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Tense and aspect in the verbal system of Wolof*

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Perfective aspect is the unmarked form of the Wolof verbal system. It is analyzed here as an aspectual by-product of the conjugation's core meaning, induced by three different configurations: resulting state (Perfect), temporal presupposition (focusing conjugations), and a comprehensive view of the process (Null tense and Presentative). The primary conjugations enter into secondary oppositions by means of aspectual and temporal suffixes. Alongside the expected aspectual and temporal effects for the imperfective suffix, the Wolof aspectual system reveals a remarkable shift, conditioned by Aktionsarten, from a temporal to a modal meaning. The imperfective suffix has a predicative variant. These two variants are used to produce two distinct future tenses. They also combine to form imperfective compound conjugations referring to occasional events.

Keywords: Unmarked perfective; temporal presupposition; global viewing; modal shift; focusing inflections; occasional

1. Introduction

Within the Niger-Congo group, the verbal system in Wolof (an Atlantic language spoken by approximately 10 million people, mainly in Senegal) shows a remarkable organization due to its particularly synthetic morphology. As in many other Atlantic languages, focalization and negation are integrated in the Wolof verbal morphology. Moreover, the various verbal morphemes have merged into the inflectional paradigms and can no longer be isolated, to such an extent that tense and aspect marking is conflated with other verbal specifications (person, modality, focus,

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negation…). This means that the verbal system is made up of various basic inflectional paradigms (functioning as primary markers), all with perfective (*i.e.* completive) meaning, where tense is relative to the speech time; it is thus both a tense and an aspect system. Furthermore it has one special characteristic: the perfective is the unmarked form and the imperfective (*i.e.* incompletive) is derived from the primary paradigms. This raises the question of the status of the perfective in Wolof, whether perfectivity is a secondary effect of each primary paradigm's specific semantics. It is therefore necessary to present the entire Wolof verbal system in order to understand the aspectual system. In the first part of this paper, I will present the verbal system's organizing principles, the morphology of the primary markers (*i.e.* the inflectional paradigms) and the manner in which the secondary markers function (Section 2). I will then propose a reanalysis of the perfective construction mode, taking the role of process types into consideration (Section 3). After having explored how inflectional paradigms with perfective meaning function, we will be in a position to examine the use of the imperfective suffix and its predicative variant as well as their combination (Section 4).

2. The Wolof verbal system: Morphology and organization

2.1 Morphology of the primary inflectional paradigms (conjugations)

The Wolof verb constituent has two components: an invariant lexical stem (unless derived) and an inflectional marker conveying the verb's grammatical specifications. The inflectional marker is (mostly) preposed, postposed, or suffixed to the lexical stem; the two components are therefore formally separate but functionally linked.

One characteristic feature of Wolof is the grammatical expression of utterance level specifications in the verbal system. Inflectional verbal morphemes convey specifications for person, number, tense, aspect, mood and polarity. These verbal morphemes also define the sentence's information structure (focus) synthetically. The verbal system is thus organized into twelve primary[1] paradigms or conjugations: Perfect, Presentative, Null tense (often also called Narrative or Aorist), Future, Verb Focus, Subject Focus, Complement Focus, Negative, Emphatic Negative, Obligative, Imperative and its negative counterpart, the Prohibitive. These markers are obligatory: in a well-formed utterance, every clause has to contain one (and only one) of them.

1. I have labeled these forms "primary" because they do not result from the combination of otherwise existing morphemes.

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Thus for *lekk* 'eat' and *loolu* 'that' (anaphoric demonstrative), we find the conjugations presented in Table 1.

