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ALTERNATIONS OF EMOTION VERB-NOUN ROOTS IN WOLOF: ANALOGY BETWEEN VERBS AND NOUNS

Olivier Bondéelle

Laboratoire Modèles Dynamiques Corpus - Université Paris ouest-Nanterre la Défense
Leiden University Centre for Linguistics – Leiden University ¹

olivbond@yahoo.fr

Abstract

My proposal here is to explore the analogy between the verbal and nominal domains, which can contribute to describe the polysemy of the verb-noun roots. The paper contains four parts. In the first one, I give some basic morphological distinctions among verbs and nouns such as different derivations and also different flexional morphemes of the two parts of speech. In the second one, I describe the aspectual alternation of emotion verbs with the distinction between states and activities verbs. In the third one, I describe the countable alternation of emotion nouns with the distinction between mass and count nouns. And finally, the perspective of the fourth part is the analogy between state verbs and mass nouns.

Introduction

An important fact in Wolof is the prevalence of the verb into noun conversion. Around twenty percent of the lexicon is due to this phenomenon, which creates cross-categorial polysemy. However, we cannot make any confusion between noun and verb in a sentence because they have different grammatical behaviours. The high frequency

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of the cross-categorial polysemy explains why the linguists have used the notion of “verb-noun root” in Wolof. A verb-noun root is a lexical unit which is not morphologically derived but which can be used as verbs as well as nouns². They are around twenty in the emotion lexical field, and I will focus on five of them³: JAAXLE ‘to be worried, surprised, embarrassed, to be uncomfortable; (G) the anxiety’; MER ‘to be angry, to get angry; (M) the anger’; RAGAL ‘to be afraid, to get scared; (G) the fear; (B) a fearful person’; SEDD ‘to be cold, to freeze; (B) the cold, the coldness, the rheumatism; to be quiet; (G) quietness; to be satisfied, to be frigid’; TIIS ‘to be sad, sadden; (W) the adversity, the misfortune’.

Categorial conversion⁴ creates regular polysemy such as here ‘to be in an emotional state’ for the verb meaning, and ‘emotion X’ for the noun meaning.

There is also a regular meaning alternation between the stative and the inchoative reading of the verbs, which is ‘to be in an emotional state’ versus ‘to get in this state’. The noun seems to select only the stative meaning of the verb. We cannot say ‘the beginning of the anger’ with only one noun in Wolof.

I should add another verbal alternation, which is the intransitive versus transitive causative reading e.g. ‘to be sad’ versus ‘sadden someone’. Since it doesn’t concern the nominal domain, I will not consider this alternation here.

1 Basic formal distinction among the two parts of speech

1.1 Morphological distinctions

Let us see the first morphological difference between the two parts of speech, which is about the derivation. The first results are in the table 1 below.

² “En effet, une grand part des unités lexicales du wolof sont mieux identifiées comme des bases verbonominales, c’est à dire des unités lexicales qui sans avoir à subir de dérivation, sont aptes à fonctionner comme base nominale ou comme base verbale.” (Nouguier-Voisin, 2002: 19).

³ Since Wolof is a language with nominal classes, I put the nominal class markers between brackets.

⁴ Mel’čuk (1996: 133) quotes the definition of the categorial conversion, which is the change of the part of speech: “ce qui change est la CLASSE SYNTAXIQUE MAJEURE (the capital letters are due to Mel’čuk) du radical de départ – sa partie du discours. Cela entraîne simultanément le changement de l’ensemble des constructions syntaxiques qui admettent les mots-formes avec ce radical ainsi que (s’il y a lieu) celui de l’ensemble des catégories flexionnelles pertinentes à ce dernier. »

VERB-NOUN ROOT	VERBAL DERIVATION	NOMINAL DERIVATION
JAAXLE ‘surprise’ (1a)	JAAXAL ‘to wonder’ * JAAX	N-JAAXLE G- ‘anxiety’
MER ‘anger’ (1b)	MER-E ‘to be angry against sb’	?
RAGAL ‘fear’ (1c)	RAGAL-(L)OO ‘make sb be afraid’	?
SEDD ‘cold’ (1d)	?	SEDD-AY B- ‘the fact of being cold’ (emotion??)
TIIS ‘sad’ (1e)	TIISL-LOO ‘make sb be sad’	?

