

Lexical creation in the fulfulde language: an analysis of compounding and compounding processes

Mamadou DIALLO

Docteur en linguistique et sciences du langage, Maître de Conférences Assimilé, Université Gaston Berger de Saint-Louis, Sénégal
mamadou.diallo@ugb.edu.sn

Abbreviations

<i>A</i>	<i>adjective</i>
<i>AUG</i>	<i>augmentative</i>
<i>CL</i>	<i>class marker</i>
<i>Conj</i>	<i>conjunction</i>
<i>DM</i>	<i>diminutive</i>
<i>N</i>	<i>noun</i>
<i>Num</i>	<i>number</i>
<i>P</i>	<i>preposition</i>
<i>V</i>	<i>verb</i>

Abstract:

This study focuses on compounding as a word creation process in Fulfulde. It is an analysis of the different compounding patterns and types of compounds existing in the language. The study shows that Fulfulde uses ten combining patterns to create nominal, verbal, adjectival, or adverbial compounds. All these compounds belong to the following three types: subordinate, attributive, and coordinate compounds. And in each one of these three types can be found both endocentric and exocentric exemplars. The study also reveals that compounding is quite a productive process in Fulfulde, though an agglutinating language.

Résumé

Cette étude se concentre sur la composition comme processus de formation des mots en fulfulde. Il s'agit d'une analyse des différents modèles et types de mots composés existant dans la langue. L'étude montre que le fulfulde peut utiliser dix modèles de combinaison pour créer des mots composés nominaux, verbaux, adjectivaux ou adverbiaux. Tous ces composés appartiennent aux trois types suivants : composés subordonnés, attributifs et coordonnés. Dans chacun de ces trois types, on trouve des exemples de composés endocentriques et de composés exocentriques. L'étude révèle également que la composition est un processus très productif en fulfulde, bien qu'étant une langue agglutinante.

Introduction

As an agglutinative language, Fulfulde primarily forms words by stringing together word parts, that is morphemes. And each one of such word parts typically represents a single grammatical meaning. In such languages, derivational processes represent the typical word creation processes since they seem to be the most productive ones. However, compounding plays a significant role as well in the expanding of the lexicon in the language, showing even some degree of productivity. In this study, the focus will be first on the compounding patterns that are found in Fulfulde as well as the word classes that result from these combining patterns. The focus will then be on the classification of Fulfulde compounds following the model that distinguishes these three types: subordinate, attributive and coordinate compounds. Each of these three compound types will be further subdivided into endocentric and exocentric exemplars. Explicitly, the analysis draws its inspiration from the classificatory model found in Bisetto and Scalise (2005), where all compounds fall into subordinate, attributive and coordinate compounds, and where, within each type, are found both endocentric and exocentric exemplars. As regards methodology, data collection has been conducted in two phases: the documentation phase and the field

trip one. I conducted the documentation phase, not only to collect second-hand data, but also to allow me to see what was the state of research on compounding in Fulfulde before I took any direction. The second phase consists of a series of field trips that led me to different places in the Fuuta-Tooro dialect zone, whose data are used in this study for illustration. Thus, I went to places such as Kanel, Ourosogui and Podor in Northern Senegal, Dahra Djolof in Central Senegal, and Goudiri, Kidira and Bakel in Eastern Senegal. During these trips, that took place from April 2024 and December 2024, I was able to collect sample data and devise a sizable corpus. To achieve all this, I had to resort to a number of methods such as interviewing, questionnaire administration, even direct involvement in debates with clear consciousness of the information needed. Furthermore, the social and practical interest of this study needs to be underlined here. In fact, we are today in the context of globalization and technological progress, on the one hand, and the need to empower African languages as means of intellectual discourses capable of keeping up with this global trend. But, one of the biggest challenges to the introduction of these languages into modernity is the lack of the most appropriate vocabulary and the right technical terms to enable the transfer and acquisition of content (be it knowledge, skills or values). Therefore, African languages, including Fulfulde, are faced with a huge need for lexical/term creation to allow for the communication of concepts of science, technology, arithmetic, health, social life, religion, and so on. So, exploring the internal processes of word creation in one of these languages is of paramount importance, as it allows to enrich the language, providing it with an appropriate general and technical vocabulary readily available for users. The paper is organized into three sections. Section 1 is about the conceptual unit and classification of compounds, section 2 deals with the

compounding patterns attested in Fulfulde and section 3 is dedicated to the classification of Fulfulde compounds.