Table 1. The twelve primary conjugations in Wolof

	Perfect	Presentative	Verb focus	Subject focus	Complement focus
1 sg	*lekk naa*	*maa ngi lekk*	*dama lekk*	*maa lekk*	*loolu laa lekk*
2	*lekk nga*	*yaa ngi lekk*	*danga lekk*	*yaa lekk*	*loolu nga lekk*
3	*lekk na*	*mu ngi lekk*	*da(fa) lekk*	*moo lekk*	*loolu la lekk*
1 pl	*lekk nanu*	*nu ngi lekk*	*danu lekk*	*noo lekk*	*loolu lanu lekk*
2	*lekk ngeen*	*yeena ngi lekk*	*dangeen lekk*	*yeena lekk*	*loolu ngeen lekk*
3	*lekk nañu*	*ñu ngi lekk*	*dañu lekk*	*ñoo lekk*	*loolu lañu lekk*
	Null tense	**Future**	**Obligative**	**Negative**	**Emphatic negative**
1 sg	*ma lekk*	*di-naa dem*	*naa lekk*	*lekk-uma*	*duma lekk*
2	*nga lekk*	*di-nga dem*	*nanga lekk*	*lekk-uloo*	*doo lekk*
3	*mu ~ Ø lekk*	*di-na dem*	*na lekk*	*lekk-ul*	*du lekk*
1 pl	*nu lekk*	*di-nanu dem*	*nanu lekk*	*lekk-unu*	*dunu lekk*
2	*ngeen lekk*	*di-ngeen dem*	*nangeen lekk*	*lekk-uleen*	*dungeen lekk*
3	*ñu ~ Ø lekk*	*di-nañu dem*	*nañu lekk*	*lekk-uñu*	*duñu lekk*
	Imperative	**Prohibitive**			
2 sg	*lekk-al*	*bul lekk*†			
2 pl	*lekk-leen*	*buleen lekk*			

† For this paradigm, the Null tense inflection (postposed to the *bu* morpheme) replaces the Imperative one for the 1st and 3rd persons (*i.e.* 1sg *bu ma lekk*).

The forms presented in this table are found in vehicular Wolof, as opposed to other variants. For example, the forms for Verb Focus used in Cayor or Gambia and in Lebu Wolof, always bear the *-a* suffix, which merges with the TAM final vowel (*e.g.* 1sg *damaa lekk*, 1pl *danoo lekk*). We will return to this issue below (see 4.3). In Dakar, the first person plural is often identical to the third person plural, *i.e.* it is pronounced with a palatal nasal instead of a dental one (*e.g. lekk nañu* 'we have eaten' instead of *lekk nanu*, or *ñu ngi lekk* 'we are eating' instead of *nu ngi lekk*).

Throughout these paradigms, the following series of TAM markers can be identified in Table 2.

Noticeably, the Future can be reconstructed as a compound conjugation, since it is made up of the Perfect inflection suffixed to the predicative variant of the imperfective marker *di* (*cf.* 4.2.2). However, from a functional point of view this paradigm can

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Table 2. Wolof TAM markers

Perfect	(V) *na* (postposed)	Obligative	*na* (V) (fronted)
Null tense	Ø	Imperative	*-(a)l*
Presentative	*a ng* + spatial suffix		
Future	Imperfective + Perfect		
Verb focus	*da*	Prohibitive	*bu*
Subject focus	*-a*	Negative	*-ul*
Complement focus	*la*	Emph. Negative	*du*

be considered a primary conjugation in so far as, like the other conjugations, it can receive the imperfective suffix (*-y*) and the past suffix (see 2.3 and 4.4).

Wolof conjugations probably originate from the combination of the autonomous morphemes (particles or affixes) listed in Table 2 with what appear to be two series of personal pronouns. Synchronically however these morphemes have merged with the person markers. This implies that (1) morphologically, it is impossible to isolate regular series of person markers across these paradigms, (2) the person (inflectional) markers are almost always obligatory even when there is a lexical subject. This is why it is more fitting to use the term "conjugations" for this system, even though there can be some non-inflectional variants accompanying the lexical subject. This is probably because the Wolof verbal system is currently evolving, from a system where a set of autonomous TAM markers (*cf.* Table 2) combine with personal pronouns, to a conjugation system (*cf.* Table 1). Thus the conjugation system shows certain morphosyntactic irregularities which seem to indicate an as yet incomplete switch to an inflectional system. While in the 3rd person most of the inflectional forms are retained in presence of a lexical subject, in the manner of true conjugations, other forms have possible non-inflectional variants (subject + full inflectional form ~ subject + invariable particle with no person marker, *e.g.* for Subject focus *Sàmba moo dem* ~ *Sàmba-a dem* 'it is Samba who left'). For one of the conjugations, the Null tense, the presence of a lexical (or pronominal)[2] subject triggers the person marker being replaced by the non-inflected form, which in this case bears the zero marker (*Moodu dem* 'Moodu left' *vs. mu dem* 'he left').

2.2 The system's organizing principles

Within the basic system, there are two features which give the system internal structure, in distinguishing between the various conjugations: the polarity feature,

2. Such as a relative or interrogative pronoun (cf. Robert to appear).

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distinguishing affirmative from negative conjugations, and focus which, in the affirmative conjugations, distinguishes focused conjugations from non-focused conjugations. Moreover, two other components, namely tense and aspect, also appear in secondary distinctions, between the conjugations' bare forms (primary markers) and forms bearing various additional morphemes (secondary markers), mainly suffixes. We will begin by exploring the (bare) conjugations, which constitute the basis of the system.