Table 1: morphological distinctions among verbs and nouns

As we can see, the verbal suffixes modify the actancial structure of the lexeme: see the causative suffixes AL in JAAXAL and LOO in RAGALOO, or the associative suffix E in MERE. These productive ways to derive verbs are in contrast with the nominal domain. We have here only two examples of derivation: the first one is due to the consonant alternation phenomenon, which is very productive in all Atlantic languages see example (1a). I have to quote that in many cases, the two forms of the nouns coexist: that is, the verb-noun root form and the form of the consonant alternation. It is maybe one reason why the analogies between the nominal and verbal domains are not studied in Wolof, except the paper from Robert 1998.

1.2 Grammatical distinctions

The second difference between the two parts of speech is about the flexional morphemes of the two parts of speech. Classically, every verbal lexeme is associated in a sentence with a complex morpheme, which supports the tense, the aspect, the mood and the person. The verbal lexeme is invariable. This is only the form and the position of the TAM morpheme to the verb which allow to precise the aspect and the mood of the verb. Here in (2a)⁵, since the TAM morpheme NA is after the verb, we know that the verb is to the perfect conjugation.

(2a) *Dend ak yow tiis na ma*
to be side by side with 2SG be sad PF.3SG 1SG
‘To be side by side with you sadden me’

⁵ Conventions

DEF: definite	NARR : narrative	PL : plural
EV: emphatic verb	NC: nominal class	POS: possessive
ECP: emphatic complement	NEG: negative	SG : singular
IMPF : imperfective	PAST: past tense	SP: spatial specifier
LOC : locative	PF: perfect	UNDEF: indefinite

Like every verb, every noun in a sentence is associated with a morpheme. In the case of nouns, this is a nominal class marker which is a consonant, followed by a spatial specifier (i, a, u): here in (2b), the morpheme WI which follows TIIS means that the noun TIIS belongs to the class w and the *i* specifies the proximity of the referent.

(2b) *Kénn bëgguloon ni tiis wi dal la*
 nobody want.NEG.3SG.PAST that sadness NC.SP to hit 2SG
 ‘Nobody wanted that sadness affects you’

1.3 How about the qualities?

As Creissels 2003 observed, to say that adjectives in a language are not verbs is to prove that adjectives have a particular grammatical behaviour when they are used in the predicative form, which distinguishes them from verbs.

As we can see in the examples (2c-d), the lexeme RAFET 'beautiful' in (2c) has the same grammatical behaviour than the verb DEM in (2d) because it is combined with the same kind of TAM morpheme (here the conjugation EV as 'verb emphatic'). We can thus say that in Wolof, the lexemes which denote qualities are verbs.

(2c) *Ay jëfam dañu rafet*
 UNDEF.PL act.POS.3SG EV.3PL to be beautiful
 ‘He/she does good deeds’

(2d) *Sa fit dafa dem*
 POS.2SG courage EV.3SG to go
 ‘His/her courage is gone’

2 Wolof Verb Classes and aspectual alternations

2.1 Aspectual distinction of states and activities

The first partition of the aspectual classes is the well-known distinction between states and activities (Vendler 1967, Dowty 1979, Bach 1986). I follow here Bach 1986 calling the two classes *eventualities* to avoid the confusion with the aspectual class called *event*. In the same way, the term *activity* allows putting together the *events* and the *processes*.

In Wolof, two main criteria allow to make the distinction between states and activities: the classical test of dynamicity considering the values of the imperfective marker -y (Church 1981: 26- 32), and the test with the perfect conjugation discussed in Robert (1991: 35 ssq).

2.1.1 Dynamicity of activity verbs

Consider the examples (3a) to (4b). We can see that with activity verbs, the imperfective *-y* mark has a present progressive value in (3a) and a habitual value in (4a).

- (3a) *Dama-y lekk céeb* (3b) *Dama lekk céeb*
 EV.1SG-**IMPF** eat rice EV.1SG eat rice
 'I am eating some rice' 'I eat some rice'

- (4a) *Ma-y seetsi sama sèriñ bès bu nekk*
 NARR.1SG-**IMPF** visit POS.1SG marabout day every
 'I visit my marabout every day'

- (4b) * *Ma seetsi sama sèriñ bès bu nekk*
 NARR.1SG visit POS.1SG marabout day every
 'I visit my marabout every day'

Here in (4a), the quantifier BU NEKK 'every' doesn't allow to have a perfective form. But if the quantifier disappears such as in (4c), the imperfective form has a progressive value like in (3a).

