proportion of ambitransitive verbs, whereas ambitransitive verbs are exceptional in Joola.

3.3. Passives

3.3.1. Active / passive lability (zero-coded passives)

P-labile verbs are verbs that can be used in their underived form either transitively or intransitively with a subject representing the same patient-like participant as the object of the same verb used transitively.

Semantically, two varieties of P-lability must be distinguished: causative / anticausative lability, if the subject of the intransitive construction represents a participant undergoing the same process as the object of the transitive construction, but not necessarily as the result of the action of an agent, and active / passive lability, if the intransitive construction implies the participation of an unexpressed agent.

Cross-linguistically, causative / anticausative lability, illustrated by English *break*, is extremely common, and its existence is widely acknowledged in typological investigations of valency changes, whereas until not long ago, the very possibility of active / passive lability was either ignored or even explicitly denied by typologists working on valency-decreasing derivations (Haspelmath 1990). Arka and Kosmas (2005) on Manggarai (Autronesian) and Lüpke (2005) on Jalonke (Mande) are to the best of my knowledge the first published works that have explicitly argued the case for the recognition of zero-coded passives (aka bare-passives), but this recognition was implicit in many previously published descriptions of languages belonging to various families, both within and outside Africa (for a review, see Cobbinah and Lüpke (2009); see also Hamlaoui (2014) for an analysis of zero-coded passives in Bantu and western Nilotic languages).

The Mande language family shows a particular concentration of languages with more or less productive zero-coded passives, or active / passive lability (Lüpke 2007; Cobbinah and Lüpke 2009). Manding languages illustrate the extreme case of languages that have no strictly

transitive verb, and a very restricted class of A-labile verbs, but in which all the verbs that have a transitive use can also be used intransitively in their underived form with a passive reading.

In language description, the analysis of lability is conditioned not only by the alignment properties of the languages, but also by the existence of a more or less clear-cut distinction between transitive and intransitive predications (Creissels 2014). In Mandinka and other Mande languages, the analysis of lability is facilitated by the rigidity of the Subject-Object-Verb-Oblique constituent order and the total ban on null subjects or objects: in Mande languages, a single NP in preverbal position in assertive or interrogative clauses can only be a subject. Morever, some TAM-polarity markers may have variants conditioned by the transitive vs. intransitive nature of the predicative construction.

For example, in (37b), the absence of any specific passive marking might suggest positing a null subject with an arbitrary reading. However, if *kúlúŋò* were the object in a transitive construction with a null subject, the TAM-polarity marker would be *yè* preceding *kúlúŋò* rather that *-tá* suffixed to the verb, as in the ungrammatical sequence (37c).

(37) Mandinka

a. *Kèwóo yè kúlúŋ-ò dádâa.*
man.D CPL.TR boat-D repair
'The man repaired the boat.'

b. *Kúlúŋ-ò dádàa-tá.*
boat-D repair-CPL.INTR
'The boat was not repaired.'

c. **Ø yè kúlúŋ-ò dádâa.*
CPL.TR boat-D repair

(pers. doc.)

Consequently, (37b) is not a transitive construction with a null subject, but an intransitive construction whose subject (*kúlúŋò*) has the same semantic role as the object of the transitive construction (37a) – in other words, a zero-coded passive.

Decisive proof of the passive nature of the intransitive constructions involved in this active/passive alternation is their ability to include agent-oriented adverbs, such as *fèerèetòo-* 'cleverly' in (38b), since agent-oriented adverbs are impossible in anticausative constructions with inanimate subjects.

(38) Mandinka

a. *Kàmbàanóo yè násóo fèerèetòo-bóŋ kòlóŋ-ò kónò.*
boy.D CPL.TR magic_water.D cleverly-pour well-D inside
'The boy cleverly poured the magic water into the well.'

b. *Násóo fèerèetòo-bôn-tá kòlóŋ-ò kónò.*
magic_water.D cleverly-pour-CPL.INTR well-D inside
'The magic water was cleverly poured into the well.'

(pers. doc.)

In spite of the absence of any specific passive morphology, the construction illustrated by sentences (37b) and (38b) is passive in the sense that the patient is the subject of an intransitive construction in which the agent is syntactically *demoted* without however being *deleted* from argument structure.

In Manding languages, the passive reading of such intransitive clauses is not bound to any particular condition on aspect, mood, or referentiality. Mandinka speakers use them in the same conditions, with the same freedom, and with the same semantic implications, as agentless passive clauses in languages that have canonical and fully productive passive constructions.

There is however an interesting difference between Mandinka and most other Manding languages in the syntactic properties of the zero-coded passive construction. In most Manding languages, intransitive clauses constituting the passive counterpart of a transitive clause may include an oblique representing the agent, as in (39).

(39) Bambara

a. *Wùlû má sògô dún.*
dog.D CPL.NEG meat.D eat
'The dog did not eat the meat.'

b. *Sògô má dún (wùlú fɛ̂).*
meat.D CPL.NEG eat dog.D beside
'The meat was not eaten (by the dog).'

(pers. doc.)

This possibility does not exist in Mandinka. Interestingly, the passive clauses of Mandinka may include obliques marked by the same postpositions as those used to encode the agent in the other Manding varieties (i.e., postpositions whose basic meaning is reference to the personal sphere of an individual), but in the passive clauses of Mandinka, such obliques are interpreted as referring to a person who has some link with the event but does not play an active role in it, or to an involuntary agent, as in (40).

(40) Mandinka

Kódòo dómò-tá ŋ́ fèe.
money.D spend-CPL.TR 1SG beside
'The money was spent without my knowing.'
or 'I spent the money, but I did not do it on purpose.'

(pers. doc.)

3.3.2. A rare type of oblique passive in Joola languages

By *oblique passive*, I mean a construction in which the verb shows the marking typically found in canonical passive constructions, but the subject corresponds to an oblique in the construction of the corresponding non-passive verb form. English *This bed has been slept in* is a classical example.

According to Pierre Sambou (pers. com.), Joola languages have a type of oblique passive, illustrated by (41b), which as far as I know has not been mentioned so far in the literature on passives. In (41b), *e-bool-yu* 'the bowl' in subject position governs verb agreement, but is also resumed by a pronoun in the position it would occupy in the corresponding active sentence.

(41) Kuwaataay

a. *Sana a-ñoofo-a-ñoofo ti e-bool-yu.*
Sana CLa-eat-VFOC-eat in CLe-bowl-CLe.D
'Sana has eaten in the bowl.'

b. *E-bool-yu e-ñoofo-ee-ñoofo ti e-yo.*
CLe-bowl-CLe.D CLe-eat-VFOC.PASS-eat in CLe-PRO
lit. 'The bowl$_i$ has been eaten in it$_i$.'

(Pierre Sambou, pers. com.)

Although this is not a common type of passive construction, it is not difficult to imagine a plausible grammaticalization path. Since impersonal passives (i.e., constructions in which the demotion of the subject is not accompanied by the promotion of any other term) are cross-linguistically very common, one can imagine that the source of this construction was an impersonal passive with an expletive subject marker, something like *EXPL-has been eaten in this bowl*, which in combination with the topicalization of the oblique phrase may have given something like *This bowl, EXPL-has been eaten in it*. Then the topicalized phrase was reinterpreted as a subject, and the expletive index of the impersonal passive construction was replaced by an index expressing agreement with the NP to its left: *This bowl*$_i$ *it*$_i$*-has been eaten in it*$_i$.

3.4. Atypical objects in Soninke

By atypical objects, I mean phrases coded like the P argument of transitive verbs in the basic transitive construction, which however do not refer to participants in the event encoded by the verbal lexeme. The analysis of atypical objects is often difficult in Subject-Verb-Object-Oblique languages with unflagged objects, since in such languages, the distinction between objects and unflagged obliques is not always easy to draw. By contrast, in Mande languages, the absolute rigidity of the Subject-Object-Verb-Oblique constituent order in verbal predication rules out any possible confusion between atypical objects as defined above and semantically similar phrases in their canonical oblique position. In this section, the question of atypical objects is presented through the example of Soninke, but similar constructions have been described in Manding languages.

In Soninke, as in other languages, the syntactic notion of object can be defined with reference to the coding of the patient in the basic transitive construction. As in other languages, the basic transitive construction extends to many verbs that are not, semantically speaking, prototypical transitive verbs, and the participants encoded as the two core terms of a transitive construction are not necessarily a typical agent and a typical patient. For example, in the construction of *ŋàrí* 'see' (42b), the perceiver and the stimulus are encoded exactly like the agent and the patient of a typical transitive verb such as *kárá* 'break' (42a). By contrast,

(42c) illustrates an "extended intransitive" construction in which one of the arguments is encoded like a typical adjunct (i.e., takes the form of an adpositional phrase whose postverbal position contrasts with the immediate preverbal position typical for objects).

(42) Soninke

a. *Lémínè-n dà qóllè-n kárá.*
child-D TR calabash-D break
'The child broke the calabash.'

b. *Lémínè-n dà sámáqqè-n ŋàrí.*
child-D TR snake-D see
'The child saw the snake.'

c. *Ń mùngú dò ké lémíné tòxó-n ŋà.*
1SG forget with DEM child name-D^{LH} POSTP
'I have forgotten the name of this child.'

(pers.doc.)

The position between the subject and the verb, which in Mande morphosyntax unambiguously characterizes objects, may however be occupied by atypical objects that do not represent a participant, and nevertheless are encoded in the same way as typical patients, for example phrases encoding the duration of an activity, as in (43b).

(43) Soninke

a. *Hàatú dà kónpè-n céllà.*
Fatou TR room-D sweep
'Fatou swept the room.'

b. *Hàatú dà kòotá-n mùumâ-n céllà.*
Fatou TR day-D whole-D^{LH} sweep
'Fatou spent the whole day sweeping.'

(pers.doc.)

In Ex. (43b), the atypical object referring to the duration of an activity replaces the canonical object representing the second argument of 'sweep'. The canonical object is absent, and could only be present as an incorporated object, as in (44). Interestingly, as a rule, incorporation requires detransitivization marking on the verb, as in (44b), but the detransitivization marker disappears when an atypical object referring to duration is added.

(44) Soninke

a. *Ń dà súwà-n kárá.*
1SG TR firewood-D break
'I broke firewood.'

b. *Ń cúwá-káré dáàrú.*
1SG firewood-break.DETR yesterday
'I did firewood-breaking yesterday.'

c. *Ń dà kòotá-n mùumâ-n cúwá-kárá.*
1SG TR day-D whole-D^{LH} firewood-break
'I spent the whole day breaking firewood.'

(pers.doc.)

(45) illustrates the behavior of an intransitive verb, which cannot be used transitively with an object referring to a participant, but can nevertheless be found in a transitive construction with an object expressing duration.

(45) Soninke

a. *Ń ŋàtí yérú.*
1SG be_sick last_year
'I was sick last year.'

b. *Ń dà qású-báané wàtí.*
1SG TR month-one be_sick
'I was sick during a whole month.'

(pers.doc.)

Interestingly, some intransitive activity verbs may show a different ending in their transitive construction with a duration phrase in object function.

(46) Soninke

a. *Ń kìsìmá bíré kàmé sìiné.*
1SG grandfather^{LH} live hundred year^{LH}
'My grandfather lived one hundred years.'

b. *Ń kìsìmá dà kàmé sìiné bírá.*
1SG grandfather^{LH} TR hundred year^{LH} live.TR
'My grandfather lived one hundred years.'

(pers.doc.)

(47) illustrates another semantic type of atypical object: intransitive verbs denoting manner of movement, such as *wùrú* 'run' or *tèré* 'walk' cannot only be used transitively with a duration phrase in object function, but also with an object denoting the interval covered. Here again, transitivization may be overtly expressed by a change in the final vowel.

(47) Soninke

a. *Ó dà Qàayí dò Ñóoró nàxá-n tèrá.*
1PL TR Kayes with Nioro interval-D walk.TR
'We walked from Kayes to Nioro.'

b. *Ó dà kílóméetàrá-nú sìkkì wùrá.*
1PL TR kilometer-PL three^{L} run.TR
'We ran three kilometers.'

(pers.doc.)

A third type of atypical object that does not refer to a participant and can feature in the construction of otherwise strictly intransitive verbs is the noun *hó* 'thing', interpreted in this construction as expressing intensity of the activity, as in (48).

(48) Soninke

Lémínè-n ŋá hó qènqè-né.
child-D ICPL thing sleep-GER
'The child sleeps so much.'
lit. 'The child sleeps a thing.'

(pers.doc.)

Interestingly, as illustrated by (49), *hó* 'thing' as an atypical object expressing intensity (or more precisely, quantification over the patientive argument) can also occupy the object slot in the construction of transitive verbs. In this case, as illustrated by (49c), the patientive argument of the transitive verb can be expressed as an oblique phrase headed by the postposition *`dí* 'in'.

(49) Soninke

a. *Múusá wá máarò-n ñígá-ná.*
Moussa ICPL rice-D eat-GER
'Moussa eats/is eating rice.'

b. *Múusá wá hó yígá-ná.*
Moussa ICPL thing eat-GER
'Moussa eats so much.'

c. *Múusá wá hó yígá-ná máarò-n dí.*
Moussa ICPL thing eat-GER rice-D in
'Moussa eats so much rice.'
lit. 'Moussa eats a thing in rice.'

(pers.doc.)

For a more detailed presentation of the atypical objects of Soninke, see Creissels (Forthcoming(a)).

3.5. Experiencers, impersonality, and transitivity

As discussed in Creissels (2008b), across the world's languages, it is relatively common that clauses describing physiological of psychological states or events affecting animate beings have special constructions that depart more or less from canonical verbal predication, and are

often described as impersonal constructions, or constructions with experiencers encoded as non-canonical subjects. Creissels (2008b) gives illustrations from Russian (Europe), Quechua (South America), Tamil (India), and Tobelo (New Guinea). In this respect, there is some evidence that the situation is different in Sub-Saharan Africa.

After surveying various types of impersonal constructions in a sample of Atlantic and Mande languages, Creissels et al. (2015) conclude that all major functional types of impersonal constructions commonly recognized in the languages of the world are present in the languages of their sample, with however a notable exception: they came across no case of constructions that could be analyzed as affective impersonals, i.e., deviations from canonical predication related to the presence of an experiencer in argument structure. Although further investigation would be necessary before deciding to what extent this conclusion could be generalized to other areas or language families of Sub-Saharan Africa, my impression is that the situation described in Creissels et al. (2015) is at least the most common situation across Sub-Saharan Africa.

In Sub-Saharan languages, verbs whose argument structure includes an experiencer tend to simply occur in plain transitive or extended intransitive constructions. Interestingly, affective verbs with a plain transitive construction in which the experiencer is encoded like a typical patient (i.e., as the object), whereas the stimulus is encoded like a typical agent (i.e., as the subject), are particularly common. For example, the Ganja equivalent of *want* is a plain transitive verb (which interestingly is also used with the same construction to express *hurt*) with the stimulus in subject function and the experiencer in object function. The same situation can be illustrated by the Joola Fooñi equivalent of *like*.

(50) Ganja

Gódì *râa-ní.*
(CLu)money tempt-1SG
'I want money.'

(pers. doc.)

(51) Joola Fooñi

Kafɛ *e-suum-on-suum.*
(CLe)coffee CLe-please-1SG-please
'I like coffee.'

(pers.doc.)

Interestingly, *be sick* and *be hungry* are often encoded by means of plain transitive constructions in which *sickness* and *hunger* are encoded as the subject of *catch* (in the case of sickness) or *kill* (in the case of hunger) and the experiencer is encoded as the object. Soninke expresses *I have insomnia* as lit. *Insomnia caught me*, Ganja expresses *I have a headache* as lit. *The head eats me*, and similar idioms are common throughout Sub-Saharan Africa.

(52) Baule

Àwê kùn mín.
hunger kill 1SG
'I am hungry.'

(pers.doc.)

(53) Mandinka

Kíríkíròo yè ŋ́ mùtá.
fever.D CPL.TR 1SG catch
'I have fever.'

(pers.doc.)

(54) Soninke

Yáaxánkáawà-n dà ín lágà.
insomnia-D TR 1SG catch
'I have an insomnia.'

(pers.doc.)

(55) Ganja

B-gɔ́ wɔ̂m-ní.
CLb-head eat-1SG
'I have a headache.'

(pers.doc.)

(56) provides some additional illustrations from the Kru language Newole.

(56) Newole

a. *Klē ɓlá mɔ́.*
hunger kill 1SG
'I am hungry.' lit. 'Hunger kills me.'

b. *Wɔ̄tlō ɓlá mɔ́.*
cold kill 1SG
'I am cold.' lit. 'Cold kills me.'

c. *Ylá ɓlá mɔ́.*
sleep kill 1SG
'I am asleep.' lit. 'Sleep kills me.'

d. *Ná sɔ̄ɔ́ ɓlá mɔ́.*
POSS.1SG arm kill 1SG
'My arm is sore.' lit. 'My arm kills me.'

(Grah 1983: 255)

3.6. Antipassives in "accusative" languages

3.6.1. Introductory remarks

In the long-standing debate about the relationship between antipassive and accusativity/ergativity, a number of Sub-Saharan languages belonging to various families and areas provide crucial evidence against the hypothesis of a privileged relationship between antipassive as a type of valency change and ergativity, and provide strong support to the view that accusative languages may have fully productive antipassive derivations. The languages in question have accusative alignment in core argument coding, and they also have antipassive derivations that only differ from the antipassive derivations found in ergative languages in that (a) they are less visible, since in an accusative language, the coding properties of an A noun phrase converted into the unique core argument S of an intransitive construction do not change,[8] and (b) one of the functions fulfilled by antipassive derivations in some ergative languages (making A's accessible to operations to which P's and S's only have access) has no possible equivalent in accusative languages.

(57) illustrates this situation in Tennet: Tennet uses the same "marked-nominative" case for all subjects (transitive A's and intransitive S's), and requires the addition of a special antipassive suffix to transitive verbs in unspecified-P constructions.

(57) Tennet

a. *Á-dáh dolɛ́c áhát.*
IPF-eat child.NOM asida
'The child is eating asida.'

b. *Á-dáh-ye dolɛ́c.*
IPF-eat-ANTIP child.NOM
'The child is eating.'

(Randal 1998: 245)

Gao Songhay, aka Koyraboro Senni (Heath 1999: 166–167), has a detransitivizing suffix *-a* that, depending on the individual verbs, may encode valency changes of the mediopassive or antipassive type. This latter possibility can be illustrated by *haabu* 'sweep (tr.)' > *haab-a* 'do the sweeping'.

Janic (2013) provides a general survey of antipassive constructions in accusative languages, and a general discussion of this question. In the remainder of this section, I briefly present some Bantu and West African illustrations.

3.6.2. Bantu antipassives

The reciprocal-antipassive syncretism, widely attested outside Africa (in particular among Austronesian and Turkic languages) is also typically found among Bantu languages, where the verbal suffix *-an-* traditionally designated as reciprocal extension has more or less

[8] A, P, and S must be understood as 'agent in the basic transitive construction,' 'patient in the basic transitive construction,' and 'single argument of monovalent verbs,' respectively.

productive uses that depart from the notion of reciprocal and rather fall under the notion of antipassive. In some of them (for example, Tswana), the antipassive uses of *-an-*, although unquestionably attested, have a very low productivity. In others (for example, Rundi), the reciprocal and antipassive uses of *-an-* seem to have a comparable degree of productivity, resulting in a systematic ambiguity between the antipassive and reciprocal readings of *an*-forms with plural subjects, as in (58).

(58) Rundi

a. *Abanyéeshuúle baatukye umwarimu.*
students insulted teacher
'Students insulted the teacher.'

b. *Abanyéeshuúle baatukanye.*
students insulted.RECIP/ANTIP
(a) 'Students insulted each other.' (reciprocal reading)
(b) 'Students insulted [people].' (antipassive reading)

(Ndayiragije 2006: 275)

3.6.3. West African antipassives

Antipassive derivations with a limited degree of productivity are common among Atlantic and Mande languages. For example, Ganja has 11 transitive verbs that cannot be used in a null-object construction, and whose intransitive use with reference to no specific object requires the use of an antipassive form. Five of them involve a special suffix, whereas the antipassive form of the other six verbs is formed by means of a reciprocal or mediopassive suffix. (59) illustrates antipassive derivation with *wɔm* 'eat'.

(59) Ganja

a. *À-wɔ̂m tîw.* vs. **À-wɔ́m-tɛ̀ tîw.*
CLha-eat (CLu)meat CLha-eat-ANTIP (CLu)meat
'He/she ate meat.'

b. *À-wɔ́m-t-ɔ̀.* vs. **À-wɔ́m-ɔ̀.*
CLha-eat-ANTIP-FV CLha-eat-FV
'He/she ate.'

(Creissels and Biaye 2016: 251–252)

The antipassive is more productive in Wolof. It involves a suffix *-e* also used in reciprocal function. (60) illustrates the antipassive use of this suffix.

(60) Wolof

a. *Xaj a ko màtt.*
dog FOC 3SG bite
'A dog bit him/her.'

b. *Xaj b-i d-u màtt-e.*
dog CLb-D ICPL-NEG bite-ANTIP
'[You should not be afraid,] the dog doesn't bite.'
(Nouguier-Voisin 2002: 310)

Interestingly, in Wolof, antipassive *-e* is particularly productive with ditransitive verbs. In that case, it invariably encodes the demotion of the recipient/beneficiary argument. This is consistent with the general tendency of this argument to act as the primary object in the ditransitive constructions of Sub-Saharan languages.