2.2.1 *Polarity feature: Inflectional negation*

Negation is integrated in the verbal system in a complex manner. Based on the marker (*-u(l)*), shared by all negation morphemes, Wolof has a double system, depending on the scope of the negation (Robert 1990). Thus one finds (a) two negative conjugations (the Negative and the Emphatic Negative), and (b) a negation marker which combines with various affirmative conjugations, with two possible forms: a suffixed form with negative perfective meaning (*-ul*), and a free form with negative imperfective meaning (*dul*). We will begin with the negative conjugations.

Concerning the polarity feature, the verbal system is asymmetrical as there are two negative conjugations (one of which has a variant bearing the imperfective suffix) and six affirmative conjugations, as well as one conjugation with prohibitive meaning, opposed to two injunctive conjugations. This asymmetry is very common crosslinguistically and is due to the variable scope of the negation. From a semantic perspective, the negative conjugations correspond to specific affirmative conjugations: in example (1) the Negative serves to negate the Perfect (negating that the endpoint of the process has been reached) and the Presentative (negating that the process is ongoing); in example (2), the Emphatic Negative negates a future or general process, corresponding respectively to the Future and the imperfective Verb Focus (see Section 4.1.1). Its imperfective variant (Example 3) has the specific meaning of negating the frequency of the process ('never do' or 'do sometimes, but rarely') which corresponds to negating the imperfective variant of the Future (*cf.* 4.4.1). The Prohibitive (4) negates the Imperative and the Obligative.

(1) *Tóxuloo*
smoke:NEG2SG
'You haven't smoked' ~ 'you aren't smoking'

(2) *Doo* *tóx*
EMPHNEG2SG smoke
'You don't smoke' ~ 'you're not a smoker' ~ 'you won't smoke'

(3) *Dooy* *tóx*
EMPHNEG2SG:IPFV smoke
'You don't usually smoke' ~ 'you sometimes (but rarely) smoke'

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(4) *Bul* *tóx*
PROH2SG smoke
'Don't smoke!'

On the contrary, the two non-inflectional negative morphemes can combine with all of the affirmative conjugations, with the exception of those which have their own negative conjugation, namely the Presentative[3] (where negation is expressed through the Negative), the Perfect (which shares the Negative), the Future (negated by the Emphatic Negative), and lastly the Imperative and the Obligative (negated using the Prohibitive). The two negative morphemes (with perfective and imperfective meanings) thus combine with the three focus conjugations ((5) to (9)) and the Null tense (10). When they combine with the affirmative conjugations, they retain their meaning, namely their modal determinants and focus:

(5) *Yaa* *tóx*
SUBJFOC2SG smoke
'It is you who smoked.'

(6) *Yaa* *tóx**ul***
SUBJFOC2SG smoke:NEG
'It is you who didn't smoke.'

(7) *Yaa* ***dul*** *tóx*
SUBJFOC2SG IPFVNEG smoke
'You are the one who doesn't usually smoke.'

(8) *Dafa* *défé**wul*** *né* *dinaa* *ñëw,* *mootax* *tëjewul*
VBFOC3SG think:NEG COMP FUT1SG come therefore lock:NEG3SG
bunt *bi.*
door DEF
'It's because he thought I wouldn't come that he didn't lock the door.'
(*lit.* He did not think that I would come)

(9) *Garab* *gi* *laa* *naan**ul***
medicine DEF COMFOC1SG drink:NEG
'This is the medicine I didn't take.'

(10) *Mu* *lekk**ul,*** *moo* *gën.*
NULL3SG eat:NEG SUBJFOC3SG be.more
'It is better that he didn't eat (*lit.* (that) he did not eat, that is what is better).'

3. Some speakers accept the Presentative form with the suffix *-ul*, but only when it is followed by another clause: **mu ngi lekkul* (Prest3sg eat-neg) but *mu ngi lekkul te bëgga dem* 'just now he didn't eat, and (yet) he wants to go out.'

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This overview of the negation system is summarized in Table 3. For a more detailed account of the meanings and workings of the negative morphemes in Wolof, see Robert (1990 and 1991).