- (4c) *Ma-y seetsi sama sèriñ*
 NARR.1SG-**IMPF** visit POS.1SG marabout
 'I (will now) visit my marabout'

But with state verbs, the imperfective *-y* mark can never have the progressive value. This is rather a prospective value such as in (5b) and (6b). Consider the examples (5a-b) where the meaning is inherently habitual. (5b) shows that the imperfective mark gives a prospective value in the future. The progressive is excluded: we can not translate by 'it is now hot in Senegal'.

- (5a) *Senegal dafa tàng* (5b) *Senegal dafa-y tàng*
 Senegal EV.3SG be hot Senegal EV.3SG-**IMPF** be hot
 'The weather is hot in Senegal' 'Weather will be hot in Senegal'

Even in another case where the perfective form does not have a habitual value such as in (6a), the imperfective mark gives also a prospective value such as in (6b), but not a progressive value.

- (6a) *Kon nag dama falu*
 therefore thus EV.1SG be elected
 'I am thus elected'

- (6b) *Kon nag dama-y falu*
 therefore thus EV.1SG-IMP be elected
 'I will thus (probably) be elected'

2.1.2 resultative state of state verbs?

If we consider now the second criterion as the temporal value of the perfect conjugation, we can see that activity and state verbs entail different points of view about the eventuality. We have to precise now that in Wolof, the neutral form is the narrative (NARR) for activity verbs and the verb emphatic for state verbs (Robert's 1991 book analyses deeply this fact).

Compare thus the neutral and perfect forms with activity verbs such as in (7 a-b) and (8 a-b), and the neutral and perfect forms with state verbs such as in (9 a-b) and (10 a-b).

- (7a) *Nga gis Faal Faadel* (7b) *Gis nga Faal Faadel*
 NARR.2SG see Fal Fadel see PF2SG Fal Fadel
 'you see Fadel Fal' 'you saw Fadel Fal'

- (8a) *Nga tas sama yakaar*
 NARR.2SG to scatter POS.1SG hope
 'You ruin my hopes'

- (8b) *Tas nga sama yakaar*
 to scatter PF.2SG POS.1SG hope
 'You ruined my hopes'

With activity verbs such as in (7) and (8), the perfect entails a result of the eventuality unlike with a state verb (9 a-b) and (10 a-b). In the latter cases, the perfect has a present value: the eventuality is still right.

- (9a) *Dama sonn* (9b) *Sonn naa*
 EV.1SG be tired be tired PF.1SG
 'i am tired' 'i am tired'

- (10a) *Dafa baax* (10b) *Baax na*
 EV.3SG be good be good PF.3SG
 'He /she is a good person' 'It is good'

In the case of state verbs, we can notice that the category of the verb argument is also important to determine the choice of the predicative form: the perfect form is more accurate when the argument is not a person.

Robert 1991 characterizes the perfect form by its resultative state. But the term *resultative* doesn't emphasize the aspectual difference of the two verb classes. It is right that examples (7) and (8) show the resultative value of the perfect conjugation and those examples (9) and (10) show its state value. But (9) and (10) verbs are inherently

state verbs and we do not see a resultative value there. I prefer thus call the temporal value of state verbs as *continuous state*.

We can summarize the dichotomy between state and activity verbs from the aspectual point of view. The perfect conjugation (PF) gives to the activity verb a resultative value contrary to the state verbs. And the imperfective -y mark has a present progressive value with an activity verb (this is not the case with a state verb). In accordance to the Bach's classification of eventualities, the stative process cannot be cut off in time. It is homogeneous and Bach characterizes it by its continuous aspect. Robert is agree with this characterization: “Nous retiendrons ici pour caractéristique des verbes d'état le fait qu'ils sont compacts c'est-à-dire « non découpables dans le temps »” (Robert 1991: 59).

By contrast, an activity is dynamic and the eventuality can be cut off in time. Let us examine now what is the behavior of emotion verbs. Are they discrete or continuous in Wolof?