1. Conceptual unit and classification of compounds

1.1 *What constitutes a compound?*

A *compound*, according to Baker and Bobaljik (2002:28), is “a word that contains more than one root”. This definition has led these authors to distinguishing two types of roots: *bound* roots and *free* roots. Free roots are autonomous forms that count as words by themselves, whereas bound roots do not count as words by themselves and can only occur when an affix of some sort is accompanying them. But, another definition of what constitutes a compound is given by Plag (2003:40), for whom a compound is “the formation of a new lexeme by adjoining two or more lexemes.” In this definition, the term *lexeme* is meant to be specific enough to exclude affixes and broad enough to encompass the roots, stems, and free words that make up compounds in typologically diverse languages. Further, the morphological make-up of lexemes depends on the typology of the language. In some languages such as English, Mandinka, or Wolof, lexemes generally occur as bare roots without any inflected form. In others however, lexemes never occur without a suffix of some sort. Fulfulde, a noun class language, belongs to this type. In this language, a noun or adjective lexeme consists at least of two parts: a bound root and a class-marker suffix, as in (1).

(1) *woy-ndu maw-ndu* (= *woyndu mawndu*)

well-CL_{ndu}-big-CL_{ndu}

‘a big well’

Similarly, a verb lexeme consists at least of two parts: a bound root and the infinitive suffix *-de*, as in *ñaaamde* (*ñaaam-* + *-de*) ‘eat’. A verb may also be composed of a root and an aspect-

marker suffix, *ñāama* (*ñāam-* + *-a* = *imperfective*) ‘eat’. Thus, in my view, the adequate conceptual unit of compound analysis in Fulfulde will be the one based on the lexeme as described above, since the language know no bare roots.

Another point to determine which component in the compound word bears inflection, as languages vary. In some languages such as Dutch, it is the head of the compound that bears inflection (Lieber and Štekauer 2011:15), while the non-head occurs uninflected. In others such as Yimas (spoken in Papua New Guinea), it is the noun-head element that bears a compound-specific inflection (ibid.). In Fulfulde, both elements can bear inflection, as in (2).

- (2) *jaab-i-fow-ru* (= *jaabi-fowru*)
jujube-CL_{ki}-hyena-CL_{ndu}
 ‘type of jujube-tree’

Moreover, while in some languages inflection is compound-specific, in Fulfulde, it is non compound-specific; the same class marker or verbal category of simple words can be found in both elements of the compound.

1.2. Classifying compounds

The classification of compounds ranks amongst one of the much-debated issues in the literature related to word creation. Almost every scholar dealing with the subject has proposed their own view. Among the many proposals, the one in Bisetto and Scalise (2005) seems to be consistent and universally valid. The authors distinguish compounds on the basis of the grammatical relationship between the compounded elements. They identify three kinds of relationship: a relationship of attribution, subordination, and coordination. Each one of these produces a type of compound, that is, respectively, subordinate, attributive and coordinate compounds.

The first type are the subordinate compounds. Compounds are defined as such “whenever there is a «complement» relation between the two constituents” (ibid.: 327). A subordinate compound is made up of two components: the head and the non-head elements. the latter bears an argumental relation to the former. This head-complement relation can be a relation between an event and its participants or the sort of relationship that can be found in NN compounds. The examples in (3) illustrate these two situations in Mandinka.

- (3) *Mandinka, Niger-Congo, Mande, Manding Group*
a. kúlúŋ-tiilaa ‘vessel-flyer = pilot’
b. tiya-fée ‘peanut-field = peanutfield’
c. siŋ-kála ‘foot-cane = leg’

In (3b) and (3c), the head element (*tiilaa* or *kála*) in both NN compounds has two arguments, the first representing the referential argument of the noun (“R” argument) and the second representing an argument of the type *N of N*. In subordinate compounds of this sort, the non-head satisfies the “non-R” argument of the head.