Table 3. Overview of the negative morphemes in Wolof

Negative affixes combining with affirmative conjugations		
Combining with the Null tense and focusing conjugations		
Form	*Position*	*Meaning*
-ul	Suffixed to the verbal lexeme	Negative perfective
dul	Preposed to the verbal lexeme	Negative imperfective
Negative conjugations		
Label	*Affirmative counterpart*	*Meaning*
Negative	– Presentative – Perfect	Negation of the present happening or completion of a process
Negative Emphatic	– Imperfective Verb focus – Future	Negation of the process in general, of the habitual and of the future
Negative Emphatic + *y*	– Imperfective conjugations	Negation of frequency
Prohibitive	– Imperative and Obligative	Prohibition

2.2.2 *Focus features: Integrating the information structure in the verb morphology*
The Wolof verbal system is also structured around distinctions related to information structure. As in many Atlantic languages (Robert 2010a) and other African languages (Heine & Nurse 2008: 104), Wolof uses verbal morphology to express focus in a remarkably synthetic fashion. In the affirmative indicative mood, there are three non-focusing conjugations (Perfect, Presentative, and Null tense) and three focusing conjugations (traditionally called "emphatics", *e.g.* Dialo 1981): Verb focus, Subject Focus, and Complement Focus. These vary depending on the syntactic function of the focused constituent: subject, verb, or complement (in the broad sense of any constituent which is neither subject nor main verb). Thus, Example 11, which contains the Perfect (no focus), may be contrasted with Examples 12–14 which contain focusing conjugations:

(11) *Moodu lekk na*
Moodu eat PFT3SG
'Moodu has eaten' ~ 'has finished eating.'

(12) *Moodu dafa lekk*
Moodu VBFOC3SG eat
'Moodu did eat.'

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(13) *Moodu moo ko lekk*
Moodu SUBJFOC3SG OPR3SG eat
'It was Moodu who ate it.'

(14) *Mburu la lekk*
bread COMPFOC3SG eat
'It was bread he ate.'

The focusing conjugations are obligatory in Wolof whenever a constituent (whatever its syntactic function) is the informative segment of the sentence. Therefore their uses go far beyond the prototypical cases of contrastive, exclusive or replacing focus; for instance, they are also used in *wh*-questions (with *-an* interrogative markers) and are obligatory in the replies to such questions (even when there is no conceivable alternative to the focused constituent). Verb focus in particular displays a large array of discursively regulated and conditioned uses, ranging from explanations and intensive predication to mere statements for stative verbs.[4]

As we will see below (Section 3.3.2), this grammaticalization of focus in the verb morphology has important consequences for the aspectual and temporal values of the verb system because tense, aspect, and focus marking are merged into a single component.

2.2.3 *Tense and aspect features*

When not bearing the imperfective suffix (*-y*), all conjugations and verb inflections have perfective (*i.e.* completive) meaning: action verbs refer to past events, while stative verbs refer to present states, except for the Presentative which refers to current processes with all verb types (see examples in Section 3.2). Furthermore, all but one of these paradigms (including the Emphatic Negative but excluding the Negative) can receive the imperfective marker, the *-y* suffix or its unbound variant *di*. This system is also organized around a secondary aspectual opposition between bare paradigms (corresponding to the basic inflected forms) with perfective value (15), and derived paradigms with imperfective value (16). One clarification must be made concerning this aspectual opposition: the terms "perfective" and "imperfective" are used here in order to relate the aspectual opposition between the unmarked and the derived form in Wolof to a well-known distinction in aspectology. However it should not be confused with what Dahl labels the "Slavic style aspect" (1985: 85*ff*), which is "in fact rather idiosyncratic in many ways" (*ibid.*: 69). In order to avoid confusion, some authors prefer to use the terms 'completed *vs.* incomplete event' (*e.g.* Bril, in this volume) or

4. For a detailed account of the uses of the focusing conjugations, see Robert (1991) and (2010a).

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"completive *vs.* incompletive aspect" (*e.g.* Gasser 1988). The crucial point in Wolof, as in many other African languages, is that this aspectual opposition is conveyed by a grammatical suffix and is closer to the *perfectum vs. infectum* opposition than to the one at work in Slavic languages.

(15) *Yaa* *tóx*
SUBJFOC2SG smoke
'You are the one who smoked.'

(16) *Yaa* *-y* *tóx*
SUBJFOC2SG IPFV smoke
'You are the one who is smoking.'