A similar situation is described by Renaudier (2012) for Sereer.

Among Atlantic and Mande languages, Soninke distinguishes itself by the very high degree of productivity of its antipassive derivation. Moreover, in Soninke, the productivity of antipassive derivation relies essentially on the use of a dedicated antipassive suffix.

Soninke has a particularly clear-cut distinction between transitive and intransitive predication, even in comparison with other Mande languages, and very strict constraints on the intransitive use of transitive verbs. With the only exception of a handful of A-labile verbs, transitive verbs in their underived form cannot be found in constructions in which the P argument would not be expressed. The discourse frequency of antipassive constructions in which the verb is overtly marked as detransitivized follows from the fact that, in Soninke, they constitute the usual strategy to encode two-participant events lexicalized as transitive verbs without mentioning the patient. With the only exception of ten A-labile verbs or so, the Soninke verbs that can be used transitively have an antipassive form. A minority of transitive verbs have an antipassive form marked by a multifunction detransitivizing suffix *-i* also found (sometimes with the same verbs) with an anticausative or passive function, but most transitive verbs use a dedicated antipassive suffix.

Soninke has no constraint restricting the use of the antipassive form of transitive verbs to stereotyped activities or habitual events. Antipassive verb forms can refer to specific events, provided no specific patient is mentioned; see (61) below. Most of the time, the participant that would be encoded as the object of the transitive construction is not mentioned at all, but as shown by (61c), constructions in which it is expressed as an oblique are also possible:

(61) Soninke

a. *Hàatú dà yúgó sàará.*
Fatou TR male give_birth
'Fatou gave birth to a boy.'
(transitive construction)

b. *Hàatú sàaré.*
Fatou give_birth.DETR
'Fatou had a baby.'
(antipassive construction with unexpressed P argument)

c. *Hàatú sàaré tì lénñúgó yì.*
Fatou give_birth.DETR with son POSTP
'Fatou gave birth to a son.'
(antipassive construction with demoted P argument)

(pers.doc.)

Interestingly, Soninke also has a productive mechanism of object incorporation which semantically triggers a non-specific reading of the incorporated object, and morphologically implies detransitivization marking on the verb. However, as a rule, incorporation requires the multifunction detransitivizing suffix *–i*, as in (62b), where *gáagè* < *gáagà+i* – even with verbs like *gáagà* whose antipassive form is otherwise formed by means of the dedicated antipassive suffix, as in (62c).

(62) Soninke

a. *À wá yìràamû-n gáagà-ná.*
3SG ICPL cloth.PL-D sell-GER
'(S)he sells (the) clothes.'

b. *À wá yìràn-gáagè-né.*
3SG ICPL cloth-sell.DETR-GER
'(S)he sells clothes.' or 'She does cloth selling.'

c. *À wá gáagá-ndì-ní.*
3SG ICPL sell-ANTIP-GER
'(S)he sells things.' or 'She does selling.'

(pers.doc.)

As regards the origin of the two suffixes involved in Soninke antipassivization, comparative evidence suggests that the multifunction detransitivizing suffix was originally a reflexive marker that developed anticausative/passive and antipassive uses, whereas the dedicated antipassive suffix might be the reflex of a former verb 'do' in an antipassive periphrasis ('do V-ing'); for more details, see Creissels (Forthcoming(b)).

3.7. Non-canonical applicatives: the case of Tswana

3.7.1. Introductory remarks

It is well-known that an important proportion of Sub-Saharan languages makes wide use of the applicative strategy (in contrast to the cross-linguistically more common adpositional strategy) for the licensing of extra-valency NPs. In their canonical use, applicative derivations license the presence of an NP in the syntactic role of object (the applied object) referring to a semantic role that the non-applicative form of same verb cannot assign to an NP in the syntactic role of object.

Most Bantu languages have derived applicative verb forms with a remarkably wide range of uses meeting the standard definition of applicatives, but also have non-canonical uses of the same forms whose relationship to the standard definition of applicative verb forms is

sometimes far from obvious. Unfortunately, with very few exceptions, these non-canonical uses of applicative verb forms are marginalized in Bantu grammars. One can imagine that a better knowledge of this aspect of Bantu morphosyntax might greatly contribute to a better understanding of argument structure in general, and of its interactions with other aspects of clausal syntax. This section, devoted to a discussion of non-canonical uses of Tswana applicatives, summarizes an unpublished paper of mine (Creissels 2004). On similar phenomena in other Bantu languages, see Jerro (2016) and references therein.

3.7.2. The canonical use of Tswana applicatives

Tswana canonical applicatives are obligatory applicatives in the sense that applied objects cannot be analyzed as promoted obliques: they always represent participants that cannot occur in the construction of the same verb in its non-applicative form, even through the mediation of a preposition.

Tswana has multiple-object constructions in which the asymmetry between the objects is minimal, and consequently Tswana applicative constructions do not significantly modify the status of an object already present in the construction of the same verb in its non-applicative form.

The applicative suffix of Tswana is semantically unspecified, in the sense that, by itself, it gives only negative indications about the semantic role of the object it licenses: the applied object may assume any semantic role that the verb in its non-applicative form cannot assign to an object, and that cannot be coded by means of a preposition either. Practically, as illustrated by (63), this means that the interpretation of applicative constructions crucially depends on the lexical meanings of the verb and of the object NP whose presence is licensed by the applicative suffix. For additional illustrations of the semantic flexibility of Tswana canonical applicatives, see Creissels (2002: 409–410).

(63) Tswana

a. *Qʰɔ́sí* *ꜜí-átɬʰɔ́l-éts-í* *mɔ̀-ńná* *bɔ́-χɔ̀ːdù.*
(CL9)king CL9-condemn-APPL.PRF.FV CL1-man CL14-theft
'The king condemned the man for theft.'

b. *Qʰɔ́sí* *ꜜí-átɬʰɔ́l-éts-í* *mɔ̀-ńná* *lɔ̀ː-sɔ́.*
(CL9)king CL9-condemn-APPL.PRF.FV CL1-man CL11-death
'The king condemned the man to death.'

(pers.doc.)

3.7.3. Applicative derivation and the promotion of instrumental adjuncts

In Tswana, participants usually treated in the construction of the non-applicative form of a verb as instrumental adjuncts, i.e., represented by a prepositional phrase headed by the instrumental preposition *ká*, cannot be encoded as applied objects. By contrast, if no agent is mentioned, they can be encoded as subjects of applicative verb forms, see (64).

(64) Tswana

a. *ɔ̃́-nè* *à-àpày-à* *qʰáká* *á-ʃàbà*
CL1-AUX CL1.SEQ-cook-FV (CL9)guinea-fowl CL1.SEQ-flavor-fin
bò-χɔ́bé *ká* *námà* *y-á-y-ɔ̀ːné.*
CL14-porridge with (CL9)flesh 9-LK-9-CL9.PRO
'He cooked the guinea fowl and flavored the porridge with its flesh.'

b. *Nàmà* *í-ʃáb-él-à* *bò-χɔ̂ːbɛ̀.*
(CL9)meat CL9-flavor-APPL-FV CL14-porridge
'Meat is used to flavor the porridge.'

(pers.doc.)

This use of applicative derivation is clearly non-canonical, since in (64b), the subject of the non-applicative form of the verb is suppressed, and the instrumental adjunct is not promoted to the role of object, but to that of subject.

3.7.4. Applicative derivation and the semantic role of locative phrases: general remarks

The use of Tswana applicative verb forms examined in this section has in common with their canonical use that it licenses the presence of a term with a particular semantic role in the construction of the verb. It however departs from the canonical use in that the term in question is not an object NP, but a locative phrase showing no evidence of a syntactic status different from that of ordinary obliques: it cannot be represented by an object marker or converted into the subject of a passive construction, and, more generally, apart from the fact that it cannot be suppressed, it seems to have exactly the same syntactic behavior as locative phrases accompanying non-derived verbs.

In Tswana, locative phrases are not marked for the location vs. source vs. destination distinction, and their semantic role is regulated in the following way: any Tswana verb can combine with a locative phrase expressing the localization of the event, or of a participant in the event, as in (65a); in combination with some movement verbs, locative phrases are assigned the semantic role of destinations, as in (65b); with some other movement verbs, locative phrases are assigned the role of source, as in (65c).

(65) Tswana

a. *Kítsɔ́* *ˈɔ́-bɛ́rɛ́k-à* *kó* *Kàːɲɛ́.*
(CL1)Kitso CL1-travailler-FV LOC (CL1)Kanye
'Kitso is working in Kanye.'

b. *Kítsɔ́* *ɔ́-ìl-é* *kó* *Kàːɲɛ́.*
(CL1)Kitso CL1-go.PRF-FV LOC (CL1)Kanye
'Kitso went to Kanye.'

c. *Kítsɔ́* *ˈɔ́-húdúχ-íl-è* *kó* *Kàːɲɛ́.*
(CL1)Kitso CL1-move-PRF-FV LOC (CL1)Kanye
'Kitso moved from Kanye.'

(pers.doc.)

Interestingly, applicative derivation may modify the semantic roles that verbs assign to locative phrases. Three cases must be distinguished.

3.7.5. Verbs of movement that cannot assign the role of source or destination

Tábóχá 'run' is semantically a verb of movement, but in its non-derived form, it has no semantic role to assign to a locative phrase, which means that the only available interpretation for a locative term in the construction of *tábóχá* in its non-derived form is the default interpretation of location of the event. By contrast, the applicative form *tábóχélà* can assign the role of destination, see (66). The same behavior is observed with *àkòfà* 'hurry,' *fòfà* 'fly,' *fìtà* 'pass,' etc.

(66) Tswana

a. *Kì-tłàà-tábóχ-à kó tsìlêː-ŋ̀.*
1SG-FUT-run-FV LOC (CL9)road-LOC
'I will run on the road.'

b. *Kì-tłàà-tábóχ-él-à kó tsìlêː-ŋ̀.*
1SG-FUT-run-APPL-FV LOC (CL9)road-LOC
'I will run to the road.' [9]

(pers.doc.)

In this particular case (but not in those examined in the following sections), a canonical applicative construction, with *tsìlà* 'road' encoded as the object of a transitive construction, would be possible with the same meaning:

c. *Kì-tłàà-tábóχ-él-à tsìːlà.*
1SG-FUT-run-APPL-FV (CL9)road
'I will run to the road.'

There is an obvious relationship with the fact that, in Tswana, non-derived verbs of movement that assign the role of destination (such as *yà* 'go') have an alternative construction in which the destination is encoded as the direct object of a transitive construction.

3.7.6. Verbs of movement that can assign the role of source

With verbs of movement whose non-derived form assigns the role of source to locative complements, the applicative form has the same formal valency as the non-derived form, but assigns to its locative argument the role of destination, as illustrated in (67) by *húdúχá* 'change one's residence'. Note that, in order to express 'move from A to B,' Tswana must use successively the non-derived form of *húdúχá* introducing the source of movement, and the applicative form of the same verb introducing the destination, see (67c). More generally,

[9] See section 3.7.8 for another possible interpretation of this sentence.

Tswana, like many languages of Sub-Saharan Africa, cannot specify the source and the destination of a movement within the frame of a monoverbal construction.

(67) Tswana

a. *Kì-tɬàà-húdúχ-à kó Kà:ɲé.*
1SG-FUT-move-FV LOC (CL1)Kanye
'I will move from Kanye.'

b. *Kì-tɬàà-húdúχ-él-à kó χàbórô:nì.*
1SG-FUT-move-APPL-FV LOC (CL1)Gaborone
'I will move to Gaborone.'

c. *Kì-tɬàà-húdúχ-à kó Kàɲé*
1SG-FUT-move-FV LOC (CL1)Kanye

kì-húdúχ-él-ì kó χàbórô:nì.
1SG-move-APPL-FV LOC (CL1)Gaborone
'I will move from Kanye to Gaborone.'

(pers.doc.)

3.7.7. Verbs that do not express movement

Verbs that do not express movement freely combine with locatives expressing the location of the event or of a participant, as already illustrated by (65a) above, but the use of the applicative form is obligatory to license the presence of a locative whose semantic role departs more or less form the mere indication of a location. For example, Tswana syntax is sensitive to the difference in the semantic role of *in the yard* and *in the big pot* in *She is cooking porridge in the yard* / *She is cooking porridge in the big pot*. In the first sentence, *in the yard* expresses nothing more than the location of the event, whereas in the event represented by the second sentence, the pot contains the porridge, which justifies coding it as a locative, but it also plays the role of an instrument in the cooking event. In other words, the spatial relation between the pot and the porridge is not accidental; it follows from the role they play in the cooking event. Consequently, in the Tswana equivalent of *She is cooking porridge in the yard*, the verb *cook* can remain in its non-derived form, whereas in the equivalent of *She is cooking the porridge in the big pot*, the verb *cook* must be in the same applicative form as when, for example, a noun phrase referring to a beneficiary is added to the construction of this verb, and the applicative derivation must be reiterated in order to make it possible to mention both the vessel used to cook the porridge and the beneficiary of the cooking event, see (68).

(68) Tswana

a. *Lòrátɔ́ ˈɔ́-tɬáá-àpày-à mɔ̀-tɔ̀:χɔ́.*
(CL1)Lorato CL1-FUT-cook-FV CL3-porridge
'Lorato will cook the porridge.'

b. *Lòrátɔ́* *ˈó-tɬáá-àpɛ̀-èl-à* *b-aná* *mɔ́-tɔ̀ːχɔ́.*
(CL1)Lorato CL1-FUT-cook-APPL-FV CL2-child CL3-porridge
'Lorato will cook the porridge for the children.'

c. *Lòrátɔ́* *ˈó-tɬáá-àpɛ̀-èl-à* *mɔ̀-tɔ̀χɔ́*
(CL1)Lorato CL1-FUT-cook-APPL-FV CL13-porridge
mó *pìtsé-ŋ̀* *é* *ˈtɔ̂ːnà.*
LOC (CL9)pot-LOC CL9.LK (CL9)big
'Lorato will cook the porridge in the big pot.'

d. *Lòrátɔ́* *ˈó-tɬáá-àpɛ̀-èl-èl-à* *b-aná* *mɔ́-tɔ̀χɔ́*
(CL1)Lorato CL1-FUT-cook-APPL-APPL-FV CL2-child CL3-porridge
mó *pìtsé-ŋ̀* *é* *ˈtɔ̂ːnà.*
LOC (CL9)pot- LOC CL9.LK (CL9)big
'Lorato will cook the porridge for the children in the big pot.'

(pers.doc.)

(69) provides additional illustrations of the obligatory use of applicative verb forms of verbs that do not express movement combined with a locative phrase referring to a participant whose role implies a spatial relation with another participant, or more generally, a locative phrase whose semantic role is not reduced to mere location.

(69) Tswana

a. *Dì-qʰòmɔ́* *ˈdí-nʷ-él-à* *mó* *mɔ̀-kórɔ̂ːŋ̀.*
CL8/10-cow CL8/10-drink-APPL-FV LOC CL3-*mokoro*-LOC
'Cows drink from a *mokoro.*' (a tree trunk carved in the shape of a canoe)

b. *Rí-kʷál-él-à* *mó* *pámpírîːŋ̀.*
1PL-write-APPL-FV LOC (CL9)paper-LOC
'We write on paper.'

(pers.doc.)

Instruments usually represented by locatives in this type of construction by virtue of the spatial relation they necessarily have with another participant share with more typical instruments (encoded by means of the instrumental preposition *ká*) the possibility of being encoded also as subjects of applicative verb forms, as illustrated by (70), to be compared with (64) above.

(70) Tswana

a. *Mɔ̀-sádí* *ɔ́-nè* *à-tsʰɔ̀l-èl-à* *bɔ̀-χɔ́bɛ́*
CL1-woman CL1-AUX CL1-dish_out-APPL-FV CL14-porridge
mó *mì-χópɔ̂ːŋ̀.*
LOC CL4-wooden_bowl-LOC
'The woman dished out the porridge into the wooden bowls.'

b. *Mò-χópó* *ˈó-tsʰól-él-à* *bò-χɔ̂ːbɛ̀.*
CL3-wooden_bowl CL3-dish_out-APPL-FV CL14-porridge
'The wooden bowl is used to dish out porridge.'

(pers.doc.)

Similarly, 'the *mokoro* used to water cows' is *mòkórɔ̀ ó ˈónʷélàŋ́ díqʰòmó́* lit. 'the *mokoro* that drinks.APPL cows,' 'coffee-cup' is *kópì é ˈínʷélàŋ́ ˈkófî* lit. 'the cup that drinks.APPL coffee,' 'room used to do the cooking' is *ntlò é ˈíápéɛ̀làŋ́* lit. 'the room that cooks.APPL,' etc.

3.7.8. Applicative derivation and the focalization of locative phrases

In constructions including a locative phrase that does not necessarily trigger the use of the applicative form of the verb, the applicative form of the verb can be used to focalize the locative phrase, without any change in the construction or in the semantic roles. Interestingly, this use of the applicative derivation is strictly limited to constructions including a locative phrase whose semantic role does not trigger the use of the applicative form of the verb. It constitutes an alternative to cleft constructions, which are in Tswana the standard way to express focalization.

For example, in (66) above, repeated here as (71), the second sentence is in fact ambiguous between an interpretation according to which the applicative suffix codes a change in the role-assigning properties of *tábóχá* ('I will run *to* the road [not *on* the road]') and another interpretation according to which the applicative suffix codes the focalization of a locative phrase without modifying its semantic role of location.

(71) Tswana

a. *Kì-tɬàà-tábóχ-à* *kó* *tsìlêːŋ̀.*
1SG-FUT-run-FV LOC (CL9)road-LOC
'I will run on the road.'

b. *Kì-tɬàà-tábóχ-él-à* *kó* *tsìlêːŋ̀.*
1SG-FUT-run-APPL-FV LOC (CL9)road-LOC
(a) 'I will run to the road.'
(b) 'I will run ON THE ROAD (and nowhere else).'

(pers.doc.)

This ambiguity is general with verbs of movement that must be used in the applicative form in order to be able to assign the role of destination to locative phrases: the same applicative form can always be used to focalize a locative phrase in the role of location. But with verbs whose applicative form cannot be used to assign the role of destination to a locative phrase that otherwise would be interpreted as expressing location, the focalization of a locative phrase is the only possible function of an applicative verb form used in a construction identical to that of the non-applicative form of the same verb. (72) illustrates applicative forms whose only possible interpretation is that they focalize a locative phrase expressing location. In Tswana, contrary to what could suggest the use of the applicative derivation with verbs such as *tábóχá*, an andative interpretation of the applicative form of verbs that do not express movement is not possible.

(72) Tswana

a. *Lòrátɔ́* *ˈó-ápɛ́-èl-à* *mó* *dʒáràtêː-ŋ̀.*
(CL1)Lorato CL1-cook-APPL-FV LOC (CL9)yard-LOC
'Lorato does the cooking IN THE YARD.'

b. *Mò-ńnà* *w-á-mí* *ˈó-sw-éts-ì* *kó* *mò-ráfôː-ŋ̀.*
CL1-man CL1-LK-1SG CL1-die-APPL-PRF-FV LOC CL3-mine-LOC
'My husband died IN THE MINE.'

c. *Kì-tsál-étsʷ-ì* *kó* *Kàːɲɛ́.*
1SG-give_birth-APPL-PRF-PASS-FV LOC Kanye
'I was born IN KANYE.'

d. *B-ànà* *b-á-tlàdí* *ˈbá-áɲ-él-á* *lɔ́-ràtlêː-ŋ̀.*
CL2-child CL2.LK-(CL9)thunder CL1-suck-APPL-FV CL11-noise-LOC
'The sons of the thunder suck IN THE NOISE.' (proverb)

(pers.doc.)

3.7.9. Concluding remarks

In Tswana (and also in many other Bantu languages, cf. Jerro (2016)), the same applicative marker occurs both in contexts in which it fulfills valency-changing functions without any particular discursive implication and in contexts in which it has a purely discursive function, without triggering any change in valency. In the present state of Tswana, it seems difficult to propose a unified definition of the syntactic and pragmatic uses of this marker. It is particularly puzzling that the focalizing function of the applicative marker is strictly limited to locative phrases. There is however a possible connection between this duality in the uses of the applicative verb forms of Tswana and several other syntactic phenomena.

In Tswana, object NPs precede obliques, and in multiple-object constructions, objects relatively higher in the animacy hierarchy obligatorily precede those that stand lower, and violations of these constraints generally result in agrammaticality, with however an interesting exception: objects and obliques can be questioned *in situ*, but interrogative pronouns and adverbs can also be placed immediately after the verb, even if this contradicts the principles that govern the linear order of objects and obliques in the corresponding declarative clauses, see (73).

(73) Tswana

a. *Kì-bɔ́ŋ-í* *mò-ńnà* *y-ó* *máàbâːnì.*
1SG-see.PRF-FV CL1-man CL1-DEM yesterday
'I saw this man yesterday.'

b. **Kì-bɔ́ŋ-í* *máàbání* *mò-ńnàː* *y-ó.*

c. *ǒ́-bɔ́ŋ-ì* *líŋ́* *mò-ńnàː* *y-ó?*
2SG-see.PRF-FV when CL1-man CL1-DEM
'When did you see this man?'

(pers.doc.)

This variation in the constituent order in clauses including interrogative words has no semantic correlate, but it is reasonable to think that, given the inherent focality of interrogative words, it reveals a dual status of the immediate postverbal position. This position is quite obviously the position normally assigned to NPs syntactically assimilated to the patient of prototypical transitive verbs, but its behavior in interrogative sentences suggests to recognize it also as (the vestige of) an IAV focus position:[10] in limited conditions, a constraint assigning the immediate postverbal position to a focalized constituent overrides the constraint assigning it to an object NP standing relatively high on the animacy hierarchy scale.

