

A typology of subject marker and object marker systems in African languages

Denis Creissels
Laboratoire Dynamique Du Langage (CNRS)
& Université Lumière (Lyon2)
e-mail: denis.creissels@univ-lyon2.fr

1. Introduction

In this paper, the term ‘pronominal marker’ is applied to any bound morpheme referring to an entity that is represented elsewhere in the same clause by a noun phrase, or could be represented by a noun phrase in a clause identical in all other respects, and whose variations reflect, either certain semantic characteristics of the entity in question, or certain grammatical features of a noun phrase referring to the same entity in the same construction.

Pronominal markers typically show variations expressing distinctions that parallel those expressed by free pronouns, in particular distinctions in person and number.¹

When discussing properties of the pronominal markers, the expression ‘the corresponding noun phrase’ will be used here as an abbreviation for ‘the noun phrase referring to the same entity that is present in the same clause or that could be used to refer to the same entity in a clause identical in all other respects’.

‘Subject markers’ are pronominal markers that correspond to a noun phrase in subject function, and ‘object markers’ are pronominal markers that correspond to a noun phrase in object function.

This definition groups together several types of morphemes that may differ in some important aspects of their grammatical behaviour – see section 2. But, diachronically, the subtypes of pronominal markers can be viewed as successive stages in the evolution of former pronouns that in a first stage lose their status of autonomous words, and that subsequently may undergo additional modifications in their behaviour without entirely losing the semantic properties of the pronouns they originate from.

In this connection, it is important to keep in mind that a variety of terms are applied to pronominal markers in different grammatical traditions (pronominal affixes, weak pronouns,

¹ In the first person plural, a distinction between ‘we including you’ and ‘we excluding you’ occurs sporadically in several groups of African languages. As a rule, additional distinctions in the third person are encountered in languages with a gender system in which identical distinctions are involved in the agreement between nouns and modifiers. With gender systems of the Niger-Congo type (traditionally referred to as ‘noun class systems’), gender distinctions are found in the third person only. In gender systems based on the sex distinction, gender distinctions may be found in the second person too. Note that the correlation between ‘nominal gender’ and ‘pronominal gender’ is not absolute: one may encounter languages, either with gender-like distinctions in pronouns and/or pronominal markers only, or languages with gender distinctions manifested at the level of the relation between the noun and its modifiers that do not extend to pronouns and/or pronominal markers. For example, Wolof has noun class distinctions at the noun phrase level, but these distinctions do not manifest themselves in the variations of free pronouns or of subject and object markers. Conversely, Zande is devoid of any gender distinction at the noun phrase level, but in the third person, the free pronouns and the subject markers of Zande have different forms for masculine human, feminine human, non-human animate and inanimate.

unemphatic pronouns, pronominal clitics, personal endings of verbs, subject/object concords, etc.), and that the choice between these different labels does not correlate in any consistent way with variations in the properties of the pronominal markers.

Even more importantly, in the current orthography of many languages, pronominal markers are written as distinct words, and in many descriptive grammars, they are not clearly distinguished from free pronouns. In other words, their status as bound morphemes is not always recognized correctly. This question will be discussed in section 3, but it seems to me important to immediately emphasize that, in a cross-linguistic study of pronominal markers, there would be little sense in recognizing the existence of such morphemes in a language by simply relying on orthographic conventions or on the labels currently used in descriptive grammars.

2. Subtypes of pronominal markers according to their conditions of cooccurrence with the corresponding noun phrases

2.1. The three stages in the evolution of pronominal markers

Among the morphemes recognizable as pronominal markers according to the definition put forward in section 1, three subtypes can be distinguished on the basis of their conditions of cooccurrence with the corresponding noun phrases. Diachronically, there is a considerable amount of evidence that these three subtypes represent successive stages in an evolution whose starting point is the cliticization of free pronouns.

Stage I pronominal markers are in complementary distribution with the corresponding noun phrase within the limits of the clause, and the choice between the pronominal marker and the corresponding noun phrase depends on the discourse structure of the clause: the same entity is represented by a pronominal marker or by a noun phrase depending on its degree of topicality and recoverability from the context, and the pronominal marker cooccurs with the corresponding noun phrase only if the noun phrase is topicalized in a dislocated construction; for example, modern Romance languages have pronominal morphemes (commonly termed 'clitic pronouns') that are morphosyntactically bound to the verb, but that in most cases are used only to refer to an entity that is not represented by a noun phrase in the same clause.

Stage II pronominal markers are obligatory, even if a noun phrase or a free pronoun referring to the same entity is present in subject or object function, whereas the corresponding noun phrases or free pronouns are not obligatory constituents of the clause. In such situations, a given participant is obligatorily referred to by a pronominal marker; the corresponding noun phrase can be viewed as providing additional information helping to identify the referent in case the indications given by the pronominal marker and by the context are not sufficient, and the corresponding free pronoun occurs only to express emphasis. For example, in Latin, clauses do not necessarily include a noun phrase or (free) pronoun in subject function, but the argument that can optionally be encoded as the subject of a verb is obligatorily referred to by means of a pronominal marker incorporated in the verb ending.

Stage III pronominal markers share with stage II pronominal markers the property of obligatoriness, but they differ from them by not being able to represent by themselves the entity they refer to. In other words, constructions involving stage III pronominal markers must include a noun phrase or a free pronoun referring to the same entity. The English marker *-s* attached to verbs in the indicative present combined with a third person singular subject is an illustration of this type of pronominal marker: *-s* is a pronominal marker in the sense of the

definition put forward here, since its presence vs absence depends on grammatical characteristics of the subject noun phrase or on semantic characteristics of its referent, and it belongs to the third subtype, since in a clause *NP V-s ...*, neither the noun phrase in subject function nor the marker *-s* can be suppressed.

The pronominal nature of stage I pronominal markers is particularly clear, since they are functionally equivalent to free pronouns in the sense that, within the limits of the clause, there is no other trace of the entity referred to by means of a stage I pronominal marker. By contrast, stage III pronominal markers clearly function as pure agreement markers, and stage II pronominal markers have a mixed status, since they share with free pronouns the ability to constitute the only representant of the entity they refer to, but when a noun phrase referring to the same entity is present in the same clause, the obligatoriness of stage II pronominal markers makes it possible to consider them as agreement markers.

There tends to be a correlation between these three stages in the evolution of the syntactic properties of pronominal markers and changes in their morphophonological properties: from the morphophonological point of view, stage I pronominal markers remain generally easy to isolate as distinct segments in the morphological structure of the word they are attached to, whereas stage II or III pronominal markers often show a high degree of fusion with the other elements of the word.