In fact, tense structures this verbal system in the same way as aspect does: all the basic conjugations, except the Null tense, are anchored in the speech time. In Chung and Timberlake's terms (1985: 203), the Wolof speech moment serves as the "tense locus" for all the basic conjugations, which therefore correspond to an "absolute tense system". The basic conjugations have *present perfective* value following from the previous considerations about aspect.

While present perfective is the default value for all conjugations in the absence of a suffixation, conjugations can also appear with the past marker *-(w)oon* suffixed to the verb's lexical stem. When suffixed with *-(w)oon*, the predicate refers to a past event the consequences of which were valid at a previous moment but are no longer valid at the time of speech. One can thus contrast (17) and (18) taken from Church, the first without and the second with the *-oon* suffix:

(17) *Yàlla* *sàkk* *na* *àddina*
God create PRF3SG world
'Dieu a créé le monde.' (Church 1981: 202)
'God has created the world [and this is still true as I am speaking].'

(18) *Yàlla* *rafetaloon* *na* *àddina,*
God be.beautiful:CAUS:PST PRF3SG world
waaye *nit* *a* *fi* *indi* *ñaawteef*
but human FOC here bring ugliness
'Dieu créa le monde bon, mais c'est l'homme qui y a apporté le mal.'
(Church 1981: 203)
'God created a beautiful world, but mankind made it ugly
[as I am speaking, the world is no longer beautiful].'

The comparison between (17) and (18) confirms that bare conjugations have default present perfective value and that past reference as well as the imperfective are secondary forms obtained by deriving these primary conjugations.

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2.3 Conjugations and secondary markers: Roles and organization

2.3.1 *The organization of tense and aspect and their use in the verbal system*

From a morphological point of view, the basic Wolof verb system is made up of conjugations neatly organized into twelve inflectional paradigms based on polarity and focus features, with affirmative and negative as well as focusing and non-focusing conjugations (*cf.* Table 1). All conjugations are specified as perfective with regard to tense and aspect, and the utterance moment is the tense locus except for one conjugation, the Null tense, which is intrinsically not anchored in time. Thus, regarding tense and aspect, the Wolof verb system is one in which the perfective and present reference are the conjugations' default values. Present perfective is the system's unmarked form. These simple forms, with present perfective meaning, can furthermore receive imperfective, anterior or negative markers. In other words, the primary conjugations enter into secondary oppositions by means of aspectual and temporal secondary markers: imperfective value as well as past reference are derived from the bare (perfective) conjugations by addition of secondary markers which are mostly suffixes. Moreover, some affirmative conjugations (focusing and the Null tense) can also receive the negative suffix.

2.3.2 *The secondary markers: Placement and combinations*

The various combinations of the imperfective, past and negative markers with the primary conjugations produce a complex chart of forms constituting the complete Wolof verb system (*cf.* Diouf 2003: 36–39). However this complex picture can be simplified and summarized by combining the list of conjugations in Table 1 with the list of suffixes in Table 4.

Table 4. The Wolof verb system: Secondary markers

Simple verb forms		Secondary verb forms	
zero suffix	(perfective)	suffix *-y* ~ *di*	(imperfective)
zero suffix	(present)	suffix *-(w)oon*	(past anterior); suffix *-(w)aa(n)* (remote past)
zero suffix	(affirmative)	suffix *-ul*	(negative)

Concerning placement, the imperfective is generally suffixed to the inflectional base (19) but can on occasion be suffixed to an object clitic[5] (20), to a locative adverb (see (118) below) or to the subordinating *ba* 'until' (134); in contrast, when past and-

5. For further information on the complex question of object clitic placement, see Voisin (2010).

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negation suffixes are present, they are suffixed to the verb root for perfective forms (21, 22, 23), and thus are not affected by the presence of a clitic (24).

(19) *Maa* *-y* *tóx*
SUBJFOC1SG IPFV smoke
'I am the one who is smoking.'

(20) *Maa* *ko* *-y* *wax*
SUBJFOC1SG OPR3SG IPFV talk
'I am the one who says so.'

(21) *Maa* *tóx* *-ul*
SUBJFOC1SG smoke NEG
'I am the one who hasn't smoked.'

(22) *Maa* *lekk* *-oon*
SUBJFOC1SG eat PST
'I am the one who had eaten.'

(23) *Lekk* *-oon* *naa* *mburu*
eat PST PRF1SG read
'I had eaten bread.'

(24) *Maa* *ko* *wax* *-oon*
SUBJFOC.1SG OPR3SG talk PST
'I am the one who had said so.'