The second type of compounds are the attributive compounds. An attributive compound is one with two compounding elements, one representing the head and the other, the non-head. In this formation, the head is modified by the non-head, which expresses a property of the head. This non-head, which can be a noun, an adjective, or a verb in some languages, stands in the relation of attribute or modifier to the head. The examples in (4) from Mandinka will illustrate this situation:

4. *Mandinka, Niger-Congo, Mande*
a. búlú-baa ‘hand-big = right hand’
 N A
b. kónó-moo ‘belly-person = greedy person’
 N N

c. *múluŋ-jáwúyaa* ‘resemble-badness = ugliness’
 V N

Note that the position of the non-head varies depending on what lexical class it belongs to. It represents the right-hand element when it is an adjective (4a) and the left-hand element when it is either a noun or a verb (4b and 4c).

The third type of compounds are the coordinate compounds. Coordinate compounds are formations whose component elements are logically connected by the conjunction “and”. The examples in (5) from Wolof will illustrate the case.

(5) *Wolof, Niger-Congo, Atlantic*
fëgg-jaay ‘shake-sell = second-hand clothes’
dem-dikk ‘go-return = traffic’

Bisetto and Scalise also considered a further division of compounds based on two criteria: *endocentricity* and *exocentricity*. Endocentric compounds have a single, well-defined head; they get their morphological and syntactic features, as well as their primary meaning, from the designated head. In addition, in endocentric compounds, the compound word as a whole is the hyponym of its head, as in the English *Sky blue*, where the whole word is the hyponym of *blue*. In exocentric compounds, the Head Rule does not apply. Although they have a head, this one falls outside the roots that make it up. In addition, the compound as a whole is not a hyponym of its head, as in *pick pocket*, where *pick pocket* is not a hyponym of *pocket*. Moreover, within all the three types of compounds mentioned supra can be found both endocentric and exocentric types. The examples in (6) from Mandinka will illustrate the situation.

(6) a. *Subordinate*

Endocentric: kúlún-tílaa ‘vessel-flyer = plane’

Exocentric: múluŋ-jáwúyaa ‘resemble-badness = ugliness’

b. Attributive

Endocentric: moo-fiŋ ‘person-black = a black person’

Exocentric: búlú-baa ‘hand-big = right hand’

c. Coordinate

Endocentric: kele-faa ‘fighting-killing = war’

Exocentric: suu-fáli ‘horse-donkey = mule’

2. Compounding patterns in Fulfulde

This section presents an inventory of the different compounding patterns that are found in the data collected and shows what word classes are created from the different combinations.

2.1. Inventory of the compounding patterns

The corpus that has emerged from the different data collected gives evidence of the existence of ten different compounding patterns in Fulfulde. I give the inventory of these patterns in the following subsections.

2.1.1. N-N compounds

Combining two nouns (NN) to produce a compound word is very common in Fulfulde, as the examples in (7) below show.

(7) *jaabi-fowru* ‘type of jujube-tree’

ho’re-kudol ‘advance payment given to marabout’

suudu-baaba ‘paternal line’

yitere-nga’ri ‘type of tree’

joom-ho're 'flu'

2.1.2. V-V compounds

V-V combinations that produce compound words are also a common pattern in compound building, as the examples in (8) show.

- (8) *rema-ñaama* 'poor person'
ɲata-wutta 'hypocrite person'
noddaaka-nootii 'undesirable situation'
doga-jala 'free woman'
una-jooga 'housewife'

2.1.3. A-A compounds

A-A combinations are attested in Fulfulde compounding, although they are less frequent than either N-N or V-V compounds. The examples in (9) below will illustrate this type.

- (9) *kecco-berndeejo* 'tender-hearted'
naawo-baleejo 'fair-dark skinned'
naawo-bodeejo 'fair-bright skinned'
paho-muumo 'deaf-dumb'

In the preceding subsections, all the combinations have resulted in the same word class (NN, VV, or AA). Combining two different word class to produce a compound is also possible in Fulfulde.