2.2. Subject / object markers functioning as pure agreement morphemes in African languages

Subject or object markers functioning as pure agreement morphemes (i.e. subject or object markers whose variations refer to an argument encoded as a noun phrase in subject or object function but that cannot by themselves represent the argument they refer to) are not common in the languages of the world. Not surprisingly, examples of pronominal markers of this type are not easy to find in African languages. A possible example of stage III subject markers in an African language is the agreement of Fula verbs with their subject in gender/number, manifested by consonant alternations at the initial of verb stems – ex. (1).²

(1) *Fula*

a. *debbo wari*
woman came
'The woman came'

b. *rewɓe ŋgari*
women came
'The women came'

c. *o-wari*
SM3S-came
'(S)he came'

² Historically, it seems reasonable to analyze these consonant alternations as the reflex of the presence vs absence of an ancient prefix **n-*. Note that Fula has also stage I subject markers, illustrated here in ex. (1c-d), which are in complementary distribution with NPs in subject function.

- d. ɓe-ŋgari
 SM3P-came
 ‘They came’

2.2. Discourse dependent and obligatory subject markers in African languages

Among African languages, one commonly encounters both languages with discourse dependent subject markers – ex. (2) – and languages with obligatory subject markers – ex. (3). Stage I subject markers are particular common in some language families and stage II subject markers in others, but it is difficult to say which of these two types predominates at the level of the African continent.

(2) *Anyi* (Quaireau, 1987)

- a. kuakú dafi
 Kuaku sleep
 ‘Kuaku is sleeping’
- b. ɔ-dafi
 SM3S-sleep
 ‘He is sleeping’
- c. kuakú díé ɔ-dafi
 Kuaku TOP SM3S-sleep
 ‘As for Kuaku, he is sleeping’

(3) *Tswana*

- a. kító ʉ-tsíle
 CL1.Kitso SMC1-come.TAM
 ‘Kitso has come’
- b. ʉ-tsíle
 SMC1-come.TAM
 ‘He has come’
- c. *kító tsíle

In this respect, the subject markers of some languages do not behave in a uniform way: for example, the subject clitics of French are obligatory in the first and second person but optional in the third person; Mende – ex. (4) – has subject markers in complementary distribution with the corresponding noun phrase in the third person singular, contrasting with obligatory subject markers in the third person plural.

(4) *Mende* (Innes, 1971)³

- a. i-kólíí lóilo
SM3S-leopard see.PAST
'He saw a leopard'
- b. kpanâ kólíí lóilo
Kpana leopard see.PAST
'Kpana saw a leopard'
- c. tí-kólíí lóilo
SM3P-leopard see.PAST
'They saw a leopard'
- d. maheísia tí-kólíí lóilo
chiefs SM3P-leopard see.PAST
'The chiefs saw a leopard'

2.4. Discourse dependent and obligatory object markers in African languages

Typical stage II object markers, i.e. object markers necessarily present in transitive constructions, even if in the presence of the corresponding noun phrase, are not uncommon in the languages spoken in certain parts of the world. For example, a number of Amerindian languages have a class of transitive verb stems that must combine with an object marker, as illustrated here by Nahuatl – ex. (5).

(5) *Nahuatl* (Launey, 1981)

- a. ni-c-cua in nacatl
SM1S-OM3S-eat DEF meat
'I am eating the meat'
- b. ni-c-cua
SM1S-OM3S-eat
'I am eating it'
- c. ni-c-cua nacatl
SM1S-OM3S-eat meat
'I am eating meat'
- d. *ni-cua nacatl, *ni-cua
(‘I am eating’, without any specification of the thing eaten, would be in Nahuatl *ni-tla-cua*, where *-tla-* is an intransitivizing morpheme)

In Africa, typical stage II object markers (obligatory object markers) are not frequent; by contrast, stage I object markers (discourse dependent object markers) are very common.

Tswana – ex. (6) – provides a good illustration of object markers that always represent

³ Mende is an SOVX language with subject markers attached to the first word of the verb phrase (i.e. the first word of the NP in object function, if any) – see section 4.

topics, and are therefore in strict complementary distribution with noun phrases in object function, the choice between an object marker and a noun phrase or free pronoun in object function being always possible and pragmatically significant.

(6) *Tswana*

- a. kì-χù-bídítsè
SM1S-OM.2S-call.TAM
'I called you' (how is it possible that you didn't hear me?)
- b. kì-bídítsé wèná
SM1S-call-TAM you
'I called you' (and nobody else!)

However, many languages have object markers that are stage I object markers in the sense that they are not always present in transitive constructions, but that depart from the typical behaviour of stage I object markers in the sense that at least in certain conditions, they must be present even if the corresponding noun phrase or free pronoun is also present. Historically, such systems can be viewed as systems in a transitional stage between stage I and stage II.

For example, Romance languages have cases of obligatory 'clitic doubling', in which a free pronoun or a noun phrase in object or dative function is necessarily accompanied by the corresponding clitic attached to the verb. Among African languages, Swahili illustrates a situation in which pronouns, proper nouns and definite noun phrases trigger the presence of an object marker irrespective of their discourse function, whereas no object marker accompanies indefinite noun phrases in object function – ex. (7). Note that in Swahili, definiteness is not obligatorily marked at noun phrase level, and consequently the presence of an object marker may constitute the only clue to the definiteness of common nouns in object function.

(7) *Swahili*

- a. ni-me-ku-ona
SM1S-TAM-OM2S-see
'I have seen you'
- b. *ni-me-ona wewe
SM1S-TAM-see you
- c. u-me-leta chakula?
SM2S-TAM-bring CL7.food
'Have you brought (some) food?'
- d. u-me-ki-leta chakula?
SM2S-TAM-OMC7-bring CL7.food
'Have you brought the food?' (which I told you to bring)

2.5. Implicit reference to discursively salient entities

Free pronouns are used to refer to entities by relying maximally on the discourse feature of

salience, and minimally on the mention of semantic characteristics independent of the particular speech act within which entities are referred to. This functional characterization of pronouns is shared by stage I pronominal markers, and partially by stage II pronominal markers. But when discussing certain aspects of the typology of pronominal markers according to their conditions of cooccurrence with noun phrases or free pronouns, it must be kept in mind that the use of free pronouns or pronominal markers is not the only way of exploiting the discourse property of salience to refer to an entity involved in an event. In case a noun phrase representing this entity would have the status of argument of the verb, an alternative strategy is the strategy of implicate reference, which relies on an interpretive rule according to which, if there is no explicit representation of an argument within the clause, the role of this argument must be assigned to some salient entity not mentioned in the clause.