However, when it is the Negative conjugation which is suffixed to the verb root, the past marker, rather than being suffixed to the inflectional morpheme (as in the case of the imperfective suffix), is suffixed to the clitic following the inflected verb form (26 *vs.* 25):

(25) *Gis* *-uma* *-woon*
see NEG1SG PST
'I hadn't seen.'

(26) *Gis* *-uma* *la* *-woon*
see NEG1SG OPR2SG PST
'I hadn't seen you.'

These suffixes can be subject to rare combinatory restrictions or structural impossibilities (see Table 5). These can be explained semantically. First, the Presentative and Perfective have no negative derived form, but instead are negated using the Negative (*cf.* 2.2.1). Second, the Imperative and Injunctive also have no negative derivation, but use the Prohibitive, nor do they have any past derived forms (it is impossible to give an order to be carried out in the past). Third, the Perfect has no imperfective derived form (it indicates a state resulting from a completed action). In contrast, the Perfect

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inflection may be suffixed to the predicative variant (*di*) of the imperfective marker (*cf.* 4.2), thereby constituting the Future conjugation (see Table 1). This predicative variant is also used for the imperfective imperative form (*di-l lekk!* 'get into the habit of eating').

Table 5. Impossible suffixations

	Negative suffix	Past suffix	Imperfective suffix
Perfect	*-*ul*		*-*y* → *di-* (Future)
Presentative	*-*ul*		
Imperative	*-*ul*	*-*oon*	*-*y* → *di-*
Injunctive	*-*ul*	*-*oon*	

Suffixes may also combine with each other as in the following example:

(27) *Mburu laa lekk -ul -oon*
bread COMPFOC.1SG eat NEG PST
'It is the bread that I hadn't eaten.'

Quite remarkably, all complex forms which combine the imperfective and another suffix (either past or negative) contain the imperfective variant *d-*. Thus, alongside the negative perfective *-uloon* (27), one finds the past imperfective *doon*, the negative imperfective *dul* and the negative past imperfective *duloon*. The derived forms for Complement focus are laid out in Table 6. For more details on the predicative variant of the imperfective suffix, see Section 4.2.

Table 6. The various derived conjugation forms: the example of Complement focus (1SG)

Complement focus (1SG)		
perfective	*loolu laa lekk*	this is what I ate
perfective anterior past	*loolu laa lekk**oon***	this is what I had eaten
perfective negative	*loolu laa lekk**ul***	this is what I didn't eat
perfective past negative	*loolu laa lekk**uloon***	this is what I hadn't eaten
imperfective	*loolu laa**y** lekk*	this is what I am eating
imperfective anterior past	*loolu laa **doon** lekk*	this is what I was eating
imperfective negative	*loolu laa **dul** lekk*	this is what I do/will not eat
imperfective past negative	*loolu laa **duloon** lekk*	this is what I wasn't eating

To complete this table of derived conjugations, it is worth noting that alongside *-(w)oon*, there is another temporal suffix indicating past anteriority: *-(w)aa(n)*, which has

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the form *daa(n)* in the imperfective. This suffix is highly restricted in its uses however: on the one hand it is very rarely used in ordinary speech in Dakar, and this was already the case in the 1960s (Sauvageot 1965: 127); on the other hand, even in speech varieties where it is still used, the perfective form (*-aan*) only appears in subordinate clauses, *i.e.* with the Null tense (see (28) below). Regarding the imperfective form, although Church (1981: 206) provides examples of combinations between *daan* and all of the conjugations to be found in his corpus of spontaneous discourse, and although he indicates that, in Dakar, the form is still used in narratives (*i.e.* with the Null tense in independent uses), in Diouf's tables (*ibid.*) the imperfective form *daan* is only provided in combination with three conjugations: the Perfect (*e.g. daan naa gis* for the first person singular of the verb *gis* 'to see'), the Negative (*daa-w-uma gis*), and the Verb focus (*dama daan gis*). Diouf also mentions the use of the Null tense in temporal subordinate clauses only (*bi ma daan gis*), and its combination with the negative suffix (*daa-wul*) for the latter two conjugations (*e.g. dama daawul gis* and *bi ma daawul gis*).

(28) *Fu mu dem-aa, ñépp dàq ko*
where NULL3SG go-REMPST all chase OPR3SG
'Wherever he went, everyone chased him away.' (D)

The meanings of the negation suffixes have already been given in 2.2.1, and a separate section will be devoted to the meanings of the imperfective (Section 4). Therefore I will only briefly present here the meanings of the two temporal suffixes mentioned,[6] both of which indicate relative anteriority.