2.2 Aspectual classes alternation of emotion verbs

The behaviour of emotion verbs in Wolof is interesting when we try to classify them: what kind of eventualities are they?

Seen from the perfective point of view (perfect conjugation), an emotion verb is like a state verb because the perfect conjugation doesn't entail necessarily a result such as (11 a-b), and also because the narrative form (11c) is impossible.

(11a) *Sama xol dafa sedd ci yow*
 POS.1SG heart EV.3SG be cold LOC 2SG
 'I am satisfied with you'

(11b) *Sama xol sedd na ci yow*
 POS.1SG heart be cold PF.3SG LOC 2SG
 'I am satisfied with you'

(11c)* *Sama xol mu sedd ci yow*
 POS.1SG heart NARR.3SG be cold LOC 2SG
 'I am satisfied with you'

We notice here that when a body-part is the verb argument (not a person), the verb emphatic and perfect forms both are possible and convey the same meaning. And we can see that the temporal value of the eventuality is the present. We can also conclude that emotion verbs in Wolof have the same behaviour than state verbs.

But from the imperfective point of view, some emotion verbs are like an activity verb because the imperfective -y mark can be the progressive, like the inchoative such as in (12b) and (13b).

(12a) *Dama mer*
 EV.1SG be angry
 'I am angry'

(12b) *Dama-y mer*
 EV.1SG-IMPF be angry
 'I get angry'

- | | | | | | | | |
|-------|---------------------------|-----------|--------------|-------|-------------------------------------|-------------|--------------|
| (13a) | <i>Dafa</i> | <i>ko</i> | <i>ragal</i> | (13b) | <i>Dafa</i> | <i>ko-y</i> | <i>ragal</i> |
| | EV.3SG | 3SG | fear | | EV.3SG | 3SG-IMPF | fear |
| | 'He/she is afraid of him' | | | | 'He/she begins to be afraid of him' | | |

The imperfective -y mark cannot have a habitual value such as in (14a). Wolof will prefer to use another conjugation to mean this kind of habitual value such as in (14b). In this case, the markedness of the habit moved from the verb to the noun. To say that a state is habitual in Wolof, we say that the entity is defined by this state (nominal equative form).

- | | | | | | | | | |
|--------|--------------------------------|---------------|-------------|-------|--------------------------------|-----------|-------------|-----------|
| (14a)* | <i>Omar</i> | <i>dafa-y</i> | <i>sedd</i> | (14b) | <i>Omar</i> | <i>ku</i> | <i>sedd</i> | <i>la</i> |
| | Omar | EV.3SG-IMPF | be cold | | Omar | NC.SP | be cold | ECP.3SG |
| | 'Omar is quiet (all the time)' | | | | 'Omar is quiet (all the time)' | | | |

In Wolof, the possibility to use the imperfective -y mark with the inchoative value for a few emotion verbs is noteworthy. Apresjan (1974, translated in 1992) and Dowty (1979) have already noticed this possibility for a few emotion verbs to be used either as states or activities. They refer to a physical change of state. Dowty calls them “degree achievements”. There is a morphological reason in Wolof why we cannot consider emotion verbs like state verbs. An inchoative form derived from the base is possible in Wolof for a few quality state verbs such as BAAX 'be good' < BAAXSI 'begin good' but these derivation is impossible for emotion verbs such as MER 'be angry' < *MERSI.

We can ask the following question: what kind of eventuality do these emotion verbs refer to? The nominal domain can help us to answer. The analogy between the aspectual classes of verbs and the two opposite nominal categories -that is mass versus count- has been already noted by many works see Mourelatos 1978 for references, Bach 1986 for the formal semantics or Jackendoff 1991 for the lexical conceptual semantics. We can thus examine the count vs mass distinction in Wolof and then ask the question of the nature of emotion nouns.

3 Wolof noun classes and countable alternations

3.1 Countability of nouns

In a paper from 1998, Gillon has well summarized the morphosyntactical features which show that count and mass nouns are opposite categories. These features emphasize the role of the determiners.