2.1.4. N-V compounds

N-V compounds are much less common in Fulfulde compounding. Only few examples have been found, as in (10) below.

- (10) *jam gondaado* 'death'
ho're helnde 'a mental'
nofuru nanooru 'heedful person'
ho're malaande 'lucky person'

2.1.5. N-A compounds

The N-A pattern of compounding is attested, though in a lesser extent. The examples in (11) below are an illustration of this.

- (11) *sukkundu baleeru* ‘hair-black = young person’
sukkundu raneeru ‘hair-white = old person’
nofuru malaandu ‘ear-lucky= attentive person’
ho’re malaande ‘head-luck = lucky person’

2.1.6. N-Num compounds

A noun can also combine with a number to produce a compound word. This can be seen in (12).

- (12) *leebol-go’tol* ‘hair-one = one colour’
gi’el-go’ti ‘thorn-one= type of tree’
duubi-didiiri ‘year-two = two-year old’
demdidiijo ‘tongue-two = bilingual’

2.1.7. V-N compounds

V-N compounds are very common in Fulfulde, much more than N-V combinations. The examples in (13) are an illustration of this.

- (13) a. *war-ho’re* ‘kill-head = murder’
toowa-kufune ‘is-high-cap = proud person’
wodja-nofel ‘is-red-ear = white man’
- b. *tiidde ho’re* ‘be-hard-head = be stubborn’
yoorde gite ‘be-hard-eyes = be cheeky’
laabde bernde ‘be-cleaan-heart = be kind’
toowde kufune ‘be-high-cap = be proud’

2.1.8. A-N compounds

Compounds from an A-N combination are well attested in Fulfulde. They are a common feature in the language. All the

examples in (7b) above can be turned into A-N compounds. They are formed from the V-N pattern in (13), as the examples in (14) below show:

- (14) *tiidae ho're* → *tiida-ho'reejo* 'stubborn'
yoorde gite → *yoora-giteejo* 'cheeky'
laabde bernde → *laaba-berndeejo* 'kind'
toowde kufune → *toowa-kufuneejo* 'proud'

2.1.9. P-N compounds

And finally, a preposition can combine with a noun to produce a compound word. However, only few cases have been found. The examples in (15) will illustrate this pattern.

- (15) *dow-wuro* 'toilet in the nautre'
dow-maayo 'up-river'
les-maayo 'down-river'

2.1.10. N-Conj-N or P-Conj-P compounds

In the data, there are cases, though few of them, in which the compounding elements are linked by a conjunction, which is generally the coordination conjunction *and*. The examples in (16) illustrate this.

- (16) a. *jamma-e-ñalawma* 'everyday'
N-Conj-N
- b. *nduumngu-e-ceedu* 'at all time'
N-Conj-N
- c. *Jehri-e-Waalo* 'at any place'
N-Conj-N

d. dow-e-les
P-Conj-P

As the examples above indicate, ten types of compounding patterns are used in Fulfulde to create compound words. These combinations produce four different compound words: nouns, verbs, adjectives, and adverbs. I will discuss this in the next section.

2.2. Compounding patterns and word class

After presenting the different compounding patterns attested in Fulfulde in the preceding section, I will determine in this section the various word classes resulting from these combinations.

2.2.1. N-N compounds

N-N combinations are the most common compounding patterns in Fulfulde. The N-N compounding pattern is also the most productive process in compounding. An N-N combination always results in a noun compound, as Table 1 below indicates.

Table 1. Noun compounds: NN

	N (Noun)	Meaning
N	<i>jaabi-fowru</i> <i>jujube-tree-hyena</i>	‘bitter jujube-tree’
	<i>ho’re-kudol</i> <i>head-plume</i>	‘advance payment given to marabout’
	<i>suudu-baaba</i> <i>room-father</i>	‘paternal line’
	<i>yitere-nga’ri</i> <i>eye-ox</i>	‘type of tree’
	<i>joom-ho’re</i> <i>owner-head</i>	‘flu’

2.2.2. V-V combinations

V-V compounds are a common and productive process in Fulfulde. All the instances found in the data show that V-V combinations result in noun compounds. Table 2 will serve as an illustration of this.