Japanese is a good example of a language that systematically uses the strategy of implicit reference to speech act participants or other discursively salient entities. Such a systematic use of this strategy seems to be very rare in Africa. In virtually all African languages, arguments encoded as subjects, if not represented by a noun phrase or free pronoun in subject function, must at least be represented by a subject marker. In the case of arguments encoded as objects, most of the time, their total omission triggers an indefinite rather than anaphoric interpretation.

However, the descriptions of some African languages mention a regular use of the strategy of implicit reference to discursively salient entities, but in rather restrictive conditions. In contrast to Japanese, which extends the use of this strategy to any salient entity in argumental function, African languages that make use of it seem to restrict it to inanimate patients.

3. Problems in recognizing the distinction between free pronouns and pronominal markers

Many descriptions of African languages do not mention the existence of bound pronominal morphemes, but in most cases the morphemes termed ‘subject pronouns’ and ‘object pronouns’ in descriptions of African languages are not really separate words and should be reanalyzed as bound morphemes.

The problem is that pronominal markers are easily recognizable as such only if the following three conditions are met:

(1) They are obligatory, so that it is relatively easy to establish a distinction between pronominal morphemes that have the same distribution as nouns (free pronouns), and pronominal elements that have a specific distribution, since they cooccur with nouns (pronominal markers); by contrast, pronominal markers in complementary distribution with the corresponding noun phrases are easy to confuse with free pronouns.

(2) Even in very short and simple sentences, their position cannot be confused with that of the corresponding noun phrase (for example, they are prefixed to the verb and correspond to noun phrases that follow the verb, or they are suffixed to the verb and correspond to noun phrases that precede the verb).

(3) From the morphophonological point of view, they show a relatively high degree of interaction with TAM or polarity markers, i.e. with morphemes that are not expected to interact with nouns or their equivalent; for example, no linguist would imagine the possibility of isolating as distinct words the subject markers that constitute the ending of Italian or Spanish verbs; by contrast, subject markers attached the initial of the verb that do not fuse with the following morphemes, like the clitic subjects of French or Piemontese, are easily confused with words that preceded the verb.

In other words, stage II pronominal markers are generally easy to identify (and most

descriptive grammars identify them properly), but stage I pronominal markers are easy to confuse with free pronouns, in particular when their position is at first sight similar to that of the corresponding noun phrase.

Wolof – ex. (8) – provides a good illustration, both of the difficulties in the identification of pronominal morphemes and of the kind of observations that may help to solve this problem.

By itself, the data put forward in (8a) could suggest recognizing *ma*, *nga*, etc. and *ko* as free pronouns in subject / object function. But:

– in the verb tenses illustrated in (8b-c), a subject marker is obligatorily present even if there is a noun phrase in subject function, and it is often amalgamated with a TAM or focus marker in a way that makes it difficult to isolate a segment representing specifically the subject marker;

– in (8b), the subject marker is very clearly suffixed to the verb, and its position cannot be confused with that of noun phrase in subject function;

– in (8c), the position of the object marker is clearly different from that of a noun phrase in object function.

(8) *Wolof*

a. xale yi naan meew mi
 child DEF.PL drink milk DEF
 ‘The children drank the milk’ (in a narrative context)

ma-naan-ko ‘I drank it’
 nga-naan-ko ‘You (sg) drank it’
 mu-naan-ko ‘He/she drank it’
 ñu-naan-ko ‘We/they drank it’⁴
 ngeen-naan-ko ‘You (pl) drank it’

b. xale yi naan-nañu meew mi
 child DEF.PL drink-TAM.SM3P milk DEF
 ‘The children have drunk the milk’ (perfect)

naan-naa-ko ‘I have drunk it’
 naan-nga-ko ‘You (sg) drank it’
 naan-na-ko ‘He/she has drunk it’
 naan-nañu-ko ‘We/they have drunk it’
 naan-ngeen-ko ‘You (pl) have drunk it’

c. xale yi dañu naan meew mi⁵
 child DEF.PL VFOC.SM3P drink milk DEF
 ‘The children have *drunk* the milk’ (with emphasis on the verb)

⁴ The subject markers of Wolof always have the same form in 1st person plural and 3rd person plural.

⁵ In the presentation of this example, I consider that *dañu naan* is a compound verb form with the subject marker included in a word that can be viewed as an auxiliary. This analysis, which simplifies the formulation of the rules accounting for the attachment of subject and object markers, is supported by the invariability of the verb stem, which in Wolof suffers no exception. An alternative analysis would be to analyze the ‘tense-person complex’ *dañu* as prefixed to the verb stem, but what is important here is that both analyses recognize that the pronominal morphemes occurring in (8c) are pronominal markers rather than free pronouns.

dama-ko naan	‘I have drunk it’
danga-ko naan	‘You (sg) drank it’
dafa-ko naan	‘He/she has drunk it’
dañu-ko naan	‘We/they have drunk it’
dangeen-ko naan	‘You (pl) have drunk it’

In cases when the position occupied by the pronominal morphemes in minimal sentences does not reveal their precise status as free pronouns or pronominal markers, two kinds of observations may help to solve the problem:

– in more complex constructions, free pronouns are expected to behave with the same mobility as syntactic constituents, whereas pronominal markers must remain attached to their host – for example, in the Wolof example (8a) above, it would be possible to insert *itam* ‘too’ between a noun phrase in subject function and the verb, but not between the subject markers and the verb stem;

– phonologically, free pronouns undergo only contextual changes resulting from the application of ‘post-lexical’ rules operating at word junctions; by contrast, pronominal markers have frequently allomorphs that cannot be explained as the result of phonological processes operating at word junctions and must be analyzed as the result of the interaction between morphemes belonging to the same word.

Unfortunately, morphosyntactic tests are relatively difficult to apply in African languages, due to their syntactic peculiarities. A first reason is that the contrast between the mobility of free pronouns and the lack of mobility of bound pronominal morphemes is less obvious in languages with a relatively rigid ordering of the constituents of the clause, which is the case of an overwhelming majority of African languages. A second reason is that, among the morphosyntactic tests that may help to recognize bound morphemes, the coordination tests are often particularly clear; unfortunately, most African languages do not have an exact equivalent of the English coordinating morpheme *and*, and they tend to coordinate noun phrases within what can be called the ‘comitative strategy’, which makes it impossible to simply transpose the coordination tests that prove particularly useful for languages such as French or English.

By contrast, in African languages, a careful observation of the phonological data generally provides evidence that dissipates the hesitations one may have in establishing a distinction between free pronouns and pronominal markers. For example, Ewe has an object marker of third person singular consisting of a single vowel whose quality (i, e or ε) is conditioned by the last vowel of the verb stem – ex. (9), which unambiguously identifies it as a bound pronominal morpheme in spite of the fact that at first sight, it seems to occupy in the clause the same position as an object noun phrase, since Ewe is an SVO language.