This possibility of using the IAV position for particular discursive purposes rather than assigning it automatically to a particular argument is confirmed by the existence of the inversion construction illustrated in (74).[11] Interestingly, interrogative subjects are ungrammatical in the canonical subject position, but can occur as inverted subjects, as in (74c) and (74d).

(74) Tswana

a. *Bà-símàní* *ꜜbá-tɬáà-bîːn-à.*
CL2-boy CL2-FUT-dance-FV
'The boys will dance.'

b. *χó-tɬáà-bín-á* *bà-símàːní.*
EXPL-FUT-dance-FV CL2-boy
'There will be a dance performed by (the) boys.'
(lit. 'There will dance boys.')

c. *χó-tɬáà-bín-á* *ꜜbó-mâːŋ̀?*
EXPL-FUT-dance-FV CL2-who
'Which persons will dance?'
(lit. 'There will dance which persons?')

d. **Bó-máŋ́* *ꜜbá-tɬáà-bîːn-à?*
CL2-who CL2-FUT-dance-FV
(pers.doc.)

The function of the inversion construction with an expletive class 17 index in the verb form is subject detopicalization. This is a presentational construction encoding that the argument which otherwise would be encoded as a preverbal subject refers to new information. In Tswana, interrogative words cannot function as canonical subjects, because of a general ban on non-topical subjects, but the inversion construction can be used to get round this constraint.

A handful of Tswana verbs are attested with another inversion construction, clearly residual in Tswana (but productive in other Bantu languages), whereby the subject of the non-inverted construction moves to IAV position, and the role of subject is taken over by an NP referring to a participant encoded as a locative in the non-inverted construction.

[10] The discussion on focus positions in Bantu syntax will be resumed in Section 6.1.
[11] For a detailed analysis of this construction, see Creissels (2011).

(75) Tswana

a. *Mà-dí* *á-ts^{w}-à* *mó* *ǹt^{h}ô꞉-ŋ̀.*
CL6-blood CL6-come from-FV in (CL9)wound-LOC
'The blood is flowing out from the wound.'

b. *Ǹt^{h}ɔ́* *ˈí-ts^{w}-á* *mà꞉-dí.*
(CL9)wound CL9-come_from-FV CL6-blood
'The wound is bleeding.' lit. 'The wound flows out blood.'

(pers.doc.)

(76) Tswana

a. *Ɗàkà* *y-á-sì-ts^{w}ánà* *ˈí-áχ-íl-è*
(CL9)doctor CL9-LK- CL7-Tswana CL9-settle-PRF-FV

mó *mó-tsì-ŋ̀* *lí-bâ꞉-t^{h}ò.*
in CL3-village-LOC with-CL2-person
'The traditional doctor lives in the village with the people.'

b. *Lì-fáts^{h}ì* *l-é* *ˈlí-áχ-íl-é* *Bà-sâ꞉r^{w}à.*
CL5-territory CL5-DEM CL5-settle-PRF-FV CL2-San
'This territory is inhabited by San.' lit. 'This territory settles San.'

(pers.doc.)

Here again, as reflected in the translations, the demotion of the subjects of sentences (a) demoted to IAV position is motivated by a change in their discursive role.

To conclude, applicative derivation and placement of constituents in immediate postverbal position in constructions that trigger no morphological marking on the verb share an important particularity: both are crucially involved in the particular way the general notion of object is codified in Tswana morphosyntax, but both have uses that cannot be described adequately with reference to the notion of object only, and thus necessitate taking into account discursive notions. A clue to this puzzle must probably be sought in an ancient state of Bantu syntax in which constituent order was less grammaticalized and more sensitive to discursive variations than in modern Bantu languages, and in the following two principles governing the most basic aspects of the syntactic organization of languages:

(a) As a core term of transitive clauses, the direct object shares with the subject the property of representing a participant in the event that has intrinsically a certain degree of salience.
(b) As opposed to the subject, which in transitive clauses typically represents the initiator of the event, and consequently tends to be taken as the initial term from the point of view of communicative dynamism too, the object is characterized by a lesser degree of topicality. (cf. Dalrymple and Nikolaeva 2011).

However, before trying to evaluate the possible diachronic scenarios (the one according to which the use of applicative derivation as a focalizing device would be an innovation of some

Bantu languages, as suggested by current Bantu reconstructions, and the one according to which a suffix originally involved in the expression of information structure got syntacticized to a considerable extent), it would be crucial to gather more data on the focalizing use of applicative derivation across the Bantu language family, and possibly also in other language families having applicatives.

3.8. A rare type of valency operator: the possessive voice of Wolof

Wolof has a particularly rich and original system of valency changing derivations, described in detail by Nouguier (2002). This system includes a suffix *-le* encoding a type of valency change that had not been described before in any other language as encoded by a dedicated marker: by taking this suffix, intransitive verbs become transitive, the subject of the non-derived intransitive verb is demoted to object, and the subject in the construction of the derived verb represents the possessor of the object. To put it somewhat differently, an additional argument with the semantic role of possessor is introduced in subject position, whereas the object of the derived possessive verb cumulates the role of possessee and the semantic role assigned to the subject in the non-derived construction.

(77) Wolof

a. *Woto bi gaaw na.*
car CLb-D be_fast PRF.3SG
'The car is fast.'

b. *Sàmba gaaw-le na woto.*
Samba be_fast-POSS PRF.3SG car
'Samba has a fast car.'

(Voisin-Nouguier 2010: 383)

In (77a), the subject is the theme argument of the monovalent verb *gaaw*. In (77b), the possessive suffix *-le* triggers the following change in argument structure: a new participant (Sàmba) with the semantic role of possessor takes the syntactic role of subject; the participant designated as *woto* 'car' occurs with the same semantic role of theme, but is demoted to object position and shows all the properties of an object (for example, the possibility of being pronominalized by means of an object clitic); moreover, it is assigned the additional semantic role of possessee. In other words, derived possessive verbs occur in a transitive construction Subject Verb-le Object that can be glossed as 'Subjecy is the possessor of an Object that has the property expressed by Verb'.

This derivation has a valency-increasing effect, which however differs from that induced by causative or applicative markers, cross-linguistically the commonest types of valency-increasing operators. The possessive derivation affects the semantic role assigned to the subject, which excludes analyzing it as a variety of applicative, but the semantic role assigned to the subject in the derived construction cannot be characterized in terms of causation either.

The productivity of the possessive suffix *-le* is limited to a class of intransitive verbs assigning non-agentive roles to their subject, such as *dee* 'die' or *réer* 'get lost'. It is particularly common with verbs expressing meanings that, cross-linguistically, tend to be encoded by adjectives, such as *rafet* 'be beautiful', *baax* 'be good'.

(78) Wolof

a. *Baax-le* *na* *ay* *téeré.*
be_good-POSS PRF.3SG INDEF-PL book
'He has good books.'

b. *Góor* *g-ii,* *moo* *dee-le* *jabar.*
man CLg-DEM SFOC.3SG die-POSS wife
'This man's wife is dead.'

c. *Maa* *réer-le* *xar.*
SFOC.1SG be_lost-POSS sheep
'My sheep got lost.'
(French: 'J'ai un mouton de perdu')

(Voisin-Nouguier 2010: 384)

Typologically, it is worth noting that other languages have derived verbs encoding a possessive relationship between subject and object. For example, Japanese has non-canonical passives expressing a possessive relationship between the participants encoded as the subject and the object of a passive verb form, as in (79), and Bantu languages use a combination of applicative and passive derivations, as illustrated by (80).

(79) Japanese

Watakushi-wa *hon-o* *tor-are-ta.*
1SG-TOP book-ACC take-PASS-PAST
'I had my book taken.' (lit. 'I was taken a book.')

(Martin 1956:400–401)

(80) Tswana

Ba-tho *ba-š-el-w-a* *ke* *ma-ntlo.*
CL2-person CL2-burn-APPL-PASS-FV by CL6-house
'People's houses are burning.' (lit. 'People are burnt-for by houses.')

(pers.doc.)

What is particular in the case of Wolof is the use of a specific suffix that does not lend itself to any decomposition within the frame of a synchronic analysis.[12]

4. Clause structure

4.1. Multiple transitive coding (symmetrical voices): The case of Uduk

In many languages, the coding of the core arguments of transitive verbs is not determined uniquely, but in most of the languages that have alternative constructions of transitive verbs,

[12] See Nouguier-Voisin (2002) for the discussion of a possible diachronic analysis of possessive *-le*.

there is evidence supporting the analysis of this variation as an alternation between the basic transitive coding and one or more constructions involving detransitivization. This is particularly obvious in the case of constructions (irrespective of whether they involve morphological coding on the verb or not) that semantically imply that the agent is removed from the event structure: anticausative constructions, P-oriented resultatives. There are also less obvious cases in which the event structure is not affected, but the status of one of the alternative constructions as the basic transitive construction can nevertheless be established on the basis of the following two criteria: the basic transitive construction is less marked than the other(s) in terms of discursive or semantic conditioning (and consequently much more frequent in texts), and the morphosyntactic properties of the alternative construction(s) of core transitive verbs provide evidence of demotion of either the agent (passivization) or the patient (antipassivization).

There are, however, problematic situations in which no obvious candidate for the status of basic transitive construction emerges. I refer to them as *multiple transitive coding*. The case of the languages with the Philippine-type of voice system has been widely discussed in the literature, but other languages may have alternative constructions of transitive verbs expressing alternative perspectivizations of the event comparable to those expressed by passive or antipassive derivations, without however clear evidence that one of the alternative constructions should be considered as basic (or more "transitive") and the other(s) as detransitivized variants. This includes in particular the inverse systems with a direct/inverse alternation for interactions between third persons (Haude and Zúñiga 2016).

Uduk is a case in point. In this language, the unique argument of monovalent verbs (S) is invariably in immediate preverbal position, devoid of case marking and cross-referenced on the verb. Obliques follow the verb, or precede S in the case of topicalization.

(81) Uduk

à *'cí* *'kúṯ-úd.*
CL2 child cough.IPF-3SG
'The child is coughing.'

(Killian 2015: 218)

Transitive verbs have two alternative constructions, designated by Killian (2015) as "A-voice" and "O-voice". Although the choice between these two voices may be functionally similar to the choice between the basic transitive construction and a detransitivized variant (passive or antipassive) in other languages, the position defended by Killian (2015) is that both are transitive.

In the A-voice, the agent of typical transitive verbs occupies the immediate preverbal position. It is in the same absolutive case as S in intransitive predication, whereas P in postverbal position is marked for the accusative case if it belongs to the gender designated by Killian as "class 2". Class 1 objects are in the absolutive case but trigger a change in the cross-referencing of A: A is cross-referenced for all persons with class 2 P's, whereas class 1 P's inhibit the cross-referencing of A in all persons except for 1SG, 1PL, and INCL.

(82) Uduk

Wàthí? 'cíth-í'd ā yí'd.
man cut.PF-3SG ACC.CL2 skin
'The man cut the skin.'

(Killian 2015: 218)

In the O-voice, A is case-marked with the ergative case and is always in immediate postverbal position. There is no argument cross-referencing on the verb. P is usually found in immediate preverbal position, but its position is relatively flexible.

(83) Uduk

Tāshá wò'c mà 'ká.
snake bite.IPF ERG.CL2 dog
'The dog bit the snake.'

(Killian 2015: 218)

Consequently, as regards case-marking, the A-voice shows accusative alignment with intransitive predication, whereas the O-voice shows ergative alignment. As regards argument indexation, no straightforward alignment relationship can be recognized between intransitive predication and either variant of transitive predication.

4.2. Core argument flagging and indexation

4.2.1. Co-argument sensitivity in core argument flagging: the case of Ik

Joint A/P coding (or co-argument-sensitivity in A/P coding) refers to transitive coding systems in which the coding characteristics of A and P cannot be described separately, because the nature of one of the core terms of the transitive construction conditions the coding of the other.

In this respect, there is a sharp contrast between flagging and indexation: joint A/P flagging is quite exceptional, whereas joint A/P indexation is relatively common.

In systems in which both A and P are indexed, disjoint indexation means that there is a dedicated slot for A indexes, another dedicated slot for P indexes, and that they are filled independently from each other. Quite obviously, many indexation systems do not meet this characterization. The notion of joint A/P indexation subsumes hierarchical A/P indexation, direct/inverse systems, and A/P indexation by means of portemanteau indexes. The joint indexation of A and P seems to be less common among Sub-Saharan languages than in some other parts of the words. However, portmanteau indexes can be found in some of the languages that have P indexation, for example in Basari (Perrin Forthcoming).

In contrast to joint A/P indexation, joint A/P flagging (i.e., situations in which the flagging of either A or P depends on the intrinsic characteristics of the co-argument) is extremely rare at world level. The two cases of joint A/P flagging I am aware of are Sahaptin (a language of the Pacific Northwest of the United States), with an ergative case used only when P is first or second person, and Ik.

Interestingly, Ik is so to say the mirror image of Sahaptin, since the joint A/P flagging system of Ik lies in the fact that the accusative case is used only when A is third person (König 2002).

4.2.2. Case-marked subjects or objects unexpected from a genetic or areal perspective

In this section and the following one, I briefly present some recently published or so far unpublished data that require emending some of the generalizations about core argument flagging and indexation put forward by Creissels et al. (2008).

It is well known that, in African languages, case-marked subjects or objects are not distributed similarly among different phyla. They are quite widespread in Nilo-Saharan and Afroasiatic languages, but uncommon in Niger-Congo and almost inexistent in Khoisan languages. In Niger-Congo as delimited by Greenberg, one can find case-marked subjects or objects in Kordofanian languages, in some Bantu languages with tone cases, in some Kwa languages, and in some Dogon languages, but until very recently, no case marking of subjects or objects had been mentioned in Atlantic and Mande languages.

As regards Atlantic languages, Renaudier (2012) describes a system of differential object marking in Sereer that is quite unexpected both genetically and areally, but in all respects conforms to the regularities observed in differential object marking systems cross-linguistically.

The case of Soninke (Mande) is even more interesting in that it illustrates the presence of a differential subject marking system (which is much less common typologically than differential object marking) in a language family in which no instance of case marking of subjects or objects has been signaled so far.

In Soninke, interrogative words and focalized NPs in subject function (in transitive as well as intransitive clauses) are obligatorily flagged by a special enclitic *-n* (glossed SBJF for 'subject flag'). This enclitic never occurs with subjects other than interrogative words or focalized NPs, and it cannot attach to interrogative words or focalized NPs in functions other than subject either. This is consequently a quite clear instance of differential subject marking. Moreover, its conditioning fully confirms the typological regularities observed by Fauconnier and Verstraete (2014) in differential subject marking.

(84) shows that non-focalized subjects or objects obligatorily remain unflagged (84a), whereas the introduction of the focus particle *`yá* triggers the use of *-n* if the focalized NP fulfills the subject function (84b), but not if it fulfills the object or oblique function.

(84) Soninke

a. *Ó dà Múusá qírí.*
1PL TR Moussa call
'We called Moussa.'

b. *Ó yà-n dà Múusá qìrì.*
1PL FOC-SBJF TR Moussa call^{L}
'WE called Moussa.'

c. *Ó dà Múusá yà qìrì.*
1PL TR Moussa FOC call^{L}
'We called MOUSSA.'

d. *Ó dà Múusá qírí Dénbà yá dànŋá.*
1PL TR Moussa call Demba FOC for
'We called Moussa FOR DEMBA.'

(pers.doc.)

(85) illustrates the use of the subject flag *-n* with interrogative words.

(85) Soninke

a. *Kó-n dà Múusá qìrì?*
who-SBJF TR Moussa call^{L}
'Who called Moussa?'

b. *Qá dà kó qìrì?*
2PL TR who call^{L}
'Whom did you call?'

c. *Qá dà Múusá qírí kó dànŋá?*
2PL TR Moussa call who for
'For whom did you call Moussa?'

(pers.doc.)

4.2.3. Differential object indexation

Creissels et al. (2008) propose a distinction between purely discourse-dependent object indexes (whose presence depends on the topicality of the object argument, and which normally do not co-occur with a co-referent NP) and object indexes whose presence may be obligatory, depending on some intrinsic characteristics of the object argument, even if a co-referent NP is present. I would like to add here that this second type of object indexation is common across Sub-Saharan Africa, and that, in such systems, the general trend is that animate objects tend to be obligatorily indexed, whereas the indexation of inanimate objects is either subject to discourse conditions or even impossible.

Basari is a typical illustration of this tendency: according to Perrin (Forthcoming), in Basari, animate objects are obligatorily indexed, whereas inanimate objects cannot be indexed.

4.2.4. A typologically rare configuration in argument indexation: object indexation in !Xoon

In a general typology of core argument flagging, the predominant tendency across the world's languages that have some contrast in core argument flagging is quite clearly unflagged A/S vs. flagged P. Quite symmetrically, in a general typology of core argument indexation, the predominant tendency is indexed A/S vs. unidexed P. In other terms, languages tend to case-mark objects rather than subjects, and to cross-reference subjects rather than objects.

It is well known that the preference for case-marked objects is contradicted by a significant proportion of the Sub-Saharan languages that have contrasts in core-argument flagging, since the so-called "marked-nominative" pattern of case-marking (in which case-marked A/S's contrast with P's devoid of case marking) is quite common in Africa (König 2008).

As regards core argument indexation, the indexation of objects only is an extremely rare pattern at world level, but interestingly, according to Kießling (2008), !Xoon illustrates the typologically exceptional pattern in which A/S arguments (subjects) are not indexed, whereas P arguments (objects) are obligatorily indexed – Ex. (86).

(86) !Xoon

a. *Ńsí n|ā-è n‡àhrè !xā-ē ǂ'ú-ē.*
1SG IPF see-CL3 sheep.SG.CL3 big.SG-CL3 one-CL3
'I see one big sheep.'

b. *Ńsí n|ā-àn n‡àhnn !xām-ān.*
1SG IPF see-CL2b sheep.PL.CL2b big.PL-CL2b
'I see big sheep.'

(Kießling 2008: 226)

4.3. Uncommon types of constituent order and syntactically conditioned variations in constituent order

4.3.1. Introductory remarks

The proportion of languages with a syntactically flexible constituent order is much lower among African languages than at world level. Extreme cases of flexible word order as attested for example in Russian, Basque, or Hungarian, are extremely rare (if attested at all) in Sub-Saharan African. Some interesting cases of pragmatically conditioned alternations in constituent order will be commented in Section 6 on information structure, but the question dealt with in this section is that of alternations in constituent order that have no discourse function.

As rightly observed by Güldemann (2007), OV~VO alternations are relatively common in the languages of the Sudanic belt, but I would like to add that there are some interesting differences between the eastern and the western parts of this area. Güldemann (2007) reviews data from Benue-Congo languages, highlighting the role of information structure in VO~OV alternations. Objects preceding the verb can also be found in some Atlantic languages (such as Sereer) that have a clause-initial or pre-verbal focus position, but in Atlantic languages, the fronting of focalized objects is typically conditioned by the choice of special focalizing verb forms.

In this section, I concentrate on OV~VO alternations found in West African languages families, which are markedly different in that, in the languages in question, there is no evidence of a possible involvement of information structure, and all the available evidence points to strictly syntactic developments.

This question cannot be dissociated from that of the typologically uncommon Subject-Object-Verb-Oblique constituent order, since languages with a rigid and invariable Subject-Object-Verb-Oblique constituent order show a particular concentration in the very heart of the part of West Africa where TAM/polarity-driven OV~VO alternations are common. Heine (1976) argued that, typologically, they must be conflated into his "Type B," and the hypothesis of a historical link between these two phenomena has been widely accepted, most of the time without the slightest discussion. I'll try to show that things are less

straightforward, and that the historical significance of the coexistence of these two phenomena within the same geographical area should be re-evaluated.

This section summarizes and updates Creissels (2005).

4.3.2. The Subject-Object-Verb-Oblique constituent order in Mande languages

Textbook accounts of constituent order typology suggest that the notion of SOV type of constituent order is more or less equivalent to the notion of verb-final language. It is true that, in most languages, objects and obliques tend to occupy the same position either before or after the verb, and differ only in a tendency of objects to stand closer to the verb, so that SVO, SOV, VSO and VOS can generally be considered equivalent to Subject-Verb-Object-Oblique, Subject-Oblique-Object-Verb, Verb-Subject-Object-Oblique and Verb-Object-Oblique-Subject, respectively. This however does not hold for languages in which, in pragmatically neuter clauses, the core syntactic terms of the prototypical transitive construction precede the verb, and all obliques follow it (Subject-Object-Verb-Oblique constituent order), as illustrated by Soninke in (87).

(87) Soninke

a. *Fàatú dà tíyè-n qóbó sáxà-n ŋá.*
Fatou TR meat-D buy market-D POSTP
'Fatou has bought meat at the market.'

b. *Fàatú dà tíyè-n ñígá-ndí lémínè-n ŋá.*
Fatou TR meat-D eat-CAUS child-D POSTP
'Fatou had the child eat meat.'

c. *Ó dà qálìsí-n kínì à yí.*
1PL TR money-D give 3SG POSTP
'We gave him/her the money.'

(pers.doc.)