Table 2. Noun compounds: VV

	V (Noun)	Meaning
V	<i>rema-ñaama</i> <i>tills-eats</i>	‘poor person’
	<i>ñata-wutta</i> <i>bites-blows</i>	‘hypocrite person’
	<i>noddaaka-nootii</i> <i>called.not-answered</i>	‘undesirable situation’
	<i>ñjaha-a-ngaraa</i> <i>go.you-come.you</i>	‘round trip’
	<i>ñaama-joodoo</i> <i>eats-sits</i>	‘food-charm that keeps the person in the spot forever’
	<i>doga-jala</i> <i>runs-laugh</i>	‘free woman’

2.2.3. A-A combinations

A-A combinations producing compound words are common and a relatively productive process. The compound word resulting from this combination is always an adjective. Table 3 will serve as an illustration of the situation.

Table 3. Noun compounds: AA

	A (Adjective)	Meaning
A	<i>kecco-berndeejo</i>	‘tender-hearted’
	<i>naawo-baleejo</i>	‘fair-dark skinned’
	<i>naawo-bodeejo</i>	‘fair-bright skinned’
	<i>paho-muumo</i>	‘deaf-dumb’

2.2.4. N-V combinations

The N-V pattern, although attested in Fulfulde, is the least common compounding process, and therefore, the least productive one. The compound word created from it is always a noun. Table 4 will serve as an illustration of the situation.

Table 4. Noun compounds: NV

	V (Noun)	Meaning
N	<i>jam-gondaado</i> <i>peace-lived.with</i>	‘death’
	<i>ho're-haaloore</i> <i>head-talking</i>	‘talkative person’
	<i>ho're-helnde</i> <i>head-broken</i>	‘a mental’
	<i>ho're-malaande</i> <i>head-lucky</i>	‘lucky person’
	<i>nofuru-nanooru</i> <i>ear-hearing</i>	‘heedful person’
	<i>baali-ñaamaa</i> <i>sheep-eat.not</i>	‘type of thorn-less tree’

2.2.5. N-A combinations

The N-A compound pattern is less common and less productive in Fulfulde. The compound words resulting from it are always nouns. Table 5 will serve as an illustration of the situation.

Table 5. Noun compounds: NA

	A (Noun)	Meaning
N	<i>sukkundu-baleeru</i> <i>hair-black</i>	‘young person’
	<i>sukkundu-raneeru</i> <i>hair-white</i>	‘old person’
	<i>ho're-mawnde</i> <i>head-big</i>	‘a genius’
	<i>reedu-mawndu</i> <i>belly-big</i>	‘greedy person’
	<i>bernde-baleere</i> <i>heart-black</i>	‘wickedness’

2.2.6. N-Num combinations

N-Num combinations as compound words are less common in Fulfulde and not that productive. A N-Num combination always results in a noun compound, as Table 6 below indicates.

Table 6. Noun compounds: NNum

	Num (Noun)	Meaning
N	<i>leebol-go'tol</i> <i>hair-one</i>	‘one colour’
	<i>juutngo-wo'to</i> <i>hand-one</i>	‘lone worker’
	<i>suudu-wo'turu</i> <i>room-one</i>	‘the same bloodline’
	<i>gi'el-go'ti</i> <i>thorn-one</i>	‘type of thorny tree’
	<i>berde-didi</i> <i>heart-two</i>	‘hesitation’

2.2.7. V-N combinations: Noun or Verb compounds

This type of compounding pattern is very common in Fulfulde. Nonetheless, they are not a productive compounding process, as they are usually a combination of a verb and a noun referring to a body part or related to the body. This fact limits the possibility for new candidates. The compound word created from a V-N

combination can be either a noun or a verb. Table 7 and Table 8 will serve as an illustration of the situation.