We have to know that every noun in a wolof sentence is associated with a nominal class. There are 8 singular classes (classes B, G, J, K, L, M, S, W) and 2 plurals (Y, Ñ). Before taking an hypothesis about the countability from emotion nouns in Wolof, we have to test the behaviour from a noun of stuff which is a good example to be a mass noun. If we take nouns like NDOX 'water' and MBUBB 'boubou' which designates traditional clothes in West Africa, we can see that these two nouns have different

behaviours when they are undefined. The next examples (15a-c) and (16a-b) test the use of these kinds of nouns when they are in the singular undefined form.

- (15a) *Dama bëgge ndox*
 EV.1SG want water
 ‘I would like some water’
- (15b)* *Dama bëgge am ndox*
 EV.1SG want UNDEF.NC.SG water
 * ‘I would like a water’
- (15c)* *Dama bëgge menn ndox*
 EV.1SG want NC.SG.one water
 * ‘I would like one water’
- (16a) *May na ko am mbubb*
 give PF.3SG 3SG UNDEF.NC.SG boubou
 ‘He/she gave him/her a boubou’
- (16b) *May na ko menn mbubb*
 give PF.3SG 3SG NC.SG.one boubou
 ‘He/she gave him/her a boubou’
- (16c)* *May na ko mbubb*
 give PF.3SG 3SG boubou
 * ‘He/she gave him/her some boubou’

We can see that nouns of stuff, for example NDOX ‘water’ in (15a) do not have any nominal class marker when they are in the singular form, unlike nouns of objects like MBUBB ‘boubou’ in (16a-b). This is an interesting property of mass nouns in Wolof.

Another remark is that nouns of stuff are incompatible with the nominal class of plural -y (see 15d-e), unlike nouns of objects such as in (16d-e), and this is the case whatever the noun is in the undefined or defined form.

- (15d)* *Dama bëgge ay ndox*
 EV.1SG want UNDEF.NC.PL water
 * ‘I would like some waters’
- (15e)* *Dama bëgge ay ndox yi*
 EV.1SG want UNDEF.NC.PL water DEF.NC.PL.SP
 * ‘I would like the waters’

(16d) *May na ko ay mbubb*
 give PF.3SG 3SG UNDEF.NC.PL boubou
 ‘He/she gave him/her some boubous’

(16e) *May na ko ay mbubb yi*
 give PF.3SG UNDEF.NC.PL boubou DEF.NC.PL.SP
 ‘He/she gave him/her the boubous’

However, all nouns in Wolof belong to different nominal classes. Since they are modified by a quality state verb such as in (15f) and (16f), nouns of stuff have the same grammatical behaviour than the nouns of objects.

(15f) *Dama bëgge ndox mu tàng*
 EV.1SG want water NC.SG.SP be hot
 ‘I would like some hot water’

(16f) *May na ko am mbubb mu rafet*
 give PF.3SG 3SG UNDEF.NC.SG boubou NC.SG.SP be beautiful
 ‘He/she gave him/her a beautiful boubou’

Notice that when a noun is modified by a quality state verb, there is a spatial specifier, which follows immediately the nominal class marker. This spatial specifier is invariable: this is always the U vowel.

In the same way, when the nouns are in the definite form such as in (15g) and (16g), in the two cases, the markers of nominal classes are necessary. And when the nouns are in the defined form, the nominal class marker is repeated after the modifier and associated in this time with the spatial specifier I.

(15g) *Dama bëgge ndox mu tàng mi*
 EV.1SG want water NC.SG.SP be hot NC.SG.SP
 ‘I would like the hot water’

(16g) *May na ko am mbubb mu rafet mi*
 give PF.3SG 3SG UNDEF.NC.SG boubou NC.SG.SP be beautiful NC.SG.SP
 ‘He/she gave him/her a beautiful boubou’

To sum up, There are two morphosyntactic oppositions between mass and count nouns in Wolof. Undefined mass nouns don't have any nominal class marker and they are incompatible with the nominal class marker of plural-y. We can understand that the quantification of mass nouns belongs to the problem, and we will return to it when we will consider the status of emotion nouns.

3.2 Countable alternation of emotion nouns

Consider now the nouns of emotions: are they mass nouns or count nouns? I limit here myself to the nouns, which come from the verb-noun roots of emotion. Examples

(17a b) seem to show that they are mass nouns: they haven't any nominal class marker when they are undefined but they have one when they are modified.