(9) *Ewe* (Schadeberg, 1985)

- a. kofí wù-ì
Kofi kill-OM3s
‘Kofi killed it’
- b. kofí tó-è
Kofi pound-OM3s
‘Kofi pounded it’

- c. kofí kpó-è
 Kofi see-OM3S
 ‘Kofi saw it’

In many languages that have ATR harmony, the fact that pronominal markers undergo vowel harmony is a decisive proof that they cannot be analyzed as autonomous words, as illustrated here with Anyi – ex. (10).

(10) *Anyi* (Quaireau, 1987)

- a. ɔ-dafí
 SM3S-sleep
 ‘He is sleeping’
- b. o-di alié
 SM3S-eat food
 ‘He is eating’

Most African languages have tone systems, and many of them have a complex tonal morphology. An advantage of such a situation is that, once the tonal system is known, bound morphemes often turn out to undergo tonal variations that prove their phonological dependence on their host and exclude interpreting them as autonomous words. For example, in Mende, noun phrases in object function immediately precede the verb – ex. (11), so that the object markers in ex. (11b-c) could easily be confused with free pronouns, but their tone is always the opposite of the tone of the first syllable of the verb stem. In addition to that, in the third person, Mende has a distinction between human and non human object markers, and the third person non human object marker is clearly a bound morpheme, since in many cases it manifests itself through a modification of the initial consonant of the verb and cannot be isolated as a distinct segment – ex. (11d).

(11) *Mende* (Innes, 1971)

- a. mahéí kólíí lóilo / waáilo
 chief leopard saw / killed
 ‘The chief saw / killed a leopard’
- b. mahéí ti-lóilo
 chief OM3P-saw
 ‘The chief saw them’
- c. mahéí tí-waáilo
 chief OM3P-killed
 ‘The chief killed them’
- d. mahéí tóilo
 chief OM3SNH.saw
 ‘The chief saw it’

We are now in a position to discuss the following two questions:

- (1) What is the proportion of African languages really devoid of subject markers?

(2) Among the African languages that have subject markers, what is the proportion of those that are devoid of object markers?

The Omotic language Maale – Amha (2001) – is a clear case of an African languages in which pronominal markers have only a very marginal status: in Maale, the verb is inflected for person and number in the imperative and in the optative only, and apart from that, all the pronominal morphemes of Maale are clearly free pronouns. But such cases are not frequent among African languages. In particular, the pronominal morphemes of many Mande or Songhay languages may at first sight give the impression of uniformly having the behaviour of free pronouns, but precise descriptions always make apparent the existence of allomorphic variations affecting at least certain pronominal morphemes in certain contexts that can be accounted for, neither as case distinctions, nor as the result of post-lexical phonological processes operating at ordinary word junctions – see for example Heath (1999) for Gao Songhay.

Many descriptions of African languages that mention the existence of several sets of pronominal morphemes clearly identify a set of free pronouns, but make no firm decision on the status of the other sets: they are written as separate words, but no evidence supporting the decision of treating them as free forms is explicitly provided. In most cases, such descriptive grammars simply do not contain the informations necessary to solve the problem. But what seems to me significant is that, whenever they do, the available evidence always supports the identification of ‘weak’ or ‘unemphatic’ pronouns as bound morphemes, as shown for example by Ikoro (1996) for Kana, by Eze (1994) for Igbo, and by Kutsch Lojenga (1994) for Ngiti⁶. The reason why so many descriptions misidentify pronominal markers is simply that stage I pronominal markers, i.e. pronominal markers minimally different from free pronouns, are particularly frequent in African languages.

This suggests the conclusion that, contrary to what a superficial survey of the available descriptions could suggest, an overwhelming majority of African languages do have pronominal markers.

As for the second question, it seems that the vast majority of African languages have both subject markers and object markers. Oromo – Griefenow-Mewis & Bitima (1994) – is a clear case of a language similar to Latin in that it has stage II subject markers suffixed to verbs but uses exclusively free pronouns to pronominalize objects. This situation seems to be relatively common among Cushitic and Omotic languages, but rather uncommon in the other African language families.

4. Pronominal markers attached to words other than the verb

Subject / object markers attached to the verb are particularly common, but this is not the only possibility. For example, Serbo-croatian has pronominal markers that attach to the first

⁶ Note however that, even in cases when the relevant facts are established in a precise and complete way, difficulties in identifying the exact status of pronominal morphemes may persist, due to the fact that clear evidence supporting the identification of pronominal morphemes as bound morphemes may appear only in certain conditions; for example, the clearest evidence that the ‘weak object pronouns’ of Hausa are in fact verb suffixes is that they undergo a tonal alternation conditioned by the tone of the preceding syllable, but this alternation operates only with certain verb classes. It may also happen that within the same set of pronominal morphemes, some show more clearly than others the behaviour of bound morphemes; for example, in Yoruba, the bound nature of the object marker suffixed to the verb is much more obvious in the third person singular than in the other persons, since the object marker of third person singular has no stable segmental form and is realized as a copy of the preceding vowel; in Manding, the phonological behavior of the ‘weak pronouns’ of first person singular and third person singular provides much more evidence supporting their identification as bound morphemes than in the other persons.

word or phrase of the clause; in the Amerindian language Paez – Rojas (1998), bound morphemes analyzable as the amalgam of a subject marker and of a TAM marker are suffixed to the last word of focalized noun phrases and attach to the verb by default, if no noun phrase is focalized.

These types of attachment of subject / object markers seem to be found in some Khoisan languages (Tom Güldemann, personal communication); I know of no similar case outside the Khoisan phylum, but other types of attachment of pronominal markers to words other than the verb can be sporadically found among African languages.

In Mande languages, the order of the constituents of the clause is *S (v) O V X*, where (*v*) indicates the possible presence of a grammatical word, often called ‘predicative marker’ in the descriptions of Mande languages, which expresses TAM and polarity distinctions⁷. In such a structure, the cliticization of pronouns in subject function may create subject markers that, at least in transitive clauses, are clearly attached to a word that is not the verb.

In ex. (9) above, we have already encountered subject markers attached to the first word of an object noun phrase in Mende. In Dan, the subject markers have fused with the predicative marker and have become obligatory: in this language, syntactically, the subject noun phrase is clearly optional, but the verb phrase necessarily begins with a morpheme that amalgamates TAM distinctions with person-number distinctions, and in transitive clauses, this morpheme is separated from the verb by the object noun phrase – ex. (12).