2.3.3 *Meanings of the temporal markers*

By contrast with the non-suffixed form (29), when the *-(w)oon* suffix is used, the reference time (or tense locus) precedes the time of speech (30). In Culioli's terms (1990: 130), this suffix indicates "translation" or "transposition" of the tense locus, from the utterance moment to a prior moment; the suffix preserves the properties of the predicate (as specified by the conjugation) but the predicate refers to a (perfective) past event whose consequences were valid *at a previous and specific moment* and are no longer valid at the time of speech. The suffix *-(w)oon* thus indicates that the predicated event precedes another event. It is therefore a relative tense. When combined with the imperfective (*d-oon*), it retains these temporal properties but refers to a durative process.

(29) *Maa ko wax*
SUBJFOC1SG OPR3SG talk
'I am the one who said it.'

6. For more details on their uses, see the excellent Chapters 11 and 12 in Church (1981: 195–237).

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(30) *Maa* *ko* *wax* *-oon*
SUBJFOC1SG OPR3SG talk PST
'I am the one who had said it [at that time].'

As in many other languages, this past suffix also denotes present (31) or past irrealis (32), either independently or in a subordinate temporal clause or a hypothetical clause where it has irrealis or counterfactual meaning (see 4.1.3.1).

(31) *Yow, doo gor sax. Yow, waroon nga dee, yow.*
you EMPHNEG2SG freeman only you must:PST PRF2SG die you
'You, you are not even noble. You should die, you.' (XSW)

(32) *Mu ne mbooloo ma mu waroona àndal*
NULL3SG say crowd REL NULL3SG must:PST:CONJ go.with:COM
Il dit à la foule qu'il aurait dû acompagner. (Church: 203)
'He said to the crowd that he should have gone with.'

By contrast, the *-(w)aa(n)* suffix refers to a past moment, which is in the far past but more importantly in an indeterminate past (this suffix is incompatible with a definite moment). This makes it compatible with frequentative meaning (see (28) above and Section 4.1.3 for its use in temporal subordinates). While this suffix is relatively rare in ordinary Wolof as spoken in Dakar, its imperfective variant (33) is well attested, notably in a customary story opening (*cf.* 34).

(33) [Two co-wives are arguing, the first saying that ever since the arrival of the second, the household is poor, the fridge is empty]
Yow, ba nga fi ñëwee ba tey,
you when NULL2SG here come:ANTER until today
kër gi dafa ndóol, amatuñu dara. […]
house the VERBFOC3SG be.poor have:no.more:NEG1PL thing
'You, ever since you arrived, the household is poor, we have nothing. […]'
Waaye man, xar laa ***daan*** *dugal.*
But me sheep COMPFOC1SG IPFV:REMPST enter:CAUS
'Whereas me, a sheep is what I was bringing in. (XSW)

(34) — *Léébóón!* *(the narrator)*
set.formula
'Léébóón!'
— *Lippóón!* *(the audience)*
set.formula
'Lippóón!'
— *Amoon na fi!* *(the narrator)*
have: PST PFT3SG here
'Once upon a time!'

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— ***Daan*** *na* *am* *(the audience)*
IPFVCOP:REMPST PFT3SG have
'It has often happened!' (T, p.45)

Diouf's analysis of these temporal suffixes opens up interesting views about the historical background of the contemporary Wolof verb system. The author suggests (1985: 57) that *-oon* results from the grammaticalization of a verb "to be in the past" and that *-aan* was originally an aspectual suffix meaning 'to do usually' or 'to spend one's time doing'. In many respects (grammaticalization of focus, unmarked perfective form, merging of the TAM with two series of personal pronouns, existence of an imperfective predicative variant of the imperfective suffix), the Wolof verb system seems to have undergone important language changes and to result from deep reanalysis and grammaticalization processes.

3. The great reversal: Three perfectives for one zero marker

3.1 Beyond morphology: Issues of semantics

Based on this clear morphological organization, most descriptions (*e.g.* Sauvageot 1965; Church 1981; Dialo 1981; Diouf 2001)[7] state that these paradigms are "moods", each having two aspectual forms: perfective, unmarked (Ø), corresponding to the paradigms given above (Table 1), and imperfective (*-y* suffix or its variant *di*). Thus, in this approach, one has the "mood" function undertaken by the paradigms, and the "aspect" function undertaken by the suffixes.