The Subject-Object-Verb-Oblique type of constituent order is admittedly one of the morphosyntactic features concerning a proportion of African languages significantly higher than that observed at world level. It shows a particular concentration in West Africa, where in addition to the whole Mande family, in which it is the only possible constituent order, it is found also in some languages belonging to the neighboring Gur and Songhay families. By contrast, the canonical variety of the SOV pattern (with the verb in clause-final position, and other features commonly associated with OV order) is extremely rare in West Africa, where its only representatives are Ijo and Dogon. The OV order is found in many other West African languages, but always as a syntactically conditioned variant of VO. Before discussing this OV~VO pattern, let's have a look at the most salient characteristics of the Subject-Object-Verb-Oblique constituent order as found in Mande languages.

In Mande languages, the Subject-Object-Verb-Oblique constituent order is neither restricted to particular types of clauses nor conditioned by particular features of the object NP. Moreover, Mande languages are extreme "configurational" languages, in which changes in the position of the NP representing a given participant always imply a change in the construction. In cases when the same participant can optionally be represented by a term

inserted between the subject and the verb or following the verb, as in (88), it is not difficult to convince oneself that the construction is different, and that the NP in question is in object function in a transitive construction when it precedes the verb, and in oblique function in an intransitive construction when it follows it.

(88) Mandinka

a. *Mŏo-lù* *yè* *báa* *tèyí.*
person.D-PL CPL.TR river.D cross
'The people crossed the river.'

b. *Mŏo-lù* *tèyí-tà* *bâa* *lá.*
person.D-PL cross-CPL.INTR river.D POSTP
'The people crossed the river.'

(Mande – pers.doc.)

In Mande languages, the object in the transitive construction occurs between the subject and the verb, but no additional term can be inserted between the subject and the verb, either as a second object in a double-object construction or in an oblique role. Similarly, in the intransitive construction, no additional term in oblique role can be inserted between the subject and the verb. In this respect, there is a sharp contrast between Mande and most other language families of Sub-Saharan Africa, in which multiple-object constructions tend to be common.

Most Mande languages have a very reduced verbal inflection and make a wide use of grammatical words expressing mainly TAM and polarity (called *predicative markers* in the Mandeist tradition) that obligatorily follow the subject, such as the transitivity marker *dà* in (87) above, or *yè* 'completive transitive' in (88). An important characteristic of the Mande predicative markers is that, for most of them, there is no evidence of a verbal origin, and for many of them, there is even evidence that they developed from categories other than verbs – in particular, from postpositions (see Bird and Kendall 1986; Bearth 1995; Creissels 1997; Kastenholtz 2003).

As regards the possible origin of this constituent order pattern, Claudi (1994) claimed that, originally, Mande languages had the Subject-Verb-Object-Oblique order at clause level, but the order GN (genitival dependent – head noun) in the noun phrase, and that the Subject-Object-Verb-Oblique order is an innovation resulting from the reanalysis of sequences 'auxiliary – nominalized verb' in which the NP that would have been the object of a finite verb form was encoded as a genitival dependent. This is undoubtedly a possible scenario, but Claudi's proposal is entirely speculative, since in Mande languages, the uniformity of word/constituent order patterns is total, and therefore cannot provide the slightest evidence of the previous existence of a constituent order other than Subject-Object-Verb-Oblique. Crucially, the auxiliarization processes postulated by Claudi can also operate within the frame of a constituent pattern already identical to that of present-day Mande languages without inducing any change in the linearization rules. Moreover, other equally plausible grammaticalization processes can lead to the same shift from Subject-Verb-Object-Oblique to Subject-Object-Verb-Oblique, among others the reanalysis of cleft constructions expressing object focalization, or the replacement of a transitive Subject-Verb-Object-Oblique

construction by a serial verb construction Subject-*take*-Object-Verb-Oblique, followed by the decategorialization of *take*, a process widely attested for example among Kwa languages.

Internal evidence from Mande languages does not make it possible to go beyond the default hypothesis that Proto-Mande had word/constituent order patterns identical to those attested in the modern Mande languages. At a time when virtually no one contested the Niger-Congo affiliation of the Mande family, there has been a lot of speculation about the significance of the Mande constituent order pattern for the reconstruction of Proto-Niger-Congo constituent order, but in the context of a growing skepticism about the possibility of proving the Niger-Congo affiliation of Mande, the reasonable conclusion is that nothing substantial can be said about this question. See however Nikitina (2011) for the discussion of a possible relationship between the Mande pattern of constituent order and some particularities of postpositional phrases in Mande languages.

4.3.3. Mande-style constituent order in non-Mande languages: Senufo and Eastern Songhay

The same pattern of constituent order is found in languages that have long been in close contact with languages of the Mande family. Senufo languages constitute the best known case. Carlson (1994) provides a detailed and precise description of the morphosyntax of Supyire, showing that this Senufo language shares with Mande, not only the absolute rigidity of the Subject-Object-Verb-Oblique constituent order but also the impossibility of having more than two nominal terms to the left of the verb. As in Mande, this applies even to the most typical ditransitive verbs, and whenever the second argument of a bivalent verb occurs in postverbal position, the presence of a postposition shows that it must be analyzed as an oblique in an extended intransitive construction. As illustrated in (89), Dombowsky-Hahn (2015) describes exactly the same constituent order pattern in Syer.

(89) Syer

a. *Ǹ ní la mêplɔ kǐ la! tãdyɔ yê.*
I REM my ram present my friend POSTP
'I have given my ram to my friend.'

b. *Mɛ mɛ! ndye jɛ́ cìnǎ ǹ.*
You FUT person send market POSTP
'You will send somebody to the market.'

c. *Ǹ figa ki nì.*
I.PRF PRF it POSTP
'I forgot it.' (extended intransitive construction)

(Dombrowsky-Hahn 2015: 486, 472, 537)

Contrary to Mande and Senufo, Songhay languages are not uniform in their constituent order patterns. Subject-Verb-Object-Oblique is the only possible constituent order in Western and Northern Songhay, but in Eastern Songhay, the Subject-Verb-Object-Oblique pattern has a marginal status. With typical transitive verbs, the Subject-Object-Verb-Oblique order is either the only possible order, as in Gao Songhay (Heath 1999), or the preferred order, as in Zarma (Oumarou Yaro 1993). Eastern Songhay has in common with Mande and Senufo that, in

clauses with a constituent order of the Subject-Object-Verb-Oblique type, no additional NP can precede the verb, as illustrated by (90).

(90) Zarma

a. *Ábdù nà fèèjì wíí yàwòó sè.*
Abdou CPL.TR sheep kill guest.D POSTP
'Abdou has killed a sheep for the guest.'

b. *Múúsà nà ŋ́gà mòótàà nóó káynòó sè.*
Moussa CPL.TR 3SG car.D give younger_brother.D POSTP
'Moussa has given his car to his younger brother.'

(Oumarou Yaro 1993: 242)

The Subject-Object-Verb-Oblique pattern of Eastern Songhay is virtually identical to that of Mande, but a particularity that sharply distinguishes Eastern Songhay from Mande is the existence of a limited class of semantically bivalent verbs whose second argument must occur in postverbal position without however showing evidence of an oblique status, as illustrated by (91). Oumarou Yaro (1993: 120–127) argues that the behavioral properties of the second argument of such verbs do not differ from those of the second argument or prototypical transitive verbs, and that consequently it must be recognized as a variety of object.[13] The same analysis is proposed by Heath (1999) for Gao Songhay.

(91) Zarma

a. *Ábdù gá hìmá bààbò.*
Abdou ICPL resemble father.D
'Abdou resembles his father.'

b. **Ábdù gá bààbòó hìmà.*
Abdou ICPL father.D resemble

c. *Ábdù gà báá Hăysà.*
Abdou ICPL love Aïssa
'Abdou loves Aïssa.'

d. **Ábdù gá Hăysà bâ.*
Abdou ICPL Aïssa love

e. *Ábdù díí zànkày.*
Abdou see child.PL.D
'Abdou saw the children.'

f. **Ábdù nà zànkày dí.*
Abdou CPL.TR child.PL.D see

(Oumarou Yaro 1993: 126)

[13] Oumarou Yaro (1993: 126) gives the following list of transitive verbs whose object cannot occur in preverbal position: *máá* 'hear', 'feel', *díí* 'see', *dòònáá* 'be accostumed to', *dùù* 'get', 'have', *hín* 'surpass', *hìmá* 'resemble', *màànù* 'approach', *báà* 'like', *wáání* 'know'.

Moreover, in Zarma (but not in Gao Songhay), the Subject-Object-Verb-Oblique constituent order is not the only possible constituent order in clauses headed by a prototypical transitive verb. In Zarma, with prototypical transitive verbs, the Subject-Verb-Object-Oblique order is not frequent, but it is possible, and without any apparent conditioning, as illustrated by (92).

(92) Zarma

a. *À* *nà* *gòrŋòò* *wíí* *yàwòó* *sè.*
3SG CPL.TR chicken.D kill guest.D POSTP
'He killed the chicken for the guest.'

b. *À* *wíí* *gòrŋòó* *yàwòó* *sè.*[14]
3SG kill chicken.D guest.D POSTP
'He killed the chicken for the guest.'

(Oumarou Yaro 1993: 125)

In this alternation, the absence of the transitive variant of the completive marker suggests analyzing (92b) as a zero-marked antipassive, but this analysis is contradicted by the absence of flagging of the P argument, and the question of the function of the alternation remains entirely open.

4.3.4. TAM-polarity-driven VO~OV alternations in West African languages

TAM-polarity-driven VO~OV alternations are widespread in the Gur, Kwa, and Kru families, i.e., in the central part of West Africa. Several Atlantic languages have a clause-initial or pre-verbal focus position typically conditioned by the use of special focalizing verb forms, but no Atlantic language has been signaled as having a TAM-polarity-driven VO~OV alternation, and such an alternation is attested in one Mel language only (Kisi).[15] I will argue below that some studies have overestimated the importance of VO~OV alternations in West Africa, but before examining this question, I would like to emphasize that the VO~OV alternations considered in this section are strictly conditioned by the TAM-polarity value expressed in verb morphology or by auxiliaries occurring immediately after the subject NP, allowing no room for the expression of information structure.

The most common situation in the VO~OV languages of the central part of West Africa is that the OV pattern is restricted to clauses including some overt TAM-polarity marker (auxiliary) immediately after the subject. But the details differ from one language to another, and no generalization is possible concerning the precise TAM-polarity values that require the OV pattern. There are also differences in the range of nominal terms involved in the alternation, with the result that treating them indistinctly as instances of a variation between the canonical Subject-Verb-Object-Oblique pattern and the Mande-style pattern (as often suggested in the literature) implies a considerable dose of oversimplification.

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[14] Note that, in Zarma, as in some West Mande languages (Manding, Soninke) the predicative marker of the completive positive occurs only in the Subject-Object-Verb-Oblique construction, not when the verb immediately follows the subject. The other predicative markers are not sensitive to this distinction.

[15] Mel languages were included by Sapir (1971) in the Atlantic family, but they are now considered as a distinct branch of Niger-Congo.

The three cases we are going to examine briefly are not intended to give a comprehensive view of the question, but only to illustrate the variation, and to emphasize the necessity to gather more detailed and more precise information on this question before any serious attempt at establishing a detailed typology of the constituent order patterns found in West Africa.

Kisi (the only Mel language in which the constituent order in plain assertive clauses is not uniformly Subject-Verb-Object-Oblique) has a VO~OV alternation triggered by the presence of an auxiliary immediately after the subject, and in which the OV pattern clearly differs from the Mande type of constituent order in several respects. Childs (2005) provides a detailed description of this alternative constituent order. A first difference with Mande languages is that Kisi has multiple object constructions, in which two (or even three[16]) NPs take part in the alternation, resulting in a Subject-Aux-Object$_1$-Object$_2$-Verb pattern that has no equivalent in Mande languages, as in (93).

(93) Kisi

a. *Ò* *ké* *yá* *tòòlúláŋ.*
3SG give 1SG support
'She gave me support.'

b. *À* *wá* *ndú* *kòówáŋ* *kìóó.*
3PL PAST.PROG 3SG medicine give
'They were giving him medicine.'

(Childs 2005: 8)

Moreover, in Kisi, the alternation is not limited to objects. As a rule, adpositional phrases are not involved in the alternation and remain in postverbal position; similarly, locative arguments are not considered objects, and invariably remain in postverbal position; but time adverbs can occur between the auxiliary and the object, as in (94). This again would be totally impossible in a Mande language.

(94) Kisi

Ò *cò* *nîŋ* *yá* *mààlóŋ* *hùŋgùlló*
3SG ICPL now 1SG rice beat.APPL
'He is beating the rice for me now'

(Childs 2005: 10)

Kisi is surrounded by Mande languages and is considered to have been heavily influenced by Mande languages, but in Kisi, terms that Mande languages would obligatorily put in postverbal position can be found between the auxiliary and the verb, which cannot be a straightforward calque from Mande. In another perspective, Kisi, like the other Mel languages, has the order noun – genitive in noun phrases, which is hardly compatible with a language-internal explanation along the lines of Claudi's (1994) reanalysis scenario.

In Attie, a Kwa language spoken in Ivory coast, the range of terms involved in the constituent order alternation includes not only the two objects of double object constructions,

[16] In Kisi, constructions with three objects are possible with the applicative form of ditransitive verbs.

but also locative terms whose status as objects or adjuncts is not entirely clear. In sentence (95a), the two objects precede the verb, and a locative term follows it. By contrast, in sentence (95b), the locative term precedes the verb. According to Kouadio (1996), in Attie, oblique arguments take part in the alternation in the same way as objects, whereas adjuncts invariably remain in postverbal position. A more detailed description of Attie syntax would however be necessary in order to evaluate this hypothesis.

(95) Attie

a. *Mɛ̰̄ yī-ī Yàpí ʃìkā dzé yábò lø̄.*
1SG father-ICPL Yapi money give market there
'My father is giving money to Yapi at the market.'

b. *Yàpí-ī kpɔ̄ɛ̂ pyà¯ nɑ̰̄.*
Yapi-ICPL forest-D in walk
'Yapi is walking in the forest.'

(Kouadio 1996: 402)

VO~OV alternations triggered by the presence of some auxiliaries are general in Kru languages. Much in the same way as in Kisi or Attie, the alternation may involve more than one nominal term, and is not restricted to objects. At least in some Eastern Kru languages, the alternative constituent order pattern can be characterized as Subject-Object-Oblique-Verb, i.e., as verb-final, but with an interesting particularity: in most verb-final languages, the default position of the object is immediately before the verb, but in Eastern Kru languages, the final position of the verb does not seem to affect the relative order OX. According to Grah (1983), in Newole (Eastern Kru), Subject-Object-Oblique-Verb is the canonical constituent order triggered by six auxiliaries, but the Subject-Object-Oblique-Verb pattern is not rigid, and in OV clauses, it may happen that obliques precede the object or even occur in postverbal position, as in (96).

(96) Newole

a. *Kóní ní sáká jàlɛ́ lī.*
Koni CPL.NEG rice kitchen eat
'Koni has not eaten rice in the kitchen.'

b. *Làlí yā mágìtī kɔ́ līēplɔ̄ yɛ́.*
Lali CPL market at scarf see
'Lali has seen a scarf at the market.'

c. *Wɔ̄wā níkā ɲú mlā zīmlɛ̄.*
Wowa FUT.NEG water drink today
'Wowa will not drink water today.'

(Grah 1983: 232, 259, 262)

4.3.5. Concluding remarks

In this section, I have tried to sketch a typology of the constituent order patterns found in West African languages that depart from those commonly recognized in typological studies of constituent order: the rigid and invariable Subject-Object-Verb-Oblique pattern found mainly in Mande languages, and the pattern characterized by TAM/polarity-driven VO~OV alternations. I leave entirely open the question of the possible historical connections between these two atypical constituent order patterns, and I want to emphasize that I am completely agnostic in this respect. Most of the previous studies of constituent order in West Africa have taken for granted that the two atypical constituent order patterns found in West Africa can be conflated in a typological account, and must lend themselves to some kind of unitary explanation diachronically. The desire to proove this at any price has often led to distortions in the presentation of the data and in their analysis.

For example, in the desire for proving that the Mande type of constituent order was once much more widespread than it is now, it has sometimes been suggested that otherwise strict Subject-Verb-Object-Oblique languages with object pronominal clitics occurring in preverbal position should be analyzed as having a constituent order pattern characterized by the Subject-Verb-Object-Oblique~Subject-Object-Verb-Oblique alternation, and that the position of pronominal objects can be assumed to reflect the position of object NPs in an ancient state of the language – see in particular Childs (2005) on Atlantic (and Mel). A brief look at the situation of Romance languages, whose history is particularly well known, immediately shows the unsustainability of this position. In modern Romance languages, object NPs invariably follow the verb, but in most of them (Portuguese being the main exception), weak object pronouns invariably attach to the left of finite verb forms. Accepting the position of object clitics or affixes as evidence of the position previously occupied by object NPs would lead to the reconstruction of a Mande-style constituent order for Proto-Romance, which is certainly not correct. Latin had a flexible constituent order with the verb in final position as the less marked option, and modern Romance languages have more or less flexible patterns of constituent order with a clear predominance of Subject-Verb-Object-Oblique, but there is no evidence that Subject-Object-Verb-Oblique ever played a role as an intermediate stage in the shift from the Latin pattern of constituent order to that of modern Romance languages. Moreover, the history of Romance languages is well documented enough to establish that the position of pronominal objects in modern Romance languages results from evolutions that cannot be characterized as the straightforward maintenance of the position occupied by object NPs at some stage in the history of Romance languages, and that the so-called ‘V2 constituent order’ (i.e., a constituent order pattern similar to that attested in present-day German or Dutch) was probably predominant at the period when the position of Romance pronominal clitics stabilized. There is no reason to think that a reconstruction procedure that would lead to incorrect results for Romance languages could provide an interesting explanation of the constituent order patterns found in West Africa.

4.4. Interpositions

4.4.1. Definition

Several African languages having Subject-Verb-Object-Oblique as their basic constituent order have a grammatical word (or clitic) for which I propose to coin the term "interposition". This term is intended to capture a distribution that fits with none of the possible types of grammatical words proposed in general accounts of part-of-speech systems. Interpositions can be viewed as a variety of adposition that had gone unnoticed so far: they have in common with other types of adpositions the obligatory adjacency to NPs, but differ from them in that they must necessarily be adjacent to two NPs (or NP-equivalents) at the same time. This particularity has led some authors to designate them as "linkers," but this is not a satisfying solution, since the term "linker" is commonly used for various types of grammatical words occurring between two words or phrases that have a direct syntactic relationship and form a constituent, whereas interpositions occur between two NPs that do not form a constituent, each of them having its own function in the construction of the verb.[17]

In the languages that have this rare type of adposition, it never occurs when the verb is followed by a single object or oblique. It can only be found between two successive terms (objects or obliques) in the construction of the same verb. In this type of context, the use of an interposition may be obligatory, depending on language-specific rules.

Interpositions do not contribute to the recognition of the semantic role of the term they precede, which means that this term must be either an argument of the verb or an oblique whose semantic role is retrievable from its lexical meaning or marked independently in some other way.

Typically, in the languages that have interpositions, there is no fixed order of the nominal terms following the verb.

In one of the languages in which an interposition can be recognized (Nande), it expresses agreement with the NP that precedes it. In all the other cases I am aware of, the interposition is invariable.

4.4.2. The interposition of Ju|'hoan

In the Kx'a language Ju|'hoan (Dickens 2005), verbs divide into three classes (intransitive, transitive and ditransitive) according to the number of the non-subject terms that can be present without triggering the use of a verbal suffix *-a* encoding the presence of at least one term that does not belong to the valency of the verb in postverbal position. Independently of the use of this verbal suffix (glossed VE 'valency-external participant'), the interposition *kò* is used whenever a postverbal term is followed by another postverbal term. (97) and (98) illustrate this mechanism with the intransitive verb *!áí* 'die' and with the transitive verb *||ohm* 'chop'. Note that, in these examples, there are at most two terms in postverbal position, but the presence of additional terms in postverbal position would require the repetition of *kò* before all postverbal terms not immediately adjacent to the verb.

[17] In the literature, in addition to "linkers" (Baker & Collins 2006), interpositions have also been designated as "default prepositions" (Güldemann 2004), "transitive particles" (Dickens 2005), "transitive prepositions" (Vossen 2013), or "multipurpose oblique markers" (Güldemann & Vossen 2000). None of these terms is consistent with the very particular distribution of interpositions as defined in this section.

(97) Ju|'hoan

a. *Mí !ú-n!a´àn !ái.*
1SG grand-father die
'My grandfather died.'

b. *Mí !ú-n!a´àn !ái-á |Aotcha.*
1SG grand-father die-VE |Aotcha
'My grandfather died at |Aotcha.'

c. *Mí !ú-n!a´àn !ái-á goàq=´àn.*
1SG grand-father die-VE yesterday
'My grandfather died yesterday.'

d. *Ha !ái-á |Aotcha kò |ámà hè.*
3SG die-VE |Aotcha INTERP today
'He died in |Aotcha today.'

e. *Ha !ái-á |ámà hè kò |Aotcha.*
3SG die-VE today INTERP |Aotcha
'He died in |Aotcha today.'

(Dickens 2005: 37–39)

(98) Ju|'hoan

a. *Ha kú ||ohm !aìhn.*
1SG ICPL chop tree
'He was chopping the tree.'

b. *Ha kú ||ohm-a !aìhn kò g|úí.*
1SG ICPL chop-VE tree INTERP forest
'He was chopping the tree in the forest.'

c. *Ha kú ||ohm-a g|úí kò !aìhn.*
1SG ICPL chop-VE forest INTERP tree
'He was chopping the tree in the forest.'