(12) *Dan* (Doneux)

a. SM.TAM	NP _{OBJECT}	V		(1P and 2P omitted for brevity's sake)
ā	yá rice	ɓɓ		‘I eat rice’
má	yá	ɓɓ		‘I ate rice’
ī	yá	ɓɓ		‘You (sg) eat rice’
ɓá	yá	ɓɓ		‘You (sg) ate rice’
yɓ	yá	ɓɓ		‘(S)he eats rice’
yà	yá	ɓɓ		‘(S)he ate rice’
wò	yá	ɓɓ		‘They eat rice’
wà	yá	ɓɓ		‘They ate rice’
b. NP _{SUBJECT}	SM3.TAM	NP _{OBJECT}	V	
ncé	yɓ	yá	ɓɓ	‘The child eats rice’
ncé	yà	yá	ɓɓ	‘The child ate rice’
ncé nû	wò	yá	ɓɓ	‘The children eat rice’
ncé nû	wà	yá	ɓɓ	‘The children ate rice’

⁷ At least in some languages, there is a relation between the choice of this element and morphological variations of the verb. Historically, at least some of these ‘predicative markers’ may originate from auxiliary verbs, but synchronically, most of them show no evidence of a verbal status. It is also worth noting that sometimes (but not always) their phonological interaction with the context suggests analyzing them as bound to the last word of the subject noun phrase, or to the first word of the verb phrase; but this is not directly relevant to the present discussion.

Another interesting case in point is Ewe. With ordinary transitive verbs, the object markers of Ewe are necessarily attached to the verb, as illustrated in ex. (7) above. But in the construction of transfer verbs, the noun phrase representing the transferred thing precedes the noun phrase representing the recipient, and the recipient can be represented by an object marker attached to the last word of the noun phrase representing the transferred thing – ex. (13).

(13) *Ewe* (Felix Ameka, personal communication)

- a. é-ná tsi-i
 SM3S-give water-OM3S
 ‘(S)he gave him/her water’
- b. é-fíá dɔ-ε
 SM3S-show work-OM3S
 ‘(S)he taught him/her a profession’
- c. é-fíá teφé nyui ádé-e
 SM3S-show place good INDEF-OM3S
 ‘(S)he showed him/her a nice place’

5. Distinctions in the phonological shape of subject and object markers

Subject and object markers sharing the same semantic features may have identical phonological forms. However, in a number of African languages, even among those that have no case distinction between subjects and objects, subject markers differ from the corresponding object markers, at least in some persons.

It must be noted that, in African languages, differences in the phonological shape of pronominal markers sharing the same semantic features almost always have a straightforward explanation in terms of the traditionally recognized syntactic functions. The only exception I am aware of is Anywa – Reh (1996). This language has two sets of pronominal markers attached to verbs, but there is no one-to-one correspondence between these two sets and the syntactic functions subject and object, and Reh analyzes the correspondence as a case of split ergativity: in certain constructions, prefixes are used to represent the agent of typical transitive verbs, and suffixes represent the unique core argument of intransitive verbs or the patient of transitive verbs, whereas in other constructions, the same suffixes are used to represent the unique core argument of intransitive verbs or the agent of transitive verbs. But I have found no other example of an African language with a system of subject and object markers conforming to the ergative pattern (in which intransitive subject markers are identical to the object markers and different from the transitive subject markers), the agentive pattern (in which intransitive verbs divide in two classes, the intransitive subject markers being identical with the subject markers of transitive verbs in one class, and with the object markers in the other), or the direct/inverse pattern (in which a given combination of persons in transitive verb morphology is encoded without taking into account the respective roles of the arguments referred to, and a distinct morpheme indicates whether the assignment of semantic roles follows a certain hierarchy of persons or violates it).

In African languages, differences in the phonological shape of subject and object markers sharing the same semantic features are more common in the 1st and 2nd person than in the

3rd person; they are more common in the singular than in the plural, and in the 3rd person singular, they are more common for pronominal markers that typically refer to human or animate entities than for those that don't have this property.

In tonal languages, it is very common that subject and object markers have the same segmental shape but differ in their tonal properties. For example, in Tswana, subject markers divide into four sets according to their tonal behaviour, and object markers show a tonal behaviour that does not coincide with that of any of the sets of subject markers; but object markers have a segmental shape distinct from that of the corresponding subject markers only in the first person singular, in the second person singular and in class 1.

It's also worth noting that very often, differences in the shape of subject and object markers are a mere consequence of the fact that subject markers tend to fuse with other types of morphemes expressing various types of semantic distinctions typically encoded through verbal morphology, whereas the same phenomenon rarely affects object markers. We have already seen – see ex. (8) above – that, in the conjugation of Wolof, each individual tense is characterized by a particular set of 'tense-person complexes', forms that amalgamate TAM, polarity and/or focus distinctions with person-number distinctions referring to the subject in a way that makes very difficult to decide whether these tense-person complexes must be analyzed as monomorphemic or bimorphemic; by contrast, as illustrated by ex. (12), object markers have the same form in all tenses and are always clearly isolable from the neighbouring morphemes.

(14) *Wolof*

a.	mu-	wut-	ma	'He looked for me' (narrative)	
	SM	look+for	OM		
	mu-	wut-	la	'He looked for you (sg)	
	mu-	wut-	ko	'He looked for him / her / it'	
	mu-	wut-	ñu	'He looked for us'	
	mu-	wut-	leen	'He looked for you (pl) / them' ⁸	
b.	wut-	na-	ma	'He has looked for me' (perfect)	
	look+for	SM	OM		
	wut-	na-	la	etc.	
	wut-	na-	ko		
	wut-	na-	ñu		
	wut-	na-	leen		
c.	dafa-	ma	wut	'He <i>looked for</i> me'	
	SM	OM	look+for	(emphasis on the verb)	
	dafa-	la	wut	etc.	
	dafa-	ko	wut		
	dafa-	ñu	wut		
	dafa-	leen	wut		
d.	démb	la-	ma	wut	'He looked for me <i>yesterday</i> '
	yesterday	SM	OM	look+for	(focus on 'yesterday')
	démb	la-	la	wut	etc.
	démb	la-	ko	wut	

⁸ In wolof, the object markers of 2nd person plural and 3rd person plural are identical.

démb	la-	ñu	wut
démb	la-	leen	wut

e. wut-	u-	ma		‘He did not look for me’
look+for	SM	OM		
wut-	u-	la		
wut-	u-	ko		
wut-	u-	ñu		
wut-	u-	leen		

In contrast to what is observed in many languages of the world, what is remarkable in Wolof verbal morphology is that the fusion of subject markers with other types of morphemes that cross-linguistically tend to have the status of verb affixes contrasts with the total absence of any phonological interaction between the verb stem and the tense-person complex that results from the fusion of the subject marker with other types of markers. In such a system, the bound nature of the subject markers is obvious, but what is not obvious is whether the ‘tense-person complex’ resulting from the fusion of the subject marker and of other types of grammatical markers must be considered as a verbal affix or as a distinct word. Hausa illustrates the same situation, which seems to be fairly common in African languages.