- (17a) *Dama* *yég* *ragal*
 EV.1SG feel fear
 'I feel scared'
- (17b) *Dama* *yég* *ragal* *gu* *réy*
 EV.1SG feel fear NC.SG.SP be big
 'I am very scared'

However, using numerals and plural forms with emotion nouns is common in Wolof such as in (18) and (19).

- (18) *Amuma* *ci* *benn* *jaaxle*
 have.NEG.1SG LOC. one anxiety
 'I haven't any anxiety'
- (19) *Ñetti* *réccu* *la* *ci* *am*
 three.PL regret ECP.3SG LOC have
 'He /she has had three regrets'

What can we say about that? To answer, we have to examine the case of other mass nouns. Let us take examples from nouns of food such as in (20a-b).

- (20a) *Ceeb* *laa* *togg*
 rice ECP.1SG to cook
 'It is rice that i cooked'
- (20b) *Ñetti* *ceeb* *laa* *togg*
 three.PL rice ECP.1SG to cook
 'There are three portions of rice that i cooked'

We see that using plural forms with these kind of nouns entails necessarily a meaning change. To say better than I can say: "Summarizing, then, we conclude that mass nouns, under conversion, give rise to count nouns with a limited variety of shifts in denotation. They include, but may not be confined to, the following: TO BE A KIND OF, TO BE AN INSTANCE OF, TO BE A UNIT OF, and TO BE A SOURCE OF": (Gillon 1998: 57-58).

Now I can explain the cases of the emotion nouns if we are aware that these examples show a meaning change: the noun doesn't denote any emotion itself, but the *manifestation* of the emotion. This kind of meaning change is a conversion from mass nouns into count nouns and it is called "universal packager" (Bach 1986 and Jackendoff 1991 for references and discussions). This change is like a machine which takes a continuous structure in input and gives a discrete structure in output creating a meaning change, which express 'the output is a thing composed of the input'. COMPOSED OF is the name used by Jackendoff.

The little story about this rule is amazing: in a paper from 1975, Pelletier quoted that the opposite rule called UNIVERSAL GRINDER was introduced by the American philosopher Daniel Lewis. And in his paper, Jackendoff said that Lewis didn't recognize this paternity. So these universal machines come from nowhere, but languages are overrun with them.

4 Analogy between state verbs and mass nouns

The analogy between the verbal and nominal domains is about the opposition of the continuous versus discrete nature of the lexical unit. That is, an emotional state is a continuous eventuality like an emotion is a continuous entity. And an activity, which starts an emotional state, is a discrete eventuality like a manifestation of an emotion is a discrete object. And this opposition is reflected in the internal structure of the lexical unit. Verb and noun, which belong to the same root, have the same internal structure. That is the reason why I have summarized this in the table 2 below.

Internal structure	JAAXLE (1a)	MER (1b)	RAGAL (1c)	SEDD (1d)	TIIS (1e)
verb	continuous	continuous / discrete	continuous / discrete	continuous	continuous / discrete
noun	continuous / ?	continuous / discrete	continuous / discrete	continuous	continuous / discrete
verb-noun root	continuous / ?	continuous / discrete	continuous / discrete	continuous	continuous / discrete

Table 2: internal structure of the emotion verb-noun roots

Since we can define the internal structure of the verbal or nominal lexeme, there are good reasons to consider that the lexeme, which belongs to the other domain, will have the same properties and also the verb-noun root.

It is necessary now to comment the cases of JAAXLE and SEDD, which don't seem to show the same alternations. The case of SEDD is easy to explain. Like TANG which means 'be hot' the verb SEDD which means 'be cold' is in his first meaning a temperature verb. I choose it just to show the difference of behaviour between the emotion and other lexical fields. We can notice that this root admits a nominal derivation which means precisely 'the fact of being in state X' see (1d), contrary to the other roots see the first table in the same page.

The case of JAAXLE is more complicated. If we return one more time to the first table of derivation, we can see that it seems that JAAXLE is not really a root. It is possibly derived as quoted Nougier- Voisin (2002: 242). As a matter of fact, JAAX doesn't exist but -LE is a verbal suffix, which could contain an idea of possession. This suffix is not productive. Compare NEEEX 'be successful' and NEEEXLE 'have something to be successful' with JAAXLE which can mean 'have something to be embarrassing to deal

with' and *JAAX which could mean 'be embarrassed'. The suffix adds the possession of a discrete object. So we are dealing with a possessive state of something; in this particular case, the described fact mixes a continuous event with a discrete object.