(Dickens 2005: 37–39)

In Ju|'hoan, the verb *|a´àn* 'give' can be followed by two postverbal terms representing the recipient and the gift. According to the general rule, *kò* must occur between them. The order *|a´àn* – recipient – *kò* – gift seems to be usual, but according to Baker and Collins (2006), *|a´àn* – gift – *kò* – recipient is also possible, and valency-external terms may even be inserted between the NPs representing arguments, or precede them, as shown in (99).

(99) Ju|'hoan

Mi |'an Maria ko ambere ko tzi.
1SG give Maria INTERP bucket INTERP outside
~ *Mi |'an tzi ko Maria ko ambere.*

~	*Mi*	*|'an*	*Maria*	*ko*	*tzi*	*ko*	*ambere.*
~	*Mi*	*|'an*	*ambere*	*ko*	*Maria*	*ko*	*tzi.*
~	*Mi*	*|'an*	*tzi*	*ko*	*ambere*	*ko*	*Maria.*
~	*Mi*	*|'an*	*ambere*	*ko*	*tzi*	*ko*	*Maria.*

'I give Maria the bucket outside'

(Baker and Collins 2006: 54-55)

4.4.3. Interpositions in other !Xun varieties?

Ju|'hoan belongs to the !Xun dialect cluster. Although this question is not explicitly addressed by Heine and König (2015), the examples they quote suggest that an interposition *kò* with the same distribution as in Ju|'hoan can be found in the other Southeastern !Xun dialects. By contrast, the "linker" *ke* found in the other !Xun dialects is clearly nothing other than an ordinary preposition with just an unusually broad distribution and no semantic content. The point is that, contrary to *kò*, *ke* can flag NPs in immediate post-verbal position, as in (100).

(100) Northwestern !Xun

Mí	*m*	*-ē*	*tīín*	*tí*	*kē*	*hà.*
1SG	TOP	PAST	ask	PASS	PREP	CL1.PRO

'I was asked by him.'

(Heine and König 2015: 193)

4.4.4. Interpositions in other Khoisan languages?

It has been claimed that grammatical words similar to Ju|'hoan *kò* constitute a common feature of non-Khoe South African Khoisan languages. However, not only in Northwestern and Central !Xun, but also in N|uuki (Collins and Namaseb 2011) and ǂHoan (Collins and Gruber 2014), it turns out that the so-called "linkers" are simply prepositions with just a somewhat unusual distribution and a very low degree of semantic specificity.

Crucially, N|uuki *ŋ* and ǂHoan *kì*, contrary to Ju|'hoan *kò*, must not necessarily be adjacent to two NPs at the same time. As illustrated by (101) and (102), like typical prepositions, they can be found in immediate postverbal position.

(101) N|uuki

a.

Ku	*!ũ*	*ke*	*xa*	*|ʔaa*	*ŋ*	*g!ari.*
3SG	grandfather	DECL	PAST	die	PREP	Upington

'His grandfather died in Upington.'

b.

Ku-a	*si*	*|qhõˤo*	*ŋ*	*!haeka.*
3SG-DECL	IRR	dance	PREP	tomorrow

'He will dance tomorrow.'

(Collins and Namaseb 2011: 45–46)

(102) ǂHoan

a. *Cì* *ʼa* *kyxái* *kì* *!kôa* *na.*
3PL PROG dance PREP house in
'They are dancing in the house.'

b. *Ma* *ʼa* *ʼám* *kì* *ǐ-ǂàm.*
1SG PROG eat PREP spoon
'I am eating with a spoon.'

(Collins and Gruber 2014:141–142)

Cross-linguistically, prepositions with a very broad range of uses and a very low degree of semantic specificity are not uncommon. This is a question of degree, and there is no justification for treating prepositions like N|uuki *ŋ* or ǂHoan *kì* as a special type of grammatical words. In other words, the question of whether interpositions that are really comparable to Southeastern !Xun *kò* can be found in other Khoisan languages remains open.

4.4.5. The interposition of Lamba

According to Aritiba (1988), in Lamba (a language belonging to the Gurunsi branch of the Gur family), much in the same way as in Ju|'hoan, the NPs representing the recipient and the gift in the construction of *give* do not have a fixed order, but the first NP is immediately juxtaposed to the verb, and the interposition *kà´* must be inserted before the second one. In the absence of the interposition, the first NP could only be interpreted as the genitival modifier of the second one, as in (103).

(103) Lamba

a. *Yàl* *há* *húlò* *ká* *↓Úrò.*
woman.SG give.CPL hat.SG INTERP Uro
'The woman gave a hat to Uro.'

b. *Yàl* *há* *Úrò* *ká* *↓húlò.*
woman.SG give.CPL Uro INTERP hat.SG
'The woman gave a hat to Uro.'

c. *Yàl* *há* *Úrò* *húlò.*
woman.SG give.CPL Uro hat.SG
'The woman gave Uro's hat (to someone else).'

d. **Yàl* *há* *húlò* *Úrò.*
woman.SG give.CPL hat.SG Uro

(Aritiba 1988: 8–9)

More generally, Lamba *kà´* has distributional characteristics essentially similar to those of the interposition of Ju|'hoan. It occurs not only in the construction of verbs whose argument structure is similar to that of *give*, but also in other constructions in which two unflagged NPs constitute two distinct terms in the construction of the same verb, as in (104). This led Aritiba

to designate it as a "disjunctive marker". By the choice of this term, he aimed at underscoring its demarcative function.

(104) Lamba

a. *Càmà mà hɔ̃́ kà rávììr.*
Cama hit.CPL dog.SG INTERP stick.SG
'Cama hit the dog with a stick.'

b. *Càmà mà rávììr ká ˬhɔ̃̀.*
Cama hit.CPL stick.SG INTERP dog.SG
'Cama hit the dog with a stick.'

(Aritiba 1988: 8)

Interestingly, Lamba has a homophonous *kà´* used as an optional linker between nouns and numerals (as in *hásə̀ nàsə̂l ~ hásə̀ kà náˬsə̂l* 'two dogs), and another *kà´* occurring in some clause sequences. It is however difficult to imagine a plausible connection between these three items.

To the best of my knowledge, nothing similar has been reported to exist in any other Gurunsi language, and more generally in any other West African language.

4.4.6. The interposition of Nande

The Bantu language Nande has a grammatical word which, like the Ju|'hoan interposition *kò* or the Lamba interposition *kà´*, can only be found between two successive terms in the construction of the same verb.

Baker and Collins (2006) briefly describe its use and put forward a formal analysis aiming at a unified account of the Nande interposition and of the "linkers" found in non-Central Khoisan languages. This analysis is basically flawed by the vagueness of their notion of "linker," which includes ordinary prepositions that have just a relatively broad range of uses and a very low degree of semantic specificity.

In a series of recently published papers (Schneider-Zioga 2014a, 2014b; Schneider-Zioga and Nguessimo Mutaka 2015a, 2015b, 2015c), Patricia Schneider-Zioga and Philip Ngessimo Mutaka provide a much more precise description of the Nande interposition, rectifying some errors in Baker and Collins's description, and making it possible to put forward a diachronic scenario responsible for the emergence of this interposition.

The main differences between Nande and Ju|'hoan are as follows:

(a) In a construction involving more than two successive terms in postverbal position, the interposition of Nande can occur only once, between the first and the second postverbal terms.
(b) The interposition of Nande agrees in class with the NP it immediately follows.

With respect to the linear order of postverbal terms, Nande has possibilities of variation similar to those of Ju|'hoan, as in (105) and (106).

(105) Nande

a. *Kámbale* *ágúlira* *ekitábú* *kyo* *Nadíne.*
(CL1)Kambale CL1.bought.APPL CL7.book CL7.INTERP (CL1)Nadine
'Kambale bought a book for Nadine.'

b. *Kámbale* *ágúlira* *Nadíné* *y(o)* *ekitábu.*
(CL1)Kambale CL1.bought.APPL (CL1)Nadine CL1.INTERP CL7.book
'Kambale bought Nadine a book.'

(Schneider-Zioga and Ngessimo Mutaka 2015(c): 101)

(106) Nande

a. *Kambale* *moasenyire* *olukwi* *l(o)* *omo-mbasa.*
(CL1)Kambale AFF.CL1.chopped CL11.wood CL11.INTERP CL18-CL9.axe
'Kambale chopped wood with an axe.'

b. *Kambale* *moasenyire* *omo-mbasa* *m(o)* *olukwi.*
(CL1)Kambale AFF.CL1.chopped CL18-CL9.axe CL18.INTERP CL11.wood
'Kambale chopped wood with an axe.'

(Baker and Collins 2006: 309)

To the best of my knowledge, Nande is the only Bantu language in which a similar phenomenon has been observed. However, taking into consideration (a) language-internal data on the homonymy between the interposition and other items, (b) typological data on the relationship between copulas and focus marking, and (c) the particularities of East Bantu languages in the expression of focus, it is not difficult to elaborate a plausible grammaticalization scenario accounting for the emergence of this interposition.

Schneider-Zioga (2014b) rightly emphasizes that the interposition is phonologically indentical to two other items in Kinande: a copula – in (107a) – and a focus marker found in cleft constructions – in (107b) – and is very similar to a third item: the enclitic object pronoun, in (107c).

(107) Nande

a. *Omúkali* *yó* *mwami*
CL1.woman CL1.COP CL3.chief
'It is the woman who is the chief.'

b. *Ekitábu* *kyo* *Kámbale* *ágúla.*
CL7.book CL1.FOC (CL1)Kambale CL1.bought
'It is the book that Kambale bought.'

c. *Nadíne* *ágúlá-kyô.*
(CL1)Nadine CL1.bought-CL7.PRO
'Nadine bought it (the book).'

Schneider-Zioga 2014(b))

Pronouns consisting of a class prefix and a stem *-o* are common across Bantu languages. Since pronouns are widely attested as the source of either equative copulas or focus markers,[18] there is no difficulty in accepting the hypothesis that the Bantu pronoun CL-*o* is the common source, not only of the enclitic pronoun illustrated in (107c) but also of the copula illustrated in (107a) and of the focus marker illustrated in (107b).

As regards Nande CL-*o* as an interposition, it is not difficult to imagine a grammaticalization path from CL-*o* as a copula or focus marker. The point is that IAV focus positions are common in eastern Bantu languages, and in many cases (for example, in Makhuwa), nouns in IAV focus position are overtly marked in the same way as nouns in equative predicate function. Consequently, the hypothesis I would like to propose is that the interposition in Nande started as a focus marker making explicit the focus function of the NP in IAV position (remember that, in Nande, if more than two phrases follow the verb, the interposition can only occur after the first one!). Subsequently, the use of the former focus marker generalized in this position when the verb was followed by more than one term, so that it lost its initial function and became a purely syntactic marker.

4.4.7. An emerging interposition in Baule?

In Baule (a Kwa language spoken in Ivory Coast) *man* 'give' has two possible constructions: a serial construction in which the NP representing the gift is introduced by *fa* 'take', whereas the NP representing the recipient follows *man* 'give', and a monoverbal construction. In the monoverbal construction, the sequence formed by the NPs representing the recipient and the gift has the appearance of a genitival construction:

(a) When the recipient is represented by a personal pronoun, there is no morphological evidence that this pronoun is syntactically the object of the verb it follows rather than the genitive modifier of the noun it precedes, since Baule uses the same set of pronouns in both roles.
(b) In other cases, a resumptive pronoun appears between the recipient and the gift in the same conditions as in the genitival construction, see (108).

(108) Baule

a. *Màn Kòfí (í) bólí!*
give Kofi (3SG) goat
'Give Kofi a goat!'
(compare with *Kòfí (í) bólí* 'goat belonging to Kofi')

b. *Màn blā mùn bé bólí!*
give woman PL 3PL goat
'Give the women a goat!'
(compare with *blā mùn bé bólí* 'goat belonging to the women')

(Creissels and Kouadio 2010: 179)

[18] Among many others, Ganja (Creissels and Biaye 2016: 123, 142–143, 261) is a case in point.

This strongly suggests a monotransitive analysis according to which *man* is followed by a single NP including a genitival modifier interpreted as a future possessor: 'Give [a goat intended for Kofi]'. However, if constituency tests are to be taken seriously, in particular those relying on extraction, this analysis must be abandoned. The point is that Baule has a focalizing construction that can be described as follows:

– the focalized term occurs in sentence initial position, followed by the focalizing particle *yɛ̂*;
– resumption of the focused element by an overt pronoun in situ is obligatory if the focalized term is the subject; in other roles, the presence of a resumptive pronoun depends on conditions that have not been fully established;
– in all cases, a particle *ɔ̀* obligatorily occurs in sentence final position, as in (109).

(109) Baule

a. *Ákísí tò-lì juê*
Akissi buy-CPL fish
'Akissi bought fish'

b. *Ákísí yɛ̂ ɔ̀ tò-lì juê ɔ̀.*
Akissi FOC 3SG buy-CPL fish FOC
'It is Akissi that bought fish.'

c. *Juê yɛ̂ Ákísí tò-lì ɔ̀.*
fish FOC Akissi buy-CPL FOC
'It is fish that Akissi bought.'

(Creissels and Kouadio 2010: 180)

When the object of a transitive verb includes a genitival modifier, the entire object NP can be extracted, but it is impossible to extract the head of the genitival construction only, leaving the genitival modifier in situ, as in (110).

(110) Baule

a. *Bè bù-lì Kòfí suă'n.*
3PL demolish-CPL Kofi house-D
'They demolished Kofi's house.'

b. *Kòfí suă'n yɛ̂ bè bù-lì ɔ̀.*
Kofi house-D FOC 3PL demolish-CPL FOC
'It is Kofi's house that they demolished.'

c. **Suă'n yɛ̂ bè bù-lì Kòfí ɔ̀.*
house-D FOC 3PL demolish-CPL Kofi FOC
intended: 'They demolished Kofi's HOUSE.'

(Creissels and Kouadio 2010: 180–181)

If the monoverbal construction of *man* 'give' were a monotransitive construction with the NP representing the recipient in genitive role, it would be expected to follow the same pattern, but

this is not the case: as shown in (111), it is perfectly possible to extract the gift NP, leaving the recipient NP in situ.

(111) Baule

a. *Kuàkú màn-nìn Kòfí (í) bólí.*
Kouakou give-CPL Kofi 3SG goat
'Kouakou gave Kofi a goat.'

b. *Bólí yɛ̂ Kuàkú màn-nìn Kòfí ɔ̀.*
goat FOC Kouakou give-CPL Kofi FOC
'It is a goat that Kouakou gave Kofi.'

(Creissels and Kouadio 2010: 181)

Another piece of evidence against the monotransitive analysis is that the sequence formed by the NPs representing the recipient and the gift is not always homonymous with a genitive – noun sequence, since the NP representing the gift can include a genitive expressing a part-whole relationship, giving rise to sequences, such as *mín í sîn* in (112), which in Baule cannot constitute viable genitival constructions.

(112) Baule

Màn mín í sîn.
give 1SG 3SG half
'Give me half of it.'

(Creissels and Kouadio 2010: 181)

The acceptability of (112) contrasts with the unacceptability of pronoun sequences in constructions in which both pronouns should be interpreted as genitives, for example in nominalizations, as illustrated by (113).

(113) Baule

a. *Wɔ́ Kòfí (í) flɛ̀-lɛ̂'n fù-lì mín nún.*
2SG Kofi 3SG call-NMLZ-D climb-CPL 1SG in
'The fact that you called Kofi (lit. 'your Kofi's calling') surprised me.'

b. **Wɔ́ mín flɛ̀-lɛ̂'n fù-lì mín nún.*
2SG 1SG call-NMLZ-D climb-CPL 1SG in
intended: 'The fact that you called me …'

OK: *Mín flɛ̀-lɛ̂'n mɔ̀ à flɛ̀-lì mín'n …*
1SG call-NMLZ-D REL 2SG call-CPL 1SG-D
lit. 'My calling that you called me …'

(Jérémie Kouadio, pers.com.)

The only analysis compatible with these data is therefore that, in spite of the homonymy with the genitival construction, the NPs representing the recipient and the gift constitute distinct terms in the monoverbal construction of *man* 'give'. Consequently, the resumptive pronoun

does not mark agreement of a nominal head with a genitive, but of the second object (representing the gift) with the first object (representing the recipient), which constitutes a typologically unusual type of agreement. The agreement mechanism in the construction of *man* is identical with the agreement of nominal heads with genitive modifiers, but the controller and the target are the first and second object of a ditransitive construction, respectively.

Diachronically, the origin of this agreement mechanism is probably the grammaticalization of constructions such as English *Give John his money* interpreted as 'Give John the money due to him', which in Baule resulted in sequences object 1 – object 2 homonymous with sequences genitive – noun.

Additional evidence supporting this analysis comes from the occurrence of resumptive pronouns marking agreement between the two non-subject terms following the verb in the construction of trivalent verbs other than *man*. At least in some cases, a "possessive" interpretation of the resumptive pronoun is excluded, and it can only have a purely syntactic function.

Resumptive pronouns similar to that found in the monoverbal construction of *man* 'give' occur in particular in the construction of transfer verbs, between the NP representing the transferee and the PostpP representing the destination, as illustrated by (114). In some cases, the resumptive pronoun can be semantically justified by the nature of the destination and its relation to the transferee (the fridge has been made to put things like milk in it, the fire has been lit to cook food on it), but (114c) is a particularly clear case in which no semantic motivation can be imagined for the presence of the resumptive pronoun: there is no possible motivation for characterizing the sun as 'the sun of the clothes'.

(114) Baule

a. *Wlà nɔ́nnɔ́n'n í flìgô'n nún.*
put milk-D 3SG fridge-D in
'Put the milk into the fridge.'

b. *Siè duô'n í sèmlên'n sú.*
put yam-D 3SG burning_charcoal-D on
'Put the yam on the fire.'

c. *Sɛ̀ tánnìn mùn bé wiá nún mằn bè wú.*
spread cloth PL 3PL sun in so that 3PL dry
'Spread the clothes in the sun so that they dry.'

(Jérémie Kouadio, pers.com.)

Note in particular the two possible readings of sentences such as those of (115), depending on the interpretation of the third-person pronoun as a genitive referring to a discursively salient entity or as an agreement mark.

(115) Baule

a. *Gwà nzân'n í vɛ́lì'n nún!*
pour wine-D 3SG glass-D in
'Pour the wine into the glass!' (*í* interpreted as an agreement mark)

or ‘Pour the wine into his/her glass!’ (*í* interpreted as referential)

b. *Ǹ yàcì-lì lòtô’n í klɔ̌ lɔ̀.*
3SG leave-CPL car-D 3SG village there
‘I left the car in the village.’ (*í* interpreted as an agreement mark)
or ‘I left the car at his/her place.’ (*í* interpreted as referential)

(Jérémie Kouadio, pers.com.)

In the case of transfer verbs, it is particularly tempting to analyze the resumptive pronoun, whatever its origin, as having grammaticalized as marking the agreement of a secondary predicate, since semantically, the locative expression in the construction of transfer verbs can be viewed as a predication about the transferee. Moreover, it is conceivable to extend this analysis to the verb ‘give’:

X_{agent} *puts* $Y_{transferee}$ $Z_{location}$ ⇒ X *makes* [Y *be located at* Z]

X_{agent} *gives* $Y_{recipient}$ Z_{gift} ⇒ X *makes* [Y *have* Z]

The possibility of analyzing a resumptive pronoun introducing the third term of a three-place construction, and agreeing with the second term, as a marker of secondary predication, is particularly obvious when the third term of the construction is an adjective in predicate function, as in (116).

(116) Baule

a. *B’à yò suă mùn bé dăn.*
3PL-PRF make house PL 3PL large
‘They have enlarged the houses.’

b. *Màn yò kpàngɔ́ í kpâ.*
1SG.PRF make bicycle 3SG good
‘I have repaired the bicycle.’

c. *B’à yò bé àwlô í klànmăn.*
3PL-PRF make 3PL compound 3SG beautiful
‘They have embellished their compound.’

(Jérémie Kouadio, pers.com.)

To conclude, there are some striking similarities between the interpositions of Ju|’hoan or Nande and the resumptive pronouns in the Baule constructions examined above. This suggests that perhaps these resumptive pronouns represent an early stage in a grammaticalization process whose result could be the emergence of an interposition. Starting from cases in which possessive marking of the second object in a double-object construction is semantically motivated, the reanalysis of this possessive marking as secondary predicate agreement may constitute a crucial move in such an evolution. The final stage could be the emergence of an interposition devoid of any semantic content, but required to license verb dependents that are not contiguous to their head.

4.5. Existential predication in the languages of the Sudanic belt

The Sudanic belt (Clements and Rialland 2008), aka Macro-Sudan belt (Güldemann 2008), is a large belt of northern Sub-Saharan Africa from the Atlantic Ocean to the Ethiopian plateau. Some important structural characteristics are particularly frequent among languages spoken in this area irrespective of their genetic affiliation (Westermann 1911; Greenberg 1959) and are not found with a comparable frequency in the genetically related languages outside of this region, which suggests an important role of language contact. Recent areality hypotheses dealing with the Sudanic belt have focused on features such as labial-velar stops, labial flaps, implosives and other "nonobstruent" stops, nasal vowels and lack of contrastive nasal consonants, ATR vowel harmony, tone, "lax" polar question markers, logophoricity markers, S-(Aux)-O-V-X and V-O-Neg order patterns. In this section, I discuss an areal feature of the Sudanic belt not mentioned so far in the literature: the particularly high frequency of a type of existential predication that is relatively rare at world level.