Table 7. V-N compound words as nouns

	N (Noun)	Meaning
V	<i>war-ho're</i> <i>kill-head</i>	'murder'
	<i>toowa-kufune</i> <i>be.high-hat</i>	'proud person'
	<i>wodja-nofel</i> <i>be.red-ear</i>	'white man'
	<i>wela-yi'yam</i> <i>be.sweet-blood</i>	'charismatic person'
	<i>yoora-yitere</i> <i>be.dry-eye</i>	'cheeky person'

Table 8. V-N compound words as verbs

	N (Verb)	Meaning
V	<i>tiidde ho're</i> <i>be.hard-head</i>	'be stubborn'
	<i>laabde bernde</i> <i>be.clean-heart</i>	'be kind'
	<i>toowde kufune</i> <i>be.high-hat</i>	'haughty'
	<i>yoorde gite</i> <i>be.dry-eye</i>	'be cheeky'
	<i>welde hakkille</i> <i>be.sweet-mind</i>	'be smart'
	<i>yaajde ho're</i> <i>be.wide-head</i>	'be ingenious'

2.2.8. V-A combinations

V-A combinations are a common pattern, but not a productive one in Fulfulde, since the second element of the compound word always refers to a body part. In principle, V-N compounds can all be turned into V-A ones, thus creating adjectives. The

compound word resulting from it is always an adjective. Table 9 below will serve as an illustration of the situation.

Table 9. Adjectival compounds: VA

	A (Adjective)	Meaning
V	<i>tiida-ho 'reejo</i> <i>be.hard-head.AM.EP.CL</i>	'stubborn'
	<i>yoora-giteejo</i> <i>be.dry-eye.AM.EP.CL</i>	'cheeky'
	<i>laaba-bernddejo</i> <i>be.clean-heart.AM.EP.CL</i>	'kind'
	<i>toowa-kufuneejo</i> <i>be.high-hat.AM.EP.CL</i>	'proud'
	<i>wela-hakilleejo</i> <i>be.sweet-mind.AM.EP.CL</i>	'smart'

2.2.9. P-N combinations

The last compounding pattern attested in Fulfulde is of the P-N combination type. The data available show only few cases. This indicates that the P-N compounding pattern is not a productive process. Compound words created from an P-N combination are always adverbs. Table 8 below will serve as an illustration of the situation.

Table 10. Adverbial compounds: P-N

	N (Adverb)	Meaning
P	<i>dow-wuro</i> <i>up-village</i>	'toilet in the nautre'
	<i>dow-maayo</i> <i>up-river</i>	'up-river'
	<i>les-maayo</i> <i>down-river</i>	'down-river'
	<i>hakkunde-laañe</i> <i>between-arrow</i>	'between parentheses'
	<i>sera-wuro</i> <i>beside-village</i>	'in isolation'

2.2.10. N-Conj-N and P-Conj-P combinations

In this last case only few instances are found in the language, as in (17) below.

(17) a. *N-Conj-N*

- jamma-e-ñalawma* ‘every day’
- Jehri-e-Waalo* ‘at any place’
- nduumngu-e-ceedu* ‘at any season’

b. *P-Conj-P*

- dow-e-les* ‘everywhere’
- ndeer-e-boowal* ‘everywhere’

3. Classifying Fulfulde compounds

The data collected to conduct this study show that compounding is a productive word creation process in Fulfulde. The data also show that all the types of compounds are attested in the language. In addition, evidence shows that within each one of the three types can be found both endocentric and exocentric exemplars. The focus in the next subsections will then be on these different types.

3.1. Subordinate compounds

Subordinate compounds are very common in Fulfulde, and the data show that this type of compounds can be either endocentric or exocentric, with the head element on the left-hand, as in table 10 below.

Table 10. Endocentric subordinate compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>gaynaako na'i</i> <i>shepherd-cow</i>	<i>gaynaako</i>	‘cow-shepherd’
<i>julanke na'i</i> <i>seller-cow</i>	<i>julanke</i>	‘cow-seller’
<i>gertogel-lakde</i>	<i>gertogel</i>	‘wild hen’

<i>hen-DM-bush</i>		
<i>mbamba-lakde</i> <i>donkey-bush</i>	<i>mbamba</i>	'warhog'
<i>rawa'ndu-lakde</i> <i>dog-bush</i>	<i>rawa'ndu</i>	'lion'
<i>powel-makkaaje</i> <i>hyena-DIM-maize</i>	<i>powel</i>	'type of hyena'
<i>mbaroodi-maayo</i> <i>predator-river</i>	<i>mbaroodi</i>	'crocodile'
<i>war-ho're</i> <i>kill-head</i>	<i>war</i>	'homicide'
<i>joom-galle</i> <i>master-house</i>	<i>joom</i>	'house-head'

Endocentric subordinate compounding is a quite productive process in Fulfulde. Exocentric subordinate compounds are also relatively common. Table 11 will illustrate the situation.