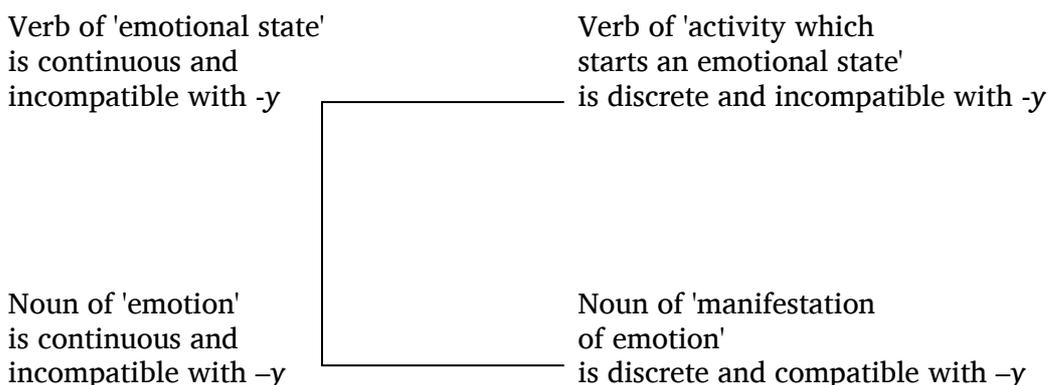
The analogy is about the internal structure of the unity (discrete versus continuous structure): the compatibility from a few emotion verbs with the inchoative form is analogous to the compatibility from emotion nouns with the plural and the singular definite forms. As quoted in Saussure 1972 where a whole chapter is about this subject (Chap.IV,Part.3), an analogy puts four things together and the real goal of an analogy is the relation between four elements. We say that a relation between A and B is analogous to the relation between C and D if the relation between A and B has the same characteristics than the relation between C and D. In our case of emotion verb noun roots in Wolof, we can say that an eventuality can have different moments in time and an entity can have different parts in space in the same way. This is why I represent these correlations in a figure, which gather the verbal lexeme and the nominal lexeme together. The important thing is that the combinatorial properties of the few verb-noun roots I have focused on are correlated with the meaning alternations.

Since an emotion noun is compatible with the nominal class of plural -y, it means that there is a conversion from 'emotion' into manifestation of emotion' and vice-versa.

In the same way, since an emotion verb is compatible with the progressive marker y, it means that there is a conversion from 'emotional state' into 'activity which starts an emotional state' and vice versa.

This is an aspectual alternation for the verbs and a counting alternation for the nouns.

What is seems important to me to notice for Wolof is that the function, which allows the meaning shifts, has the same form: the vowel -y. This is interesting for emotion verb-nouns roots because the cross categorial conversion and the internal categorial conversion are in a figure of proportionality. Here, the horizontal sides represent the verbal and nominal alternations and the vertical side represent the cross categorial conversion. As we have already noticed, there isn't any conversion from 'action, which starts an emotional state' into 'something which is the start of an emotional state'.



Conclusion

Wolof allowed me to follow a linguistic thought about the analogy between state verbs and mass nouns which is already established for some well-described languages such as French or English. Robert (1991: 331-333) established also a classification of processes for Wolof and puts separately emotion verbs such as RAGAL 'to be afraid, to get scared' or body-positions verbs such as TOGG 'to be seat, to seat'. She noticed that their particularity is that they can be used as stative state verbs, and also as dynamic activity verbs. She decides to characterize them as discrete processes, but the explication is not clearly claimed.

I tested a semantic hypothesis which comes from a few semantic schools such as the formal semantics (Bach 1986) and lexical conceptual semantics (Jackendoff 1991), which is about the analogy between state verbs and mass nouns. In Wolof, this hypothesis takes the form of the following

proposition: the compatibility of emotion verbs with the imperfective *-y* is analogous to the compatibility of emotion nouns with the plural *-y*. There is a polysemy from a few emotion verb-noun roots caused by their particularity to be continuous or discrete.

This statement gives rise to ask once more the question of the *semantic* difference between the verbal and nominal domains in this language. It seems that the analogy between the two domains can be drawn and maintained deeply in Wolof.

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