Existential predications (*There is a book [on the table]*) provide an alternative way of encoding the prototypical figure-ground relationships also denoted by plain locational sentences (*The book is on the table*), from which they differ in the perspectivization of figure-ground relationships (Borschev and Partee 2002; Partee and Borschev 2004, 2007).

Probably less than half of the world's languages have a special predicative construction encoding the existential perspectivization of figure-ground relationships (Creissels, 2016c), but in many cases (for example, Finnish, in (117)), variation in constituent order provides a rough equivalent of existential perspectivization.

(117) Finnish

a. *Poika on piha-lla.*
boy is yard-in
'The boy is in the yard.'

b. *Piha-lla on poika.*
yard-in is boy
'There is a boy in the yard.'

(Huumo 2003: 464)

However, some of the languages devoid of a morphologically distinct predicative construction encoding the existential perspectivization of figure-ground relationships also have a rigid constituent order in locational predication. In such languages, in the absence of indications provided by definiteness marking or focus marking, the same locational clauses are used indiscriminately in contexts that would trigger a choice between locational and existential predication in other languages:

(118) Mandinka

Wùlôo bé yíròo kótò.
dog.D is tree.D under
'The dog is under the tree.' or 'There is a dog under the tree.'

(pers.doc.)

Languages with rigid order in locational clauses and no possible contrast with a existential construction morphologically distinct from plain locational predication are particularly common in the Sudanic belt. The database I am compiling for a worldwide survey of existential predication includes so far 110 languages of the Sudanic belt, among which 73 (about two thirds) have a rigid figure–ground order in locational predication and no posible contrast with a morphologically marked construction encoding the existential perspectivization of figure-ground relationships, whereas elsewhere in the world (including the rest of the African continent), this configuration is either rare, or not attested at all. Among the languages of the Sudanic belt, this pattern is particularly predominant in the Mande and Gur families. Interestingly, among the major language families found in the Sudanic belt, the only ones in which it is not predominant are Atlantic (characterized by a strong predominance of existential constructions derived from *have*-possessive constructions) and Chadic (characterized by a strong predominance of existential constructions involving dedicated predicators).

4.6. Impersonal constructions: generalizing *you* with overt antecedents

It is cross-linguistically very common that second-person pronouns or indexes, which canonically represent the addressee of the speech act, can also express generalizations over sets of human beings whose delimitation is generally left implicit and can only be inferred from the context, as in *It is so smoggy in Los Angeles that you can barely breathe*, where *you* expresses a generalization over human beings present in Los Angeles.

This generalizing use of second-person pronouns or indexes, usually termed ‘impersonal’, is particularly widespread among West African languages. Moreover, in some West African languages at least, the second-person pronoun or index used in this function exhibits coreference properties that are somewhat unexpected, given what is known about the generalizing use of second-person pronouns or indexes in more familiar languages, in which generalizing *you* can introduce generic referents but cannot refer back to generic referents already introduced by a noun phrase.

Creissels (2013) on the generalizing use of Mandinka *í* ‘you’ constitutes as far as I know the first mention of this phenomenon in the literature. Creissels et al. (2015) show that it constitutes a common feature of the Atlantic and Mande languages spoken in Senegal.

In the Sereer example (119) the generalizing relative clause *oxu warna okiin* ‘whoever kills a person’ includes no mention of second person, and could be resumed by a third-person pronoun or index without any change in the meaning. However, in this context, it is also possible (and very common) to use a second-person index.

(119) Sereer

Oxu	*warna*	*o-kiin,*	*o-damel*	*ɓisel*	*o*	*Jaxaaw.*
whoever	kill.SBD	CLox-person	2SG-arrest.PASS	bring.PASS	to	Jaxaaw

lit. ‘Whoever$_i$ kills a person, you$_i$ are arrested and brought to Jaxaaw.’
> ‘Whoever kills a person is arrested and brought to Jaxaaw.’

(Creissels et al. 2015: 48)

In the Wolof example (120), *ku* 'whoever' is resumed by a second-person possessive within the generalizing relative clause, and by a second-person object clitic in the matrix clause.

(120) Wolof

Ku yar sa kuuy, yow la-y jëkka daan.
Whoever raise your ram 2SG FOC-ICPL begin attack
lit. 'Whoever$_i$ raises your$_i$ ram, it is you$_i$ that it attacks first.'
>'The one who raises a ram is the first to be attacked by it.'

(Creissels et al. 2015: 49)

(121) shows that, in Mandinka, *í* 'you (sg)' resuming a generic noun phrase can be substituted by *à* 'he, she, it' without any difference in meaning. In any other context, this substitution would change the meaning.

(121) Mandinka

a. *Nîŋ míŋ yè ŋ́ sòosóo,*
if REL CPL 1SG contradict

í sì táa jěe í yè à jùubée.
2SG POT go there 2SG SUBJ 3SG look
lit. '[Anyone who contradicts me]$_i$, you$_i$ should go there and look at it.' > 'Anyone who does not believe me should go there and have a look at it.'

b. *Nîŋ míŋ yè ŋ́ sòosóo,*
if REL CPL 1SG contradict

à sì táa jěe à yè à jùubée.
3SG POT go there 3SG SUBJ 3SG look
same meaning as (a), lit. '[Anyone who contradicts me]$_i$, he/she$_i$ should go there and have a look at it.'

(Creissels et al. 2015: 49)

In (122), generalizing *í* resumes *mànsàdíŋ wóo mànsàdìŋ* 'any prince'.

(122) Mandinka

Mànsàdíŋ wóo mànsàdìŋ,
prince INDEF prince

níŋ í ñân-tá mànsàyâa-lá Màndíŋ,
if 2SG must-CPL reign-INF Mande

Sùusúu Súmáŋkúrù bé í fǎa-là dóróŋ.
Suusuu Sumankuru COP 2SG kill-INF only
lit. '[Any prince]$_i$, if you$_i$ were doomed to reign over Mande, Suusuu Sumankuru would just kill you$_i$.' > 'S.S. would kill any prince who was doomed to reign over Mande.'

(Creissels et al. 2015: 49–50)

In (123), the antecedent of generalizing *í* is an ordinary relative clause in topic position. Such a relative clause is not inherently generic, and in other contexts, it could have a specific reading: 'the person whom love has killed'. It is interpreted here as generic because of the coreference relation with second-person *í*, which (in contrast with third-person *à*) can only refer back to generic antecedents.

(123) Mandinka

Kànú yè méŋ fǎa, í mâŋ jífà.
love CPL REL kill 2SG CPL.NEG die_miserably
lit. '[The person whom love has killed]$_i$, you$_i$ did not die miserably.' > 'If one is killed by love, one does not die miserably.'

(Creissels et al. 2015: 50)

In (124), the antecedent of generalizing *í* is *mòô*, definite form of *mǒo* 'human being'. In Mandinka, any noun in the definite singular form can be interpreted as generic, depending on the context.

(124) Mandinka

Wǒo tùmôo, mòô búká màansàyáa sòtó jǎŋ,
DEM time.D person.D ICPL.NEG kingship.D get here
fó ní í táa-tá Màndíŋ.
unless if 2SG go-CPL Mande
lit. 'In those days, [the man]$_i$ did not become king here unless you$_i$ went to Mande.' > 'In those days, one did not become king here without first going to Mande.'

(Creissels et al. 2015: 50)

In (125), the antecedent *mòo wóo mòo* 'anyone' is the subject of the clause to which the first occurrence of generalizing *í* belongs.

(125) Mandinka

Mòo wóo mòo láa-tà í fâŋ ná,
person INDEF person trust-CPL 2SG self POSTP
í sí bùlá ñǐŋ túlúŋ-ò tó.
2SG POT take_part DEM game-D LOC
lit. '[Anyone]$_i$ trusting in yourself$_i$, you$_i$ may take part in this game.'
> 'Anyone trusting in themselves may take part in this game.'

(Creissels et al. 2015: 51)

In (126), the antecedent of generalizing *í* in genitive function is *mòô* 'the person' in subject function in the same clause.

(126) Mandinka

Mòô ñân-tá í lá mùsóo màrá-là báakè.
person.D must-CPL 2SG LK wife.D look_after carefully
lit. [The man]$_i$ must look after your$_i$ wife carefully.'
> 'One must look after one's wife carefully.'

(Creissels et al. 2015: 51)

And finally, (127) illustrates the same syntactic configuration, but with generalizing *í* included in a topicalized noun phrase preceding *mòô* 'the person' in subject position.

(127) Mandinka

Í báadíŋkéw-òo, mòô sì sílá à lá.
2SG brother-D person.D POT be_afraid 3SG POSTP
lit. 'Your$_i$ brother, [the man]$_i$ may be afraid of him.'
> 'One may be afraid of one's own brother.'

(Creissels et al. 2015: 51)

To summarize, in Mandinka, generalizing *í* may refer back to non-specific noun phrases making explicit the domain within which the generalization applies (either the whole set of human beings, or a proper subset thereof), and there is no obvious syntactic restriction on such coreference chains. Generalizing *í* may even precede the co-referent generic NP.

In the generalizing use of *í* with a discourse antecedent, the selection of a particular semantic type of antecedent (non-specific noun phrases or relative clauses) seems to be the only thing that distinguishes generalizing *í* from third-person pronouns. When *í* 'you' introduces a non-specific human referent, it is of course not equivalent to *à* 'he/she/it', which in the absence of an overt antecedent is interpreted as referring to some specific entity whose identity is recoverable from the context. By contrast, when it resumes a non-specific noun phrase or relative clause, second-person *í* can be replaced by third-person *à* without any difference in meaning.

Further investigation would be necessary to determine whether the generalizing use of second-person pronouns with overt antecedents is limited to the languages of Senegal reviewed in Creissels et al. (2015) or perhaps extends to a wider area.

For the discussion of a possible grammaticalization path, see Creissels (2013).

5. Complex constructions

5.1. Relativization

A considerable amount of books and articles dealing with the typology of relativization has been published since Keenan and Comrie's (1977) seminal paper on the Accessibility Hierarchy. As regards more specifically Sub-Saharan Africa, Kuteva and Comrie (2005) put forward some generalizations about relative clause formation in African languages on the basis of a sample of 54 languages covering all major genetic families.

In this section, I briefly present two recent discoveries in the domain of relativization in Sub-Saharan Africa that are of interest for a general typology of relativization.

5.1.1. Relative clauses and the stage level vs. individual level property distinction

Creissels et al. (2015) constitutes as far as I know the first mention of languages having grammaticalized such a distinction in the noun – relative clause construction. This phenomenon is related to the generalizing use of second-person pronouns.

In the Atlantic and Mande languages spoken in Senegal, one commonly finds relative clauses beginning with 'which you know that...', where quite obviously *which you know that* must not be taken in its literal meaning. At first sight, one may have the impression that adding *which you know that* at the beginning of relative clauses is just a kind of verbal tic that does not add or change anything in the meaning. However, a closer look at the contexts in which this expression occurs shows that it does have a meaning, and its meaning has to do with the generalizing use of second-person pronouns : 'which one knows that'.

The point is that, in the Atlantic and Mande languages examined by Creissels et al. (2015), *which you know that* is never used to introduce relative clauses that specify the identity of an individual with reference to a particular situation in which this individual is episodically involved. By contrast, it regularly occurs in relative clauses that characterize an individual or a kind with reference to a stable property. As illustrated by (128b), relative clauses introduced by *which you know that* are particularly common in sentences formulating definitions.

(128) Mandinka

a. *Sěejò mú bèn-dúlàa lè tí,*
Sédhiou COP meet-place.D FOC POSTP

mîŋ í yé à lôŋ kó síi jámáa lè bé jěe.
REL 2SG CPL.TR 3SG know that race many FOC COP there
'Sédhiou is a crossroads in which many ehtnic groups live.'
(lit. 'which you know that many ethnic groups are there')

b. *Kòolêe, wǒ lè mú dùlâa tí,*
kòolêe.D DEM FOC COP place.D POSTP

dâa mîŋ í yé à lôŋ kó
place.D REL 2SG CPL.TR 3SG know that

kòo-báŋk-òo lè bé jěe.
salt-soil-D FOC COP there
'A *kòolêe* is a place where the soil contains salt.'
lit. 'a place which you know that there is salted soil there'

(Creissels et al. 2015: 52)

(129) to (131) illustrate the grammaticalization of *which you know that* as a relativizer impliying reference to a stable/essential property of the referent of the head noun in Wolof, Keerak, and Gubëeher.

(129) Wolof

ab	*dëkk-u*	*kow*	*boo*	*xam*	*ne*
INDEF.CLb	village-CSTR	countryside	REL.2SG	know	that

am	*mbey*	*doŋŋ*	*la*	*dunde*
INDEF.CLm	farming	only	FOC.3SG	live-APPL

'a remote subsistance farming village'
lit. 'a remote village which you know that it lives on farming only'

(Creissels et al. 2015: 53)

(130) Keerak

ma-łłus-am	*mɔ-nʊ-haasʊm*	*kaanakʊ*	*m-ɔmɔ*	*mʊ-hʊrʊm*
CLm-sand-D.CLm	REL.CLm-2SG-know	that	CLm-COP	CLm-salty

'the sand which contains salt' lit. 'sand which you know that it is salty'

(Creissels et al. 2015: 53)

(131) Gubëeher

Ə-den	*a*	*taabl*	*ə-gəni*	*u-na*	*buyɛnka*	*ə-dej-i.*
3SG-put	PREP	table	CLa-REL	2SG-know	that	3SG-be_high-CPL

'She puts it on a high table.' lit. 'a table which you know that it is high'

(Creissels et al. 2015: 53)

5.1.2. Generalized noun-modifying clauses

Comrie (1998) argued that, in some languages, relative clauses as commonly defined do not occur in a dedicated construction, but constitute rather a particular case of a more general 'noun + modifying clause' construction that does not imply identifying the head noun with a given position in the construction of the modifying clause. The modified noun in the generalized 'noun + modifying clause' construction is identified with an element of the scenario evoked by the modifying clause, without any syntactic constraint on the interpretation of its relationship to the event in question. For example, in such languages, sentences that could be rendered literally as 'the sound that trees are falling' are possible with the interpretation 'the particular type of sound typically associated with situations that can be described as *trees are falling*'.

Lovegren and Voll (Forthcoming) is to the best of my knowledge the first mention of an African language with a generalized 'noun + modifying clause' construction in the sense of Comrie (1998).

(132) Mungbam

ì-ʤī	*ì-nī*	*[bű*	*gbà*	*ɲà*	*kə̄-tɔ̄*	*kə̄]*
CL5-sound	CL5-REL	CL2	cut.IPF	stay.IPF	CL12-tree	CL12.D

nɔ̀ *bâŋ* *ɲà* *mɔ̄.*
make.IPF block.IPF stay.IPF 1SG
lit. 'The sound that they cut the tree disturbs me.'
> 'The sound of them cutting the tree disturbs me.'

(Lovegren and Voll Forthcoming)

Interestingly, Lovegren and Voll (Forthcoming) deal with two closely related languages, Mungbam and Mundabli, and it turns out that generalized relativization illustrated by (132) is productive in Mungbam, but rejected by speakers of Mundabli.

Moreover, it is interesting to observe that in all other respects, the typological profile of Mungbam is very different from that of the languages in which generalized relativization has been signaled so far. This suggests that generalized relativization is probably not conditioned by a particular type of syntactic organization that would characterize the languages in which this type of construction can be found.

5.2. Clause chaining

Givón (2001) proposed a typology of clause-chaining systems that divide them into two major types: the OV-type chaining, with the chain-final clause as the most finite clause, and the VO-type chaining, with the chain-initial clause as the most finite clause. He further illustrated the VO-type chaining by Swahili and Akan examples. In the remainder of the literature on clause chaining, the type with the initial clause as the most finite clause is often marginalized (Payne 1997: 321), and sometimes even claimed to be inexistent (Longacre 1985: 264).

Data from Sub-Saharan languages support Givón's proposal, but at the same time oblige to reconsider the relationship between the two basic types of clause chaining and constituent order patterns at clause level.

Not surprisingly, clause chaining with the chain-final clause as the most finite clause is common across the verb-final languages of Sub-Saharan Africa. It is found not only in the verb-final languages of East Africa, but also in Kanuri, Khoe, and Dogon. Clause chaining with the chain-initial clause as the most finite clause is common across the SVO languages of the Niger-Congo phylum and is also found in many Chadic languages.

Interestingly, Mande languages, which are clearly not SVO languages but are not verb-final languages either (see Section 4.3.2), have clause chaining with the initial clause as the most finite clause, like SVO languages. In Bambara (133), clause chaining is characterized by the reduction of non-initial clauses to infinitival VPs.

(133) Bambara

Fàtú *táa-rá* *súgû* *lá,* *kà* *sògó* *sàn,* *kà* *sègín* *só,*
Fatou go-CPL market.D LOC INF meat.D buy INF return house
'Fatou went to the market, bought some meat, returned home,

kà *sògô* *tóbí* *dúnân-ú* *yé.*
INF meat.D cook visitor.D-PL for
and cooked the meat for the visitors.'

(pers.doc.)

The behavior of Mande languages in clause chaining suggests that the relevant parameter in the choice between the two basic types of clause chaining is not OV vs. VO, but rather verb-final vs. verb-medial.

6. Information structure

6.1. Focus positions in Bantu languages

Focus-marking strategies often involve deviations from the pragmatically-unmarked constituent order, and many languages have been analyzed as having a dedicated focus position in the structure of the clause (either clause-initial, pre-verbal (IBV), post-verbal (IAV), or clause-final). The contribution of Sub-Saharan languages to the typology of focus marking is particularly important as regards the possible involvment of verb morphology in the expression of focus, but they also provide interesting data about IBV and IAV focus positions. In particular, the situation observed across Bantu languages raises the question of the possible correlations between IBV vs. IAV focus position and other typological parameters.

Watters (1979) analyzed Aghem as having an IAV focus position, and many subsequent studies have demonstrated the existence of an IAV focus position across eastern and southern Bantu languages. In this context, it is interesting to observe that an IBV focus position has been described in some western Bantu languages whose typological profile is in other respects not markedly different from that of the Bantu languages that have an IAV focus position: Mbuun (B87, Bostoen and Mundeke 2012), Nsong (B85, Koni Muluwa and Bostoen), and Kisikongo (H16, De Kind 2014).

6.2. Conjoint and disjoint verb forms in Bantu languages

6.2.1. Introductory remarks

In the context of Bantu studies, a conjoint verb form is a verb form that cannot be found in sentence-final position and cannot be separated from the following phrase by a pause. A disjoint verb form does not have this limitation, but is not excluded from non-final contexts either, and when in non-final sentence position, is not necessarily separated from the following word by a perceptible pause. Consequently, in the languages that have a distinction between conjoint and disjoint verb forms, they contrast in non-final contexts but not in final position. This distribution restricts the possible functions of the conjoint vs. disjoint distinction, leaving however some space for cross-linguistic variation.

Although the morphological distinction between conjoint and disjoint forms has long been acknowledged in Bantu grammars, serious discussions of its function began not earlier that 20 years ago. The most important reference on this aspect of Bantu syntax is the volume edited by Van der Wal and Hyman (2017).

6.2.2. The function of the conjoint vs. disjoint distinction in Tswana

Creissels (1996) showed that the choice between conjoint and disjoint forms in Tswana is straightforwardly determined by the distinction between phrases in post-verbal position that form part of the verb phrase and contribute to the comment expressed by the verb, and phrases in post-verbal position that fulfill the discourse function of afterthought (alias antitopic):

- The disjoint form is used whenever the comment/verb phrase includes no other element than the verb itself (which implies that a disjoint verb form can only be followed by extraposed phrases that do not form part of the comment).
- The conjoint form is used whenever the comment/verb phrase includes at least one element other than the verb itself (which implies that a conjoint verb form is followed by at least one phrase forming part of the comment, since the verb phrase is strictly head-initial).

In Tswana, topical object NPs must be cross-referenced by an object index, whereas cross-referencing is ungrammatical with non-topical objects. Consequently, when a verb form is immediately followed by an object NP, there are just two possibilities: either the verb form is marked as conjoint, and the object NP is not cross-referenced (if the object NP forms part of the comment), or the verb form is marked as disjoint, and the object NP is cross-referenced (if the object NP is in afterthought function).

(134) Tswana

a. *Rì-tʰús-á* ˈ*Kîːtsɔ̀.*
1PL-help-FV(CJ) (CL1)Kitso
'We help / are helping Kitso.'

b. *Rì-à-mɔ̀-tʰús-á* ˈ*Kîːtsɔ̀.*
1PL-DJ-CL1-help-FV (CL1)Kitso
'We help / are helping him, Kitso that is.'

c. **Rì-mɔ̀-tʰús-á* ˈ*Kîːtsɔ̀.*
1PL-CL1-help-FV(CJ) (CL1)Kitso

d. **Rì-à-tʰús-á* ˈ*Kîːtsɔ̀.*
1PL-DJ-help-FV (CL1)Kitso

(pers.doc.)

Note that conjoint forms including an object index are ungrammatical if the phrase in post-verbal position is an object NP coreferent with the object index (since the presence of the object index implies that the coreferent phrase does not form part of the comment), but are grammatical if the verb is followed by an adjunct forming part of the comment, as in (135).

(135) Tswana

Rì-mɔ̀-tʰʊ́s-à *ká* *mà:-dí.*
1PL-CL1-help-FV(CJ) with CL6-money
'We help him financially.'

(pers.doc.)