6. Object markers and ditransitive verbs

In the preceding sections, object markers have been identified as such and discussed in reference to typical transitive verbs, i.e. verbs with two arguments to which they assign the roles of agent and patient. In this section, we examine the behaviour of ditransitive verbs regarding the indexation of their arguments.

Transfer verbs can be considered as the prototype of ditransitive verbs, and the following discussion will be mainly based on the most common of them, ‘give’. ‘Give’ has three arguments, the giver, the transferred thing and the recipient.

The observation of the indexation of the arguments of ‘give’ across languages having object markers in typical transitive constructions confirms that languages may organize the construction of transfer verbs in various ways: the argument assimilated to the patient of typical transitive verbs may be the transferred thing, or the recipient, but it may also happen that both the transferred thing and the recipient are represented by noun phrases whose grammatical behaviour is similar to that of the object of typical transitive verbs.

6.1. Indexation systems in which object markers attached to transfer verbs can represent the transferred thing, but not the recipient

In some languages, in the construction of transfer verbs, the transferred thing receives exactly the same treatment as the patient of prototypical transitive verbs, whereas the recipient, either receives a special treatment (corresponding more or less to the traditional notion of dative), or is simply treated as an oblique. In the languages that have systems of indexation including object markers, this type of organization of the construction of transfer verbs may be reflected in the following two ways:

(a) The transferred thing is represented by the same object markers as the patient of typical transitive verbs, whereas the recipient is represented by a special set of pronominal

markers (dative markers); for example in French, in the third person, the transferred thing is represented by the same object clitics *le / la / les* as the patient of typical transitive verbs, and special dative clitics (*lui / leur*) are used to represent the recipient. The same type of indexation of the argument of transfer verbs is found in many other South-European languages (Romance languages, Greek, Basque, Macedonian, etc.), but I know of no African language with pronominal markers functionally similar to the Romance dative markers.

(b) The transferred thing is represented by the same object markers as the patient of typical transitive verbs, whereas the recipient is pronominalized in the same way as obliques, i.e. by means of free pronouns combined with an adposition, or pronominal markers attached to an adposition; situations of the type can be found in African languages, as illustrated here by Mende – ex. (15)

(15) *Mende* (Innes, 1971)

- | | | | |
|----|--|----|--------------------------------------|
| a. | kpaná lólí
Kpana call
'Call Kpana' | —> | ngi-lólí
OM3SH-call
'Call him' |
| b. | mbeí yéyá
rice buy
'Buy the rice' | —> | ngéyá
OM3SNH.buy
'Buy it' |
| c. | mbeí ve kpaná we
rice give Kpana to
'Give the rice to Kpana' | | |
| d. | fe kpaná we
OM3SNH.give Kpana to
'Give it to Kpana' | | |
| e. | mbeí ve ngié
rice give 3SH.to
'Give the rice to him' | | |
| f. | fe ngié
OM3SNH.give 3SH.to
'Give it to him' | | |

However, this type of organization of the construction of transfer verbs does not seem very common in African languages, particularly in the Niger-Congo phylum⁹.

⁹ The case of Hausa may be interesting to mention here. In this language, the verb *baà* 'give' has very clearly a construction in which the recipient is treated exactly in the same way as the patient of typical transitive verbs:

yaa baà Audù àbinci
SM3SM.TAM give Audu food
'He gave food to Audu'

yaa baa-nì àbinci
SM3SM.TAM give-OM1S food
'He gave me food'

6.2. Indexation systems in which object markers attached to transfer verbs can represent the recipient, but not the transferred thing

Mende, which has served to illustrate a type of construction of transfer verbs in which the transferred thing is assimilated to the patient of typical transitive verbs and the recipient is treated as an oblique – ex. (15), has another verb ‘give’ with a construction in which the recipient is assimilated to the patient of prototypical transitive verbs, and the transferred thing treated as an oblique – ex. (16); in this construction, the recipient, but not the transferred thing, is represented by the same object markers as the patient of typical transitive verbs.

(16) *Mende* (Innes, 1971)

a. kpanâ gó a mbeí
 Kpana give with rice
 ‘Give the rice to Kpana’

b. kpanâ gó la
 Kpana give with.it
 ‘Give it to Kpana’

c. ngi-gó a mbeí
 OM3SH-give with rice
 ‘Give the rice to him’

Ex. (16) illustrate a type of indexation of the arguments of transfer verbs particularly common in African languages. Two subtypes may be recognized. In most cases, there is no possibility of indexing the transferred thing by means of special pronominal markers attached to the verb. This may be the case, not only in constructions in which the noun phrase representing the transferred thing clearly has the characteristics of an oblique, as in ex. (16), but also in constructions in which there is no obvious indication of its oblique status, as in Swahili – ex. (17): in ex. (17d), the two noun phrases that follow the verb are neither case marked nor combined with adpositions, but only one of them can be indexed in the verb form.

By contrast, the other verbs of transfer have a construction currently analyzed as a construction in which the recipient is treated as the complement of a preposition *wà ~ ma-*:

yaa kaawoo wa Audù àbinci
 SM3SM.TAM bring PREP Audu food
 ‘He brought food to Audu’

yaa kaawoo mi- nì àbinci
 SM3SM.TAM bring PREP-1S food
 ‘He brought food to Audu’

But according this interpretation, the Hausa verbs of transfer would have very strange properties, since they would be separated from their ‘direct’ object by a prepositional object. The lack of mobility of the ‘preposition’ involved in this construction suggests reanalyzing it as a verbal suffix, which would lead to reanalyze this construction as a ‘normal’ double object construction similar to that of *baà*. Note however that Newman (2000) provides some evidence against this reanalysis.