Table 11. Exocentric subordinate compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>kolce-bamdi</i> <i>hoof-donkey</i>	<i>kolce</i>	'rumours'
<i>baali-ñaamaa</i> <i>sheep-eat.not</i>	<i>baali</i>	'type of tree'
<i>daande-maayo</i> <i>neck-river</i>	<i>daande</i>	'river-bed'
<i>baalal-foonde</i> <i>sheep-AUG-</i> <i>thicket</i>	<i>baalal</i>	'type of bird'
<i>ñiire-haay're</i> <i>tooth-mountain</i>	<i>ñiire</i>	'mountain-foot'
<i>yitere-nga'ri</i> <i>eye-bull</i>	<i>yitere</i>	'type of plant'
<i>suudu-baaba</i> <i>room-father</i>	<i>suudu</i>	'paternal blood line'

3.2. *Attributive compounds*

Attributive compounds are attested and are quite common in Fulfulde, where the non-head element can be an adjective, a noun or a verb, as in (18) below.

(18)

- a. *kecco-bernde* ‘soft-hearted person’
A N
- b. *dewbo-reedu* ‘pregnant woman’
N N
- c. *tiidde ho’re* ‘be stubborn’
V N

In can be seen in the examples above, the non-head element can on the left-hand (18a and 18c) or on the right-hand (18b) of the head. Further, attributive compounds can also subdivide into endocentric and exocentric compounds. Table 12 will illustrate the case.

Table 12. Endocentric attributive compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>dewbo-reedu</i> <i>woman-belly</i>	<i>dewbo</i>	‘pregnant woman’
<i>naawo-baleejo</i> <i>mid.light.skinned-</i> <i>black</i>	<i>naawo</i>	‘dark light-skinned’
<i>nga’ri-mbe’wa</i> <i>bull-goat</i>	<i>nga’ri</i>	‘he-goat’
<i>juulde-mawnde</i> <i>festibal-big</i>	<i>juulde</i>	‘Tabaski festival’
<i>yumma-tokooso</i> <i>mother-little</i>	<i>yumma</i>	‘aunt = mother’s sister’
<i>baaba-tokooso</i> <i>father-little</i>	<i>baaba</i>	‘uncle = father’s brother’
<i>suka-dewbo</i> <i>young-woman</i>	<i>suka</i>	‘girl’
<i>suka-gorko</i> <i>young-man</i>	<i>suka</i>	‘boy’

Exocentric attributive compounds are also attested in Fulfulde. Table 13 will be an illustration of this.

Table 13. Exocentric attributive compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>sukkundu-baleeru</i> <i>hair-black</i>	<i>sukkundu</i>	'young person'
<i>sukkundu-baleeru</i> <i>hair-white</i>	<i>sukkundu</i>	'old person'
<i>ho're-mawnde</i> <i>head-big</i>	<i>ho're</i>	'genius'
<i>wahre-raneere</i> <i>beard-white</i>	<i>beard</i>	'old chap'
<i>wodja-nofel</i> <i>be.red-ear-DIM</i>	<i>nofel</i>	'white man'
<i>nofuru-malaandu</i> <i>ear-lucky</i>	<i>nofuru</i>	'heedful person'
<i>ho're-malaande</i> <i>head-lucky</i>	<i>ho're</i>	'lucky person'
<i>ho're-haaloore</i> <i>head-talking</i>	<i>ho're</i>	'talkative person'
<i>bernde-laabnde</i> <i>heart-clean</i>	<i>bernde</i>	'kind person'

3.3. Coordinate compounds

Coordinate compounds are also attested in Fulfulde. However, as the data show, these formations are less productive than either subordinate or attributive compounds. Examples can show both endocentric and exocentric coordinate compounds, as in tables 14 and 15 below.