When verbs are followed by adjuncts, the use of a disjoint form is equivalent to the presence of a pause signaling that the phrase following the verb fulfills the discourse function of afterthought. A first difference with the case of objects is that the choice of a disjoint form is not redundant with another mechanism carrying the same information, such as the insertion of an object index in the case of objects. Another difference is that, a priori, objects can always be conceived as forming part of the comment or as afterthoughts, whereas different semantic types of adjuncts behave differently in this respect.

As illustrated by (136), adjuncts that can be found at the left edge of the sentence in the role of framing topic can also follow verbs in the disjoint form, in the role of afterthought.

(136) Tswana

a. *Kítsɔ́* *ˈɔ́-bɔ́-à* *χɔ́m̀píè:nɔ́.*
(CL1)Kitso CL1-come_back-FV(CJ) today
'Kitso is coming back today.' ('today' forms part of the comment)

b. *χɔ́m̀píènɔ́* *ˈKítsɔ́* *ɔ́-à-bɔ̂:-à.*
today (CL1)Kitso CL1-DJ-come_back-FV
'Today Kitso is coming back.' ('today' fulfills the role of framing topic)

c. *Kítsɔ́* *ɔ́-à-bɔ́-á* *χɔ́m̀píè:nɔ́.*
(CL1)Kitso CL1-DJ-come_back-FV today
'Kitso is coming back, today.' ('today' fulfills the role of afterthought)

(pers.doc.)

By contrast, as illustrated by (137), some adjuncts are inherently non-topical, and can only follow conjoint verb forms.

(137) Tswana

a. *Lɔ̀rátɔ́* *ˈɔ́-bú-à* *tʰâ:tà.*
(CL1)Lorato CL1-speak-FV(CJ) much
'Lorato speaks much.'

b. * *Lɔ̀rátɔ́* *ɔ́-à-bú-à* *tʰâ:tà.*
(CL1)Lorato CL1-DJ-speak-FV much

c. *Lɔ̀rátɔ́* *ˈɔ́-bín-á* *sí-ǹ:tɬɛ̀.*
(CL1)Lorato CL1-speak-FV(CJ) CL7-good
'Lorato dances well.'

d. * *Lòrátɔ́* *ó-à-bín-á* *sí-ǹːtɬɛ̀.*
(CL1)Lorato CL1-DJ-speak-FV CL7-good
(pers.doc.)

Analyzing the distribution of conjoint and disjoint verb forms in Zulu, which is quite similar to that found in Tswana, Buell (2006) asks the question: focus or constituency? He rightly concludes that the relevant notion is not focus, but his second conclusion that the relevant notion can only be constituency is problematic, since it suggests that the conditioning of the conjoint/disjoint alternation in languages such as Zulu or Tswana has no direct link with information structure and must be analyzed in strictly syntactic terms. However, since we are dealing with languages characterized by a straightforward isomorphism between the morphosyntactic subject – verb phrase articulation and the topic – comment articulation, opposing an explanation based on the position of the verb in the verb phrase to an explanation based on the discourse function of the phrase in post-verbal position does not make any sense. Buell (2006) does not provide any evidence that an analysis dealing exclusively in terms of explicitly defined and consistently applied constituency tests might explain aspects of the distribution of conjoint and disjoint forms that would be problematic for an analysis in terms of information structure. Consequently, an analysis in which morphosyntactic phenomena are viewed as evidence of distinctions at the level of information packaging is more interesting, because of the insights it provides into the nature of the conjoint vs. disjoint distinction.

6.2.3. The conjoint vs. disjoint distinction in other Bantu languages

A conjoint vs. disjoint distinction functionally identical to that found in Tswana has been recognized in other Bantu languages of zone S, in particular, in several Nguni varieties – see among others Buell (2006) for Zulu.

Outside zone S, a conjoint vs. disjoint distinction has also been identified in Bantu languages of zones J (Haya, Rundi, Rwanda), G (Sambaa), M (Bemba, Tonga), N (Matengo), and P (Ngindo, Ndengereko, Matuumbi, Makonde, Makwe, Makhuwa) – Güldemann (1996: 159-187), van der Wal (2011).

Jenneke van der Wal's works provide a very detailed description and thorough analysis of the conjoint vs. disjoint distinction in Makhuwa. As she puts it in the abstract of her 2006 paper, in Makhuwa, "1) The verb appears in its conjoint form when a focal element occupies the Immediate After Verb (IAV) position; 2) the verb appears in its disjoint form when the IAV position is empty."

Consequently, the conjoint vs. disjoint distinction of Tswana and Makhuwa have in common the exclusion of the conjoint form from prepausal contexts, and a conditioning involving exclusively information structure, but are very different in that the conjoint vs. disjoint distinction of Makhuwa encodes the presence vs. absence of a focal element in an IAV focus position, whereas in Tswana, the conjoint form is not restricted to the presence of a phrase interpretable as a focal element in post-verbal position, and simply encodes that the verb is followed by at least one word or phrase that must not be interpreted as topical. An obvious manifestation of this difference is that the conjoint form has a much wider distribution (and the disjoint form a much more restricted distribution) in Tswana than in Makhuwa. For example, in the inversion construction of Makhuwa, the inverted (and de-

topicalized) subject can be preceded by a disjoint verb form, which would be absolutely ungrammatical in Tswana.

As suggested by Jenneke van der Wal in several of her works (van der Wal 2006, 2009, 2011, 2017), this contrast between conjoint verb forms marking focality and conjoint verb forms marking non-topicality can probably be generalized to hold for all the languages of zones P and S that have a conjoint vs. disjoint distinction, since the available data do not include anything that would contradict the hypothesis of a functional similarity between Tswana and the other zone S languages, or between Makhuwa and the other zone P languages.

This difference in the function of the conjoint vs. disjoint distinction must probably be related to the fact that, in Makhuwa at least, the choice between conjoint and disjoint forms is redundant with a tonal modification affecting nouns occupying the IAV focus position. By contrast, in Tswana, the interactions between conjoint forms and the word that follows them result in tonal alternations affecting the final syllable of the verb, but trigger no tonal modification of the following word.

6.3. Presentational focus constructions in West African languagues

In languages with a basic Subject-Verb-Object constituent order, intransitive verbs often have an alternative construction in which the argument canonically encoded as a preverbal subject occurs in postverbal position (i.e., in the canonical position for the object of transitive verbs). These so-called inverted subjects may maintain the other properties characteristic for subjects (for example, control of verb agreement), or lose (some of) them, as in French *Trois femmes sont venues* vs. *Il est venu trois femmes* (lit. *It came three women*). In this alternative construction of French intransitive verbs, the argument encoded as a preverbal subject in *Trois femmes sont venues* occurs in post-verbal position and does not control verb agreement, which invariably expresses the default value "third-person singular masculine". A subject index (*il*) is present, but its role is purely formal, since it invariably expresses the value third-person singular masculine, whatever the person-gender-number characteristics of the inverted subject.

Such constructions, often designated as "presentational," or "thetic," are very common among Bantu languages – see Creissels (2011) on Tswana, and Marten and van der Wal (2014) for a general typology of Bantu subject inversion. By contrast, judging from the available descriptions, they seem to be absent from West African languages, which is *a priori* the expected situation, given the general rigidity of constituent order patterns in West African languages – see Section 4.2. However, this is not entirely accurate. As discussed in Creissels et al. (2015), they do exist in many languages of West Africa, but their use is restricted to very small sets of verbs (most of the time, just one verb), and this explains why they have passed unnoticed so far. Interestingly, among the West African languages that have been recognized as having inverted subjects in a presentational construction, the sets of verbs attested in this construction always includes *remain*, and in many of them, *remain* is the only verb that lends itself to subject inversion.

This situation can be illustrated by Mandinka. No other Mandinka verb accepts a construction similar to that of *tú* 'remain' in (138b), where the canonical subject position to the left of the verb is occupied by an expletive third-person singular pronoun, and the semantic role normally assigned to the preverbal subject is assigned to an NP occupying the

position to the right of the verb, which is in Mandinka the canonical position for obliques. In this position, the inverted subject is optionally flagged by the postposition lá.

(138) Mandinka

a. *Mùsù-kéebáa fùlá tú-tá sàatéwòo tó.*
woman-old two remain-CPL.INTR village.D LOC
'Two old women remained in the village.'

b. *À tú-tá jĕe mùsù-kéebáa fùlá (là).*
3SG remain-CPL.INTR there woman-old two POSTP
'There remained two old women.'

(Creissels et al. 2015: 69)

Interestingly, the languages mentioned so far in the literature as having presentational inversion constructions are SVO languages in which the position occupied by the inverted subject can be analyzed as the object position, but Mandinka contradicts this generalization. In the Subject-Object-Verb-Oblique pattern of Mandinka, the position of the inverted subject in the presentational construction is clearly not the object position, but the oblique position. This suggests that the position that is really relevant for presentational inversion is not the position canonically occupied by objects, but rather the immediate postverbal position.

The other languages surveyed by Creissels et al. (2015) are SVO languages, and their inversion construction is therefore of the common type.

In Wolof, a noun class language that does not express class distinction in subject indexation, *des* 'remain' has a construction in which its argument is in postverbal position (which is in Wolof the canonical position for objects), the preverbal position normally occupied by a subject NP remains empty, and the verb is invariably in the third-person singular form, see (139b). No other Wolof verb can be used in a similar construction.

(139) Wolof

a. *Maa-y des ci kër g-i.*
1SG.FOC-ICPL remain at house CLg-D
'It's me who will remain at home.'

b. *Des na ñaari fan.*
remain PRF.3SG two day
'There remain two days.'

(Creissels et al. 2015: 69)

Not surprisingly, in the languages that express class distinctions in subject indexation and have an expletive subject index in the inversion construction, this expletive subject index belongs to the class typically used to express vague reference. This is in particular the case of the class Ɔ index in Pepel. In (140), it is clear that this subject index does not express agreement with the inverted subject, since the inverted subject belongs to class P.

(140) Pepel

Ↄ-dʊkɔ problema pə-loŋ.
CLɔ-remain (CLp)problem CLp-one
'There remains one problem.'

(Creissels et al. 2015: 70)

In Ganja, the exceptional character of the inversion construction is reinforced by the fact that no subject index is present, as in (141). The general rule in Ganja is that, if no NP in subject position is present, a subject index must be prefixed to the verb, and Ganja has no noun class that could be analyzed as having a zero subject index.

(141) Ganja

Ŋátɛ̀ hálá à-wɔ́dà.
remain person CLha-one
There remains one person.'

(Creissels et al. 2015: 70)

In most of the languages surveyed by Creissels et al., *remain* is the only verb found in the inversion construction. However, they note that Sambou (1979) provides an example with the verb *gush* in Joola Kaasa, see (142). Note that Joola languages have obligatory subject indexation, with however a phonologically empty subject index for class R, typically used to encode vague reference.

(142) Joola Kaasa

a. *Maa mʊ-hʊwʊlɔ taatɛr.*
(CLm)water CLm-gush here
'Water is gushing here.'

b. *Hʊwʊlɔ maa taatɛr.*
(CLr)gush (CLm)water here
'There is water gushing here.'

(Sambou 1979: 178)

In Ganja, in addition to *ŋatɛ* 'remain', as in (141), a presentational construction with an inverted subject is found with *gi* 'be', as in (143). In contrast to the inversion construction of *ŋatɛ* 'remain', in which no subject index is present, the inversion construction of *gi* 'be' includes an expletive subject index of class U. Not surprisingly, in Ganja, as can be seen from the second part of this sentence, class U is typically used to express vague reference.

(143) Ganja

Wì-ìg-gí f-lɛ̌y,
CLu-HYP-be CLf-day
'Sooner or later, (lit. 'There may be a day)

fɔ̋ *ù-núm-ná-tɛ̀* *ò-bɔ́ɔ̃ɲj-ɛ̀.*
OBLIG CLu-bring-2SG-CTRP CLu-be_good-RES
this will certainly bring you happiness.'

(Creissels et al. 2015: 71)

Interestingly, presentational inversion constructions limited to the verb *remain*, or to a small set of verbs that always includes *remain*, are not limited to the Senegambian languages investigated by Creissels et al. (2015), and I would not be surprised if further investigation revealed that the same situation is relatively common elsewhere in the Sudanic belt:

– Among Mande languages, the inversion construction of *remain* is found not only in Mandinka, but also in the Manding varieties of Mali, Ivory Coast, and Burkina Faso (Bambara, Jula), and in Soninke.
– A similar situation is signaled by Soubrier (2013) for the Uwi variety of Kposo, a Kwa language spoken in Central Togo.
– Lovestrand (2012) observes an inversion construction with the verb *remain* in Baraïn (Chadic), and explicitly notes that he has found no other verb in a similar construction.

In the Uwi variety of Kposo, Soubrier (2013: 229–230) describes an inversion construction in which the obligatory slot for subject agreement is occupied by a third-person expletive index, and the subject NP moves to postverbal position. In addition to *nè* 'remain' (144), this construction is possible with *kú* 'pass', *sí* 'arrive (time)', and *kpɔ̄* 'arrive (hour)'.

(144) Kposo Uwi

Mɛ́ *á-nè* *bɛ̀kɔ̀-ɛ́* *nɔ́* *útí.*
then 3SG-remain lees-D LOC bottom
'Then there remain the lees at the bottom (of the pot).'

(Soubrier 2013: 230)

(145) illustrates the inversion construction of *remain* in Baraïn.

(145) Baraïn

Íl:à *āt:ē* *mìɟ:ó.*
except remain.CPL person
'Only the man was left.'

(Lovestrand 2012: 264)

This particularity of the verb *remain* in the languages of West Africa raises an interesting theoretical problem. In the languages that have a presentational inversion construction, the ability of verbs to occur in this construction is an instance of split/fluid intransitivity (Creissels 2010), and in the literature on so-called unaccusative vs. unergative intransitive verbs, the presentational inversion construction is commonly presented as a possible unaccusativity diagnostic (Creissels 2008a). In this perspective, the data presented in this section suggest that *remain* must be semantically the most typical 'unaccusative' verb, since it

can be the only verb for which such a construction is possible in languages characterized by a particular rigidity of constituent order patterns and drastic lexical restrictions on the use of the presentational inversion construction. However, I am aware of no proposal in the unaccusativity literature that would predict this particularity of *remain*, and this can be viewed as a serious shortcoming in the discussions about the semantic basis of split intransitivity.

7. Conclusion

My first concern when writing this paper was to present some recent advances in the documentation and understanding of the morphosyntactic diversity of the languages spoken in Sub-Saharan Africa, in relationship to their geographical position and genetic affiliation, and to place these advances into the broader context of current discussions about the morphosyntactic diversity of the world's languages.

The comparison with the state-of-the-art proposed almost ten years ago by Creissels et al. (2008) shows that, roughly speaking, the generalizations we proposed still hold true. However, given the increasing number of the available descriptions and the improvement in their average quality, it is not surprising that many of these generalizations can be formulated now in a much more precise way, and some of them can only be retained with some emendation. Moreover, current trends in typological investigation have led to consider issues that were not traditional in African linguistics, and to raise awareness about the interest of these questions for a better understanding of both the internal diversity of Sub-Saharan languages and their contribution to a general typology of morphosyntactic systems.

Until recently, in comparison with other continents, the documentation on Sub-saharan languages was characterized by a blatant lack of reference descriptions bringing together the following qualities: precision, exhaustiveness, reliability, and typological awareness. Fortunately, in this respect, things are changing very rapidly, and one can wish this trend to continue, so as to make the present overview obsolete as soon as possible.

Abbreviations

A: agent, ABSTR: abstraction, ACC: accusative, ANTIP: antipassive, APPL: applicative, AUX: auxiliary, CAUS: causatif, CJ: conjoint, CL: noun class, COP: copula, CPL: completive, CSTR: construct, CTRP: centripetal, D: definite, DECL: declarative, DEM: demonstrative, DETR: detransitivizer, DIST: distal, DJ: disjoint, DRNA: dependency reversal in *noun – attributive* constructions, EMPH: emphatic, ERG: ergative, EXPL: expletive, F: feminine, FOC: focus, FV: final vowel, GER: gerundive, HAB: habitual, HYP: hypothetical, IAV: immediate after verb, IBV: immediate before verb, ICPL: incompletive, IMPER: imperative, INDEF: indefinite, INF: infinitive, INTERP: interposition, INTR: intransitive, IPF: imperfective, IRR: irrealis, L: low morphotoneme, LH: low-high morphotoneme, LK: linker, LOC: locative, M: masculine, NEG: negative, NMLZ: nominalizer, NOM: marked-nominative, O: object, OBLIG: obligative, OV: object-verb, P: patient, PASS: passive, PAST: past, pers.com.: personal communication,pers.doc: personal documentation, PF: perfective, PL: plural, POS: positive, POSS: possessive, POSTP: postposition, POT: potential, PREP: preposition, PRF: perfect, PRO: pronoun, PROG: progressive, RECIP: reciprocal, REFL:

reflexive, REL: relativizer, RES: resultative, S: single argument of monovalent verbs, SBD: subordinator, SBJF: subject flag, SEQ: sequential, SFOC: subject focus, SG: singular, SOV: subject-object-verb, SUBJ: subjunctive, SVO: subject-verb-object, TOP: topic, TR: transitive, V: verb, VE: valency external, VFOC: verb focus, VO: verb-object, X: oblique.

References

Andersen, Torben. 1988. Ergativity in Parï, a Nilotic OVS language. Lingua 75. 289-324.

Andersen, Torben. 2002. Case inflection and nominal head marking in Dinka. *Journal of African Languages and Linguistics* 23(1). 1–30.

Arka, I W. and J. Kosmas. 2005. Passive without passive morphology? Evidence from Manggarai. In I W. Arka and M.D. Ross (eds), *The many faces of Austronesian voice systems: some new empirical studies*. Canberra: Pacific Linguistics. 87-117.

Arkadiev, Peter. 2015. The Berber "state" distinction: Dependent marking after all? A commentary on Mettouchi and Frajzyngier (2013). *Linguistic Typology* 19(1). 87–100.

Aritiba, Adji Sardji. 1988. Un type particulier de morphème relateur en Lamba. *Linguistique Africaine* 1. 5–12.

Baker, Mark and Chris Collins. 2006. Linkers and the internal structure of vP*. *Natural Language & Linguistic Theory* 24. 307–354.

Bao Diop, Sokhna. 2015. Les classes nominales en nyun gunyamolo. In Denis Creissels & Konstantin Pozdniakov (eds.), *Les classes nominales dans les langues atlantiques*. Cologne: Rüdiger Köppe. 369-405.

Bearth, T. 1995. Nominal periphrasis and the origin of the predicative marker in Mande languages – an alternative view. *Afrikanistische Arbeitspapiere* 41. 89–117.

Bird, Charles & Martha Kendall. 1986. Postpositions and auxiliaries in Northern Mande: Syntactic indeterminacy and linguistic analysis. *Anthropological Linguistics* 28(4). 389–403.

Borschev, Vladimir & Barbara Partee. 2002. The Russian genitive of negation: Theme-rheme structure of perspective structure? *Journal of Slavic Linguistics* 10. 105–144.

Bostoen, Koen & Leon Mundeke. 2012. Subject marking and focus in Mbuun (Bantu, B87). *Southern African Linguistics and Applied Language Studies* 30(2). 139–154.

Buell, Leston. 2006. The Zulu conjoint/disjoint verb alternation: focus or constituency? *ZAS Papers in Linguistics* 43. 9–30.

Carlson, Robert. 1994. *A grammar of Supyire*. Berlin: Mouton de Gruyter.

Caudill, Herbert & Ousmane Besseko Diallo. 2000. *Midɔ waawi pular! Learner's guide to Pular (Fuuta Jallon)*. Conakry, Guinea: Peace Corps.

Childs, G. Tucker. 2005. The S-Aux-O-V-Other syntagm in Atlantic. *Studies in African Linguistics* 34(1). 1–42.

Claudi, Ulrike. 1994. Word order change as category change: The Mande case. In William Pagliuca (ed.) *Perspectives on grammaticalization* (Current Issues in Linguistic Theory 109), 201–241. Amsterdam: Benjamins.

Clements, G. N. & Annie Rialland. 2008. Africa as a phonological area. In Bernd Heine & Derek Nurse (eds.), *A Linguistic Geography of Africa*, 36–85. Cambridge: Cambridge University Press.

Cobbinah, Alexander. 2010. The Casamance as an area of intense language contact: the case of Baïnounk Gubaher. *Journal of Language Contact* – THEMA 3. 175–201.

Cobbinah, Alexander and Friederike Lüpke. 2009. 'Not cut to fit – zero coded passives in African languages'. In M. Brenzinger and A.-M. Fehn (eds.). *Proceedings of the 6th World Congress of African Linguistics*. Cologne: Köppe. 153-165.

Collins, Chris & Jeffrey Gruber. 2014. *A grammar of ǂHoan*. Cologne: Rüdiger Köppe.

Collins, Chris & Levi Namaseb. 2011. *A grammatical scketch of N|uuki with stories*. Cologne: Rüdiger Köppe.

Comrie, Bernard. 1998. Rethinking the typology of relative clauses. *Language Design* 1. 59–86.

Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.

Corbett, Greville. 2006. *Agreement*. Cambridge: Cambridge University Press.

Creissels, Denis. 1994. *Aperçu sur les structures phonologiques des langues négro-africaines*, 2nd edn. Grenoble: ELLUG.

Creissels, Denis. 1996. Conjunctive and disjunctive verb forms in Setswana. *South African Journal of African Languages* 16(4). 109–115.

Creissels, Denis. 1997. Postpositions as a possible origin of certain predicative markers in Mande. *Afrikanistische Arbeitspapiere* 50. 5–17.