(17) *Swahili*

- a. ni-me-wa-ona watoto
SM1S-TAM-OMC2-see CL2.child
'I have seen the children'
- b. ni-me-ki-leta chakula
SM2S-TAM-OMC7-bring CL7.food
'Have you brought the food?' (which I told you to bring)
- c. ni-me-wa-pa chakula
SM1S-TAM-OMC2-give CL7.food
'I have given food to them'
- d. ni-me-wa-pa watoto chakula
SM1S-TAM-OMC2-give CL2.child CL7.food
'I have given food to them'
- e. *ni-me-ki-pa watoto, *ni-me-ki-wa-pa

A less common subtype is illustrated by Shimaore. In this language – ex. (18), in the same way as in Swahili, transfer verbs include a unique object marker identical to those used to represent the patient of typical transitive verbs, and this object marker necessarily represents the recipient; but Shimaore has a third set of pronominal markers that occupy a special position at the end of the verb form and are used specifically with ditransitive verbs to represent the second object. Note that, in Bantu languages, pronominal markers of this type are a particular case of 'oblique argument markers', since formally similar morphemes occupying the same position in the verb form are commonly used to represent locative arguments.

(18) *Shimaore*

- a. ni-tso-hu-zunguha
SM1S-FUT-OM2S-look+for
'I'll look for you'
- b. ni-tso-m-zunguha
SM1S-FUT-OMC1-look+for
'I'll look for him/her'
- c. ni-tso-li-zunguha
SM1S-FUT-OMC5-look+for
'I'll look for it (cl.5)'
- d. ni-tso-zi-zunguha
SM1S-FUT-OMC10-look+for
'I'll look for it/them (cl.10)'

e. ni-tso-m-ba Haladi zimarke
 SM1S-FUT-OMC1-give 1Haladi DEF.CL10.money
 ‘I’ll give the money to Haladi’

f. ni-tso-hu-βa ligari
 SM1S-FUT-OM2S-give DEF.CL5.car
 ‘I’ll give you the car’

e. ni-tso-m-ba-zo Haladi
 SM1S-FUT-OMC1-give-XMC10 CL1.Haladi
 ‘I’ll give it to Haladi (the money)’

f. ni-tso-hu-βa-lo
 SM1S-FUT-OM2S-give-XMC5
 ‘I’ll give it to you (the car)’

Among languages in which transfer verbs can incorporate a unique object marker that necessarily represents the recipient, the case of Kanuri is of special interest, since this language shows a split between the case assigning properties of ditransitive verbs and their indexation properties. In Kanuri, the object of typical transitive verbs may optionally be marked by the case marker (‘accusative’) *-ga*, and the complement of transfer verbs that represents the recipient obligatorily takes the case marker *-ro*, functionally similar to the ‘dative case’ of indo-european languages, which suggests classifying Kanuri among the languages that have a special syntactic function typically used to encode the recipient of transfer verbs. But Kanuri has no dative markers similar to those found in the Romance languages, and transfer verbs, like typical transitive verbs, can take a unique object marker representing the recipient (i.e. corresponding to a noun phrase in the dative case), which points to an organisation of the Swahili type – ex. (19). However, it must be observed that this particularity of the transfer verbs of Kanuri is consistent with the animacy properties of the arguments of transfer verbs (in unmarked situations, an inanimate thing is transferred to an animate recipient) and with the fact that Kanuri has object markers for the first and second person only.

(19) *Kanuri* (Cyffer, 1991)

a. shí-ga cítákó
 he-OBJ PAST.seize.SM1S
 ‘I seized him’

b. agógó shí-ro cóko
 watch he-DAT PAST.give.SM1S
 ‘I gave him a watch’

c. nyí-ga njítáko
 you-OBJ OM2S.PAST.seize.SM1S
 ‘I seized you’

b. agógó nyí-ro njóko
 watch you-DAT OM2S.PAST.give.SM1S
 ‘I gave you a watch’

Wolof, it is interesting to observe that the double object constructions of this language have no strict ordering of the two noun phrases in object function; by contrast, the ordering of the object markers is strict, but it is independent from the roles of the participants they represent and depends exclusively on the hierarchy ‘1st/2nd person > 3rd person plural > 3rd person singular’, as illustrated by ex. (22).

(22) *Wolof*

- a. Dama-y jox xale bi mango yi —> Dama-leen-ko-y jox
 VFOC.SM1S-TAM give child DEF mango DEF.PL ‘I’m giving them to him’
 ‘I’m giving the mangoes to the child’
- b. Dama-y jox xale yi mango bi —> Dama-leen-ko-y jox
 VFOC.SM1S-TAM give child DEF.PL mango DEF ‘I’m giving it to them’
 ‘I’m giving the mango to the children’

Another type of indexation of the objects in double object constructions is observed for example in Southern Sotho – ex. (23). In this type, ditransitive verbs cannot take more than one object marker at the same time, but this object marker may correspond to the first or to the second object.

(23) *Southern Sotho*

- a. *hà-kí-ù-bónì*
 NEG-SM1S-OM2S-see
 ‘I don’t see you’
- b. *hà-kí-lì-bónì*
 NEG-SM1S-OMC5-see
 ‘I don’t see it (the broom)’
- c. *hà-kí-ù-fí* *lìfíèlè*
 NEG-SM1S-OM2S-give CL5.broom
 ‘I don’t give you the broom’
- d. *hà-kí-lì-fí* *mùsádì*
 NEG-SM1S-OMC5-give CL1.woman
 ‘I don’t give it (the broom) to the woman’
- e. **ha-ki-li-u-fi*, **ha-ki-u-li-fi*
 (in Southern Sesotho, ‘I don’t give it (the broom) to you’ can only be *hà-kí-ù-fí lònà*, with the free pronoun *lònà* representing the transferred thing– see below)

However, it must be observed that such systems of indexation of the arguments of transfer verbs are never perfectly symmetric and always show particularities that confirm the hierarchy between first and second object.

In Tswana – ex. (24), either object may be promoted as the subject of a passive form, but when the subject of a passive form represents the recipient, the transferred thing can be represented by an object marker, whereas it is impossible to introduce an object marker representing the recipient in a passive form whose subject represents the transferred thing.

(24) *Tswana*

- a. k̩-filé b̩aná l̩kwálò
SM1S-give.TAM CL2.child CL11.book
'I've given a book to the children'
- b. k̩-lú-bà-filè
SM1S-OMC11-OMC2-give.TAM
'I've given it (the book) to them'
- c. b̩aná bá-fílwé l̩kwálò
CL2.child SMC2-give.PSV.TAM CL11.book
'The children were given a book'
- d. bá-lù-fílwè
SMC2-OMC11-give.PSV.TAM
lit. 'They were given it'
- e. l̩kwáló lú-fílwé b̩aná
CL11.book SMC11-give.PSV.TAM CL2.child
'The book was given to the children'
- f. *lú-bà-fílwè

In Southern Sotho – ex. (25), when both object are pronominalized at the same time, the first object has priority to occupy the only available object marker slot, and the second object is necessarily represented by a free pronoun following the verb.