Table 14. Endocentric coordinate compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>mbaam-puccu</i> <i>donkey-horse</i>	<i>mbaam and puccu</i>	'mule'
<i>jamma-e-ñalawma</i> <i>night-and-day</i>	<i>jamma and ñalawma</i>	'all the time'
<i>dow-e-les</i> <i>up-and-down</i>	<i>dow and les</i>	'evrywhere'
<i>Jehri-e-Waalo</i> <i>Upcountry-Riverside</i>	<i>Jehri and Waalo</i>	'everywhere'
<i>dewbati-gorkati</i> <i>woman-like-man-like</i>	<i>dewbati and gorkati</i>	'woman-like man'
<i>demmino-ceedto</i> <i>early.wet-season-</i> <i>dryseason</i>	<i>demmino and ceedto</i>	'peirod between the dry and wet season'

Note that in the last two examples, the compounding elements are not full-fledged lexemes, but some sorts of bound roots: *dewbati* and *gorkati* derived from *dewbo* 'woman' and *gorko* 'man', on the hand, and on the other hand, *demmino-ceedto*, which is derived from *demminaare* 'early wet season' *seedto* 'dry period'.

Table 15. Exocentric coordinate compounds

<i>Compound</i>	<i>Head</i>	<i>Meaning</i>
<i>rema-ñaama</i> <i>till-eat</i>	<i>rema and ñaama</i>	'modest person'
<i>ñaam-joodo</i> <i>eat-sit.down</i>	<i>ñaam and joodo</i>	'magic potion maintaining foreigners in place'
<i>doga-jala</i> <i>run-laugh</i>	<i>doga and jala</i>	'free woman'
<i>ηata-wutta</i> <i>bite-soothe</i>	<i>ηata and wutta</i>	'hypocrite'
<i>fewja-firta</i> <i>plan-dissolve</i>	<i>fewja-firta</i>	'cloud forming phase'
<i>Waala-Fenndoo</i> <i>spend.the.night-</i> <i>coagulate</i>	<i>Waala and</i> <i>Fenndoo</i>	'France, Europe'
<i>yalta-ñaayâ-</i> <i>naata-iroo</i> <i>go.out-boast-</i> <i>get.in-bury.oneself</i>	<i>yalta and ñaayâ</i> <i>and naata and</i> <i>iroo</i>	'person with false appearance'

In the last example, the compound is made up of four elements – all are verbs. All the same, they are counted as an instance of V-V combination.

Conclusion

The present study has shown that lexical creation through compounding is a major means of lexicon expansion. It is a relatively productive process with a wide range of combining patterns that allow to produce compound nouns, verbs, adjectives, and adverbs as well. Besides revealing the different compounding patterns found in Fulfulde, the study also shows that all compounds in the language fall into the three classes identified by Bisetto and Scalise (2005), that is subordinate, attributive, and coordinate compounds. And within each type can be found both endocentric and exocentric exemplars. Almost all the types show a relative degree of productivity. This is evidence enough that Fulfulde can rely on compounding lexical and terminology creation. Nonetheless, the present study is but one component of the whole potential the language in terms of lexical creation. Further studies focusing on derivation, borrowing, or neologism will be necessary to bridge the gap.

Bibliography

- BAKER Mark C. and BOBALJIK Jonathan David, 2002. Compounding. In: *Introduction to Morphology*, Rutgers and McGill, Newark.
- BISETTO Antonietta and SCALISE Sergio, 2005. The Classification of Compounds. In: *The Oxford Handbook of Compounding*, Oxford University Press, pp. 49-82, Oxford.
- LIEBER Rochelle and ŠTEKAUER Pavol, 2011. Introduction: status and definition of compounding. In: *The Oxford Handbook of Compounding*, Oxford University Press, pp. 1-25, Oxford.

PLAG Ingo, 2002. *Word-formation in English*. Cambridge University Press, Cambridge.