Creissels, Denis. 1998. Expansion and retraction of high tone domains in Setswana. In Larry Hyman & Charles Kisseberth (eds.), *Theoretical aspects of Bantu tone*. Stanford : CSLI Publications. 133-194.

Creissels, Denis. 2002. Valence verbale et voix en tswana. *Bulletin de la Société de Linguistique de Paris* 97(1). 371–416.

Creissels, Denis. 2003. Adjectifs et adverbes dans les langues subsahariennes. In Patrick Sauzet & Anne Zribi-Hertz (eds.), *Typologie des langues d'Afrique et universaux de la grammaire*, vol. 1, 17–38. Paris: L'Harmattan.

Creissels, Denis. 2004. Non-canonical applicatives and focalization in Tswana. Paper presented at the SWL 1 conference (Leipzig, 5–8 August).

Creissels, Denis. 2005. S-O-V-X constituent order and constituent order alternations in West African languages. In Rebecca T. Cover & Yuni Kim (eds.), *Proceedings of the 31st annual meeting of the Berkeley Linguistics Society: Special session on the languages of West Africa*, 37–52. Berkeley, CA: Berkeley Linguistics Society.

Creissels, Denis. 2008a. Remarks on split intransitivity and fluid intransitivity. In Olivier Bonami & Patricia Cabredo Hofherr (eds.), *Empirical Issues in Syntax and Semantics* 7, 139–168. Paris: CSSP.

Creissels, Denis. 2008b. Impersonal and anti-impersonal constructions: a typological approach. Paper presented as part of a series of lectures given at the University of Tartu, Estonia, 2–3 june. http:// www.deniscreissels.fr/public/Creissels-impers.constr.pdf

Creissels, Denis. 2009. Construct forms of nouns in African languages. In Peter K. Austin, Oliver Bond, Monik Charette, David Nathan & Peter Sells (eds.), *Proceedings of Conference on Language Documentation & Linguistic Theory 2*, 73–82. London: SOAS.

Creissels, Denis. 2010. Fluid intransitivity in Romance languages: A typological approach. *Archivio Glottologico Italiano* 2010–2. 117–151.

Creissels, Denis. 2011. Tswana locatives and their status in the inversion construction. *Africana Linguistica* 17. 33–52.

Creissels, Denis. 2013. The generic use of the second person singular pronoun in Mandinka. In Dik Bakker and Martin Haspelmath (eds.), *Languages across boundaries: Studies in memory of Anna Siewierska*, 53–67. Berlin: De Gruyter Mouton.

Creissels, Denis. 2014. P-lability and radical P-alignment. *Linguistics* 52(4). 911–944.

Creissels, Denis. 2016a. Phonologie segmentale et tonale du soninké (parler du Kingi). *Mandenkan* 55. 3-174.

Creissels, Denis. 2016b. Additive coordination, comitative adjunction, and associative plural in Tswana. *Linguistique et langues africaines* 2. 11-42.

Creissels, Denis. 2016c. Existential predication in the world's languages: the typology of inverse locational predication. Paper presented at the workshop Between Existence and Location: Empirical, Formal and Typological approaches to Existential Constructions (Tübingen, 01-02 December 2016).

Creissels, Denis. Forthcoming (a). Atypical objects in Soninke (West Mande).

Creissels, Denis. Forthcoming (b). Reconstructing the history of the Soninke voice system.

Creissels, Denis, Gerrit Dimmendaal, Zygmunt Frajzyngier, and Christa König. 2008. Africa as a morphosyntactic area. In Bernd Heine and Derek Nurse, *A linguistic geography of Africa*. Cambridge University Press. 86-150.

Creissels, Denis & Jérémie Kouadio. 2010. Ditransitive constructions in Baule. In Andrej Malchukov, Martin Haspelmath & Bernard Comrie (eds.), *Studies in ditransitive constructions: a comparative handbook*, 166–189. Berlin: De Gruyter Mouton.

Creissels, Denis & Pierre Sambou. 2013. *Le mandinka: phonologie, grammaire, textes*. Paris: Karthala.

Creissels, Denis & Konstantin Pozdniakov (eds.). 2015. *Les classes nominales dans les langues atlantiques*. Cologne: Rüdiger Köppe.

Creissels, Denis & Séckou Biaye. 2016. *Le balant ganja: phonologie, morphosyntaxe, liste lexicale, textes*. Dakar: IFAN.

Creissels, Denis, Sokhna Bao Diop, Alain-Christian Bassène, Mame Thierno Cissé, Alexander Cobbinah, El Hadji Dieye, Dame Ndao, Sylvie Nouguier-Voisin, Nicolas Quint, Marie Renaudier, Adjaratou Sall & Guillaume Segerer. 2015. L'impersonnalité dans les langues de la région sénégambienne. *Africana Linguistica* 21. 29–86.

Dahl, Östen. 2004. *The growth and maintenance of linguistic complexity*. Amsterdam/Philadelphia: John Benjamins.

Dahl, Östen. 2015. *Grammaticalization in the North: Noun phrase morphosyntax in Scandinavian vernaculars* (Studies in Diversity Linguistics 6). Berlin: Language Science Press.

Dalrymple, Mary & Irina Nikolaeva. 2011. *Objects and information structure.* Cambridge: Cambridge University Press.

De Kind, Jasper. 2014. Pre-verbal focus in Kisikongo (H16a, Bantu). *ZAS Papers in Linguistics* 57. 95–122.

Delplanque, Alain. 1997. La qualification en dagara. *Linguistique africaine* (N° hors-série). 41–73.

Dickens, Patrick J. 2005. *A concise grammar of Ju|'hoan: with a Ju|'hoan-English glossary and a subject index*. Cologne: Rüdiger Köppe.

Di Garbo, Francesca. 2014. *Gender and its interaction with evaluative morphology. An intra- and intergenealogical typological survey of Africa*. Stockholm: University of Stockholm dissertation.

Dimmendaal, Gerrit. 2011. *Historical linguistics and the comparative study of African languages*. Amsterdam: John Benjamins.

Dobrin, Lise M. 1995. Theoretical consequences of literal alliterative concord. In Audra Dainora, Rachel Hemphill, Barbara Luka, Barbara Need & Sheri Pargman (eds.), *Papers from the 31st Regional Meeting of the Chicago Linguistic Society*, 127–142. Chicago: Chicago Linguistic Society.

Dombrowsky-Hahn, Claudia. 2015. *A grammar of Syer (Western Karaboro, Senufo). Phonology, morphology, argument realization*. Cologne: Rüdiger Köppe.

Elders, Stefan. 2003. L'état d'annexion en kulango. *Gur papers / Cahiers voltaïques* 6. 67–81.

Fauconnier, Stefanie & Jean-Christophe Verstraete. 2014. A and O as each other's mirror image? Problems with markedness reversal. *Linguistic Typology*. 18(1). 3–49.

Givón, Talmy. 2001. *Syntax. Volume II*. Amsterdam: John Benjamins.

Grah, Claire. *Approche systématique du nɪwɔlɪ*. PhD thesis. Paris: University of Paris.

Greenberg, Joseph. 1959. *Africa as a linguistic area*. In William R. Bascom & Melville J. Herskovits (eds.), *Continuity and change in African* cultures, 15–27. Chicago: Chicago University Press.

Gregersen, Edgar. 1961. Luo: A grammar. PhD thesis. Yale University.

Güldemann, Tom. 1996. *Verbalmorphologie und Nebenprädikationen im Bantu*. Bochum: Universitätsverlag Dr. N. Brockmeyer.

Güldemann, Tom. 2004. Linear order as a basic morphosyntactic factor in Non-Khoe Khoisan. Paper presented at the conference Syntax of the World's Languages 1, Leipzig, 5–8 August.

Güldemann, Tom. 2007. Preverbal objects and information structure in Benue-Congo. In Enoch O. Aboh, Katharina Hartmann & Malte Zimmermann (eds.), *Focus strategies in African languages: The interaction of focus and grammar in Niger-Congo and Afro-Asiatic* (Trends in Linguistics. Studies and Monographs 191), 83–111. Berlin: Mouton de Gruyter.

Güldemann, Tom. 2008. The Macro-Sudan belt: towards identifying a linguistic area in northern Sub-Saharan Africa. Bernd Heine & Derek Nurse (eds.), *A linguistic geography of Africa*. Cambridge: Cambridge University Press, 151–185.

Güldemann, Tom & Rainer Vossen. 2000. Khoisan. In Bernd Heine & Derek Nurse (eds.), African Languages: An Introduction.

Hamlaoui, Fatima. 2014. A note on bare-passives in (selected) Bantu and western Nilotic languages. *ZAS Papers in Linguistics* 57. 123–135.

Haspelmath, Martin. 1990. The grammaticization of passive morphology. *Studies in Language* 14. 25-72.

Haspelmath, Martin. 2015. Transitivity prominence. In Andrej L. Malchukov & Bernard Comrie (eds.), *Valency classes in the world's languages: A comparative handbook*, vol. 1, 131–147. Berlin: De Gruyter Mouton.

Hassan Kamil, Mohamed. 2015. *L'afar: description grammaticale d'une langue couchitique (Djibouti, Erythrée, Ethiopie).* PhD thesis. Paris: INALCO.

Haude, Katharina and Fernando Zúñiga. 2016. Inverse systems and symmetrical voice: a unified view on languages with two transitive constructions. *Linguistics* 54(3). 443-481.

Heath, J. 1999. *A grammar of Koyraboro (Koroboro) Senni*. Cologne: Rüdiger Köppe.

Heath, J. 2008. *A grammar of Jamsay*. Berlin/New York: Mouton de Gruyter.

Heine, Bernd. 1976. *A typology of African languages, based on the order of meaningful elements*. Berlin: Reimer.

Heine, Bernd & Christa König. 2015. *The !Xun language*. Cologne: Rüdiger Köppe.

Huumo, Tuomas. 2003. Incremental existence: The world according to the Finnish existential sentence. *Linguistics* (41)3. 461–493.

Hyman, Larry M. 2003. Basaá (A43). In Derek Nurse and Gérard Philippson (eds.), *The Bantu languages*. NewYork: Routledge. 257–282.

Janic, Katarzyna. 2013. *L'antipassif dans les langues accusatives*. PhD thesis. University of Lyon.

Jenks, Peter, Emmanuel-Moselly Makasso, and Larry Hyman. To be published September 2017. Accessibility and demonstrative operators in Basaá relative clauses. In Gratien Atindogbé & Rébecca Grollemund (eds.), *Relative Clauses in Cameroonian languages.* Berlin: de Gruyter Mouton.

Kastenholz, Raimund. 2003. Auxiliaries, grammaticalization, and word order in Mande. *Journal of African Languages and Linguistics* 24-1. 31-53.

Keenan, Edward & Bernard Comrie. 1977. Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8. 77–100.

Khachaturyan, Maria. 2015. Grammaire du mano. *Mandenkan* 54. 1-252.

Kießling, Roland. 2008. Noun classification in !Xoon. In Sonja Ermisch (ed.), *Khoisan languages and linguistics*. Cologne: Rüdiger Köppe. 225-248.

Killian, Don. 2015. *Topics in* Uduk *Phonology and Morphosyntax*. Ph.D. thesis. University of Helsinki.

Kohnen, B. 1933. *Shilluk Grammar. With a little English-Shilluk Dictionary*. Verona: Missioni Africane.

Koni Muluwa, Joseph & Koen Bostoen. 2014. The immediate before the verb focus position in Nsong (Bantu B85d, DR Congo): A corpus-based exploration. *ZAS Papers in Linguistics* 57. 123–135.

König, Christa. 2002. *Kasus im Ik*. Cologne: Rüdiger Köppe.

König, Christa. 2008. *Case in Africa*. Oxford: Oxford University Press.

Kouadio, N. J. 1996. *Description systématique de l'attié de Memni*. Habilitation thesis. Grenoble: University of Grenoble.

Kuteva, Tania & Bernard Comrie. 2005. The typology of relative clause formation in African languages. In F.K. Erhard Voeltz (ed.), *Studies in African linguistic* typology, 209–225. Amsterdam/Philadelphia: John Benjamins.

Longacre, Robert. 1985. Sentences as combinations of clauses. In Timothy Shopen (ed.), *Language typology and syntactic description. Volume II: Complex* constructions, 235–286. Cambridge: Cambridge University Press.

Lovegren, Jesse and Rebecca Voll. To be published September 2017. Relative clauses in two Yemne-Kimbi languages. In Gratien Atindogbé & Rébecca Grollemund (eds.), *Relative Clauses in Cameroonian languages.* Berlin: de Gruyter Mouton.

Lovestrand, Joseph. 2012. *The linguistic structure of Baraïn (Chadic).* MA thesis. Dallas: Graduate Institute of Applied Linguistics.

Lüpke, Friederike. 2005. *A grammar of Jalonke argument structure*. Doctoral thesis. University of Nijmegen.

Lüpke, Friederike. 2007. Vanishing Voice - the Morphologically Zero-Coded Passive of Jalonke. *Linguistische Berichte* 14. 173-90.

Malchukov, Andrej. 2000. *Dependency reversal in noun-attributive constructions*. Munich: LINCOM.

Marten, Lutz and Jenneke van der Wal. 2014. A typology of Bantu subject inversion. *Linguistic Variation* 14(2). 318–368.

Martin, Samuel. 1956. *Essential Japanese*, 2nd edn. Rutland, VT & Tokyo, Japan: Charles E. Tuttle Company.

McPherson, Laura. 2013. *A grammar of Tommo So*. Berlin/New York: Mouton de Gruyter.

Mous, Maarten. 1993. *A Grammar of Iraqw*. Hamburg: Helmut Buske.

Ndayiragije, Juvénal. 2006. The Ergativity Parameter: The view from Antipassive. In Diane Massam, Alana Johns & Juvénal Ndayiragije (eds.), *Ergativity: Emerging Issues*. Springer. Dordrecht, The Netherlands. 271-292.

Nichols Johanna, David Peterson, and Jonathan Barnes. 2004. Transitivizing and detransitivizing languages. *Linguistic Typology* 8. 149–211.

Nikitina, Tatiana. 2011. Categorial reanalysis and the origin of the S-O-V-X word order in Mande. *Journal of African Languages and Linguistics* 32(2). 251–273.

Nouguier-Voisin, Sylvie 2002. *Relations entre fonctions syntaxiques et fonctions sémantiques en wolof*. Lyon: University of Lyon dissertation.

Okoth-Okombo, Duncan. 1982. *DhoLuo morphophonems in a generative framework*. Berlin: Dietrich Reimer Verlag.

Orkaydo, Ongaye Oda. 2013. *A grammar of Konso*. Leiden: University of Leiden dissertation.

Oumarou Yaro, B. 1993. *Eléments de description du zarma*. Grenoble: University of Grenoble dissertation.

Ouoba, Benoît. 1982. *Description systématique du gulmancema : phonologie, lexicologie, syntaxe*. Paris: Université de la Sorbonne Nouvelle (Paris 3) dissertation.

Partee, Barbara H. & Vladimir Borschev. 2004. The semantics of Russian genitive of negation: The nature and role of perspectival structure. In Kazuha Watanabe & Robert B. Young (eds.), *Proceedings of Semantics and Linguistic Theory XIV* (SALT 14), 212–234. Ithaca, NY: CLC Publications.

Partee, Barbara H. & Vladimir Borschev. 2007. Existential sentences, BE, and the genitive of negation in Russian. In Ileana Comorovski and Klaus von Heusinger (eds.), *Existence: Semantics and* Syntax, 147–190. Dordrecht: Springer.

Payne, Thomas. 1997. *Describing morphosyntax: A guide for field linguists*. Cambridge: Cambridge University Press.

Perrin, Loïc-Michel. Forthcoming. *Esquisse grammaticale du basari, langue tenda.* Paris: L'Harmattan.

Petrollino, Sara. 2016. *A grammar of Hamar*. Leiden: University of Leiden dissertation.

Prince, Kilu von. 2008. *Attributive linkers in three languages*. Berlin: Humboldt University MA thesis.

Randal, Scott. 1998. A grammatical sketch of Tennet. In Gerrit Dimmendaal (ed.), *Surmic Languages and Cultures*, 219–272. Cologne: Rüdiger Köppe.

Reh, Mechthild. 1996. *Anywa language: Description and internal reconstructions*. Köln: Rüdiger Köppe.

Renaudier, Marie. 2012. *Dérivation et valence en sereer, variété de Mar Lodj (Atlantique, Sénégal).* Lyon: University of Lyon dissertation.

Sagna, Serge. 2011. The documentation of Gújjolaay Eegimaa: An archive of language and cultural material from the Jóola people of Mof Ávvi (Southern Senegal). Endangered Languages Archive: SOAS.
http://elar.soas.ac.uk/deposit/0113 (accessed 15 February 2014).

Sambou, Pierre-Marie. 1979. *Joola kaasa esuulaalur : phonologie, morpho-phonologie et morphologie*. Dakar: University of Dakar dissertation.

Sapir, J. David. 1971. West Atlantic: an inventory of the languages, their noun class systems and consonant alternation. In T. A. Sebeok (ed.), *Current trends in linguistics, vol. 7: Linguistics in Sub-Saharan Africa*, 45–112. The Hague & Paris: Mouton.

Sauvageot, Serge. 1967. Sur la classification nominale en Baïnouk. In *La classification nominale dans les langues négro-africaines.* Paris: CNRS. 225-235.

Say, Sergey. 2014. Bivalent verb classes in the languages of Europe: A quantitative typological study. *Language Dynamics and Change* 4(1). 116–166.

Schneider-Zioga, Patricia. 2014a. Linking, predication, and symmetry. On the syntax of the linker in Kinande. In Ulrike Steindel, Thomas Borer, Huilin Fang, Alfredo García Pardo, Peter Guekguezian, Brian Hsu, Charlie O'Hara & Iris Chuoying Ouyang (eds.), *Proceedings of the 32nd Annual West Coast Conference on Formal Linguitics*, 323–331. Somerville, MA: Cascadilla Proceedings Project.

Schneider-Zioga, Patricia. 2014b. The linker in Kinande reconsidered. In Ruth Kramer, Elizabeth Zsiga & One Tlale Boyer (eds.), *Selected proceedings of the 44th Annual Conference of African Linguistics*, 264-276. Somerville, MA: Cascadilla Proceedings Project.

Schneider-Zioga, Patricia & Philip Nguessimo Mutaka. 2015a. Copular clauses in Kinande. *Journal of West African Languages* 42(2). 57–79.

Schneider-Zioga, Patricia & Philip Nguessimo Mutaka. 2015b. Small clauses and secondary predication in Kinande. *Journal of West African Languages* 42(2). 101–124.

Schneider-Zioga, Patricia & Philip Nguessimo Mutaka. 2015c. The linker in Kinande: a predication relation. *Journal of West African Languages* 42(2). 101–124.

Segerer, Guillaume. 2002. *La langue bijogo de Bubaque (Guinée Bissau)*. Louvain/Paris: Peeters.

Soubrier. Aude. 2013. *L'ikposso uwi. Phonologie, grammaire, textes, lexique*. Lyon: University of Lyon dissertation.

Sumbatova, Nina. 2003. 'Glagol'naja sistema jazyka landuma'. In V.A. Vinogradov & I.N. Toporova (eds.), *Osnovy afrikanskogo jazykoznanija: Glagol*. Moscow: Vostočnaja Literature.

Tucker, A. N. and M. A. Bryan. 1966. *Linguistic Analyses: the Non-Bantu Languages of North-Eastern Africa*. London: Oxford University Press.

Van de Velde, Mark. 2011. Dependency reversal in northern Sub-Saharan Africa. Paper presented at the 9th Biennial conference of the Association for Linguistic Typology, Hong Kong.

Van de Velde, Mark. To be published September 2017. The augment as a construct form marker in Eton relative clause constructions. In Gratien Atindogbé & Rébecca Grollemund (eds.), *Relative Clauses in Cameroonian languages.* Berlin: de Gruyter Mouton.

Voisin-Nouguier, Sylvie. 2010. Possessive voice in Wolof: a rare type of valency operator. In Jan Wohlgemuth & Michael Cysouw (eds.), *Rara and rarissima: documenting the fringes of linguistic diversity*, 377–400. Berlin: De Gruyter Mouton.

Vossen, Rainer (ed.). 2013. *The Khoesan languages.* London / New York: Routledge.
Wal, Jenneke van der. 2006. The disjoint verb form and an empty Immediate After Verb position in Makhuwa. *ZAS Papers in Linguistics* 43. 233–256.
Wal, Jenneke van der. 2009. *Word order and information structure in Makhuwa-Enahara*. Utrecht: LOT.
Wal, Jenneke van der. 2011. Focus excluding alternatives: conjoint/disjoint marking in Makhuwa. *Lingua* 121(11). 1734–1750.
Wal, Jenneke van der. 2017. What is the conjoint/disjoint alternation? In Jenneke van der Wal & Larry Hyman (eds). *The conjoint/disjoint alternation in Bantu*. Berlin: De Gruyter Mouton.
Wal, Jenneke van der & Larry Hyman (eds). 2017. *The conjoint/disjoint alternation in Bantu*. Berlin: De Gruyter Mouton.
Watters, John R. 1979. Focus in Aghem: A study of its formal correlates and typology. In Larry Hyman (ed.), *Aghem grammatical structure*, 137–197. Los Angeles: University of Southern California.
Westermann, Diedrich H. 1911. *Die Sudansprachen* [The Sudanic languages]. Hamburg: L. Friederichsen & Co.

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