(25) *Southern Sotho*

- a. k̩-fá bàsádí l̩fíèlò
SM1S-give CL2.woman CL5.broom
'I give the broom to the women'
- b. k̩-bá-fá l̩fíèlò
SM1S-OMC2-give CL5.broom
'I give them the broom'
- c. k̩-lí-fá bàsádí
SM1S-OMC5-give CL2.woman
'I give it to the women'
- d. k̩-bá-fà lòná
SM1S-OMC2-give PROC5
'I give it to them'

6.4. The particular case of serializing languages

Serializing languages do not fit straightforwardly into the typology presented in the preceding sections, since they tend to encode events involving three participants by means of combinations of two verbs. However, in languages commonly considered as typical serializing languages in which it is possible to identify a verb ‘give’ in a construction that involves no other verb, this construction belongs generally to the type in which the recipient, but not the transferred thing, is assimilated to the patient of typical transitive verbs.

In serializing languages, the fact that ‘give’ commonly functions also as the second term of serial constructions in which it takes a unique complement representing a recipient or a beneficiary can be viewed as an evidence of the predominance of the complement representing the recipient in the construction of ‘give’ as a ditransitive verb – ex. (26) & (27).

(26) *Kposo* (Eklo, 1987)

- a. kúmá á-ká kɔ́kú ìtùkpá
 Kuma SM3S-give Koku goat
 ‘Kuma gave Koku a goat’
- b. kúmá á-jɔ́ ìtùkpá ká kɔ́kú
 Kuma SM3S-take goat give Koku
 ‘Kuma gave Koku a goat’
- c. kúmá á-uɛ̀ ègà ká kɔ́kú
 Kuma SM3S-lend money give Koku
 ‘Kuma lent money to Koku’

(27) *Yoruba*

- a. Òjọ́ fún ìyá ní owó
 Ojo give mother PREP money
 ‘Ojo gave mother money’
- b. Òjọ́ fún-un ní owó
 Ojo give-OM3S PREP money
 ‘Ojo gave her money’
- c. Òjọ́ rà ìwé fún ìyá
 Ojo buy book give mother
 ‘Ojo bought a book for mother’
- d. Òjọ́ rà-á fún-un
 Ojo buy-OM3S give-OM3S
 ‘Ojo bought it for her’

Conclusion

The main tendencies observed in African languages regarding subject / object indexation can be summarized as follows:

(1) An overwhelming majority of African languages have bound morphemes analyzable as subject markers; in many cases, their obligatoriness or their tendency to fuse with TAM or polarity markers facilitates their analysis as bound morphemes, but stage I subject markers difficult to distinguish from free pronouns are relatively common in Africa.

(2) Languages that have subject markers only (i.e. languages that can pronominalize subject by means of bound morphemes but use exclusively free pronouns in object pronominalization) are relatively uncommon in Africa, but obligatory agreement of transitive verbs with their object is not a common phenomenon in African languages, and in many languages, the distinction between object markers and free pronouns in object function is even more difficult to establish than the distinction between subject markers and free pronouns.

(3) 'Exotic' patterns of subject / object indexation on transitive verbs (ergative, agentive, direct / inverse, ...) are very rare in African languages, which confirms a general tendency of African languages towards types of morphosyntactic organization in which the traditional notions of subject and object can be recognized in a relatively unproblematic way.

(4) The indexation of the arguments of typical ditransitive verbs confirms that African languages show a strong tendency to assimilate the recipient to the patient of typical transitive verbs. In 'double objects constructions', object markers identical to those that refer to the patient of typical transitive verbs, when attached to transfer verbs, can indistinctly refer to the transferred thing or to the recipient; but in most cases, object markers identical to those that refer to the patient of typical transitive verbs, when attached to transfer verbs, necessarily refer to the recipient, not to the transferred thing.

REFERENCES

- Cyffer, Norbert (1991). *We learn Kanuri*. Köln: Rüdiger Köppe Verlag.
- Doneux, Jean (no date). *Exercices de langue dan*. Lyon: Afrique et langage.
- Eklo, Alubue Amavi (1987). *Le kposso de Tomegbe (Togo)*. PhD thesis. University of Grenoble.
- Eze, Ezike (1995). The forgotten null subject of Igbo. In: Akinbiyi Akinlabi (ed.), *Theoretical Approaches to African Linguistics* pp. 59-81. Trenton: Africa World Press.
- Griefenow-Mewis, Catherine & Bitima, Tamene (1994). *Lehrbuch des Oromo*. Köln: Rüdiger Köppe Verlag.
- Heath, Jeffrey (1999). *A grammar of Koyraboro (Koroboro) Senni*. Köln: Rüdiger Köppe Verlag.
- Ikoru, Suanu M. (1996). *The Kana language*. Leiden: Research School CNWS.
- Innes, Gordon (1971). *A practical introduction to Mende*. London: SOAS.
- Kutsch Lojenga, Constance (1994). *Ngiti, a Central Sudanic language of Zaire*. Köln: Rüdiger Köppe Verlag.
- Launey, Michel (1981). *Introduction à la langue et à la littérature aztèque*. Paris: L'harmattan.
- Newman, Paul (2000). *The Hausa language: an encyclopedic reference grammar*. Yale University Press.
- Quaireau, André (1987). *Description de l'agni*. PhD thesis. University of Grenoble.
- Reh, Mechthild (1996). *Anywa language, description and internal reconstructions*. Köln: Rüdiger Köppe Verlag.
- Rojas Curieux, Tulio (1998). *La lengua páez*. Bogotá: Ministerio de Cultura.
- Schadeberg, Thilo C. (1985). *A short sketch of Ewe*. Köln: Institut für Afrikanistik.

ABBREVIATIONS USED IN THE GLOSSES

CLX	class X
DAT	dative
DEF	definite
FUT	future
INDEF	indefinite
NEG	negation
OBJ	object
OM	object marker
OMCX	object marker class X
OM1S	object marker 1st person singular
OM2S	object marker 2nd person singular
OM3S	object marker 3rd person singular
OM3SH	object marker 3rd person singular human
OM3SNH	object marker 3rd person singular non human
PL	plural
PREP	preposition
PROCX	pronoun class X
PSV	passive
SM	subject marker
SMCX	subject marker class X
SM1S	subject marker 1st person singular
SM3P	subject marker 3rd person plural
SM3S	subject marker 3rd person singular
SM3SM	subject marker 3rd person singular masculine
TAM	tense-aspect-mood marker
TOP	topic
VFOC	focalization of the verb
XMCX	oblique argument marker class X
1S	1st person singular
3SH	3rd person singular human