However, while this symmetrical organization accounts for the morphological reality and the fact that in the absence of a suffix, the conjugations do have perfective meaning, it becomes problematic when one attempts to extrapolate the paradigms' true ("modal") meaning. Most of these analyses give no explicit indication as to the conjugations' meanings and usage, but simply give them labels, at times obscure and even contradictory: for example the Perfect is dubbed "Énonciatif" by Dialo (1981) and Church (1981), "no focus form" by Ngom (2003), and analyzed as a marker for predicate clefting by Diouf (1985); Verb focus is called "État acquis" (Acquired state) by Sauvageot (1965), "mode d'énonciation neutre" (neutral mood) by Diouf (1985) and "Explicatif" (Explanatory) by Diouf (2003).

I believe that the difficulty in assigning meaning to the various conjugations stems from three causes: (1) the meaning of the "Énonciatif" (Perfect in my terminology)

7. For a detailed discussion of the various classical presentations of the Wolof verbal system, see Robert (1991).

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is fundamentally aspectual, i.e. that of a perfect, and this cannot be accounted for by simply stating that the conjugations have modal meaning and the suffixes aspectual meaning: if this were the case, what would then be the modal meaning of this conjugation?; (2) it is difficult to define the meaning of the Verb focus paradigm since, depending on the process type, the conjugations have contradictory prototypical uses: simple statements with stative verbs and explicative value with action verbs; (3) lastly, what I call Null tense here, and which has been variously dubbed Narrative, Subordinative, Minimal, Amodal or Aorist in Wolof descriptions, also has an array of uses, making it difficult to establish a unified definition. These uses range from a typical story and narration conjugation, equivalent to the preterit in English or the *passé simple* in French, to serving as a subordinating or interrogative mood, where the Null tense takes on variable temporal and modal meanings (past, present, future, subjunctive…).

It would thus appear that the remarkable morphological coherence can only be maintained by fiddling with the labels applied to the various "moods" (conjugations). To overcome this problem, I propose reversing the analysis and positing that if the so-called "perfective" forms (corresponding to the primary conjugations) can take on the particular aspectual form which is the zero marker form, or the markerless form, it is because their aspectual value is *already* established by the specific operations which mark each one of them. Such a position amounts to distinguishing three ways for producing perfective (completive) value, thereby establishing the perfective as the system's basic form.

3.2 Conjugations' temporal values: Interaction with Aktionsarten and determiners

Before analyzing in detail the various ways in which the perfective meaning is produced, it is important to note that in Wolof, as in all tense-aspect systems, a conjugation's meaning varies with the type of process (Aktionsart). Thus when there is no suffix, all conjugations (with the exceptions of the Null tense and Presentative, which we will come back to) have the typical behavior of morphemes with present perfective meaning: they have past meaning with dynamic verbs (35), and present meaning with stative verbs (36 and 37):

(35) *Moo* *dem*
SUBJFOC3SG go
'He is the one who left.'

(36) *Moo* *bon*
SUBJFOC3SG be.bad
'He is the one who is bad.'[8]

8. Wolof has no adjectives: qualities are expressed by stative verbs.

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(37) *Moo* *bëgga* *dem*
SUBJFOC3SG want:CONJ go
'He is the one who wants to leave.'

In fact, this general rule must be refined somewhat. As far as aspect is concerned, there is a third category of verbs which are bivalent: they behave both like stative verbs (with present meaning in non-suffixed conjugations), and dynamic verbs (with past meaning in non-suffixed conjugations) depending on the various determiners present in the sentence conditioning the verb's meaning. For example, used intransitively, the verb *tas* means 'be scattered, be exhausted' and serves as a stative verb with present meaning (38). In contrast, when an object is present, it takes on the meaning 'scatter, spread out, undo' and serves as a dynamic verb with past meaning in the perfective (39):

(38) *Tas* *naa*
scatter/be.scattered PRF1SG
'I am exhausted.'

(39) *Tas* *naa* *samay* *lett*
scatter/be.scattered PRF1SG POSS1SG:PL braid
'I undid my braids.'

Revisiting the notion of mass and count nouns, Culioli (1980) and Franckel et al. (1988) propose classifying nouns not into two but rather into three categories: "compact", "discrete" and "dense"; they then go on to apply this classification to verbs. Their analysis may be used to account for the various types of behavior observed in Wolof verbs.

Within this framework, the aspectual functioning of stative verbs can be explained by their 'compact' characteristics: by nature, these processes do not unfold over time and cannot be segmented in time, which means that temporally speaking, they can only be situated, no temporal quantification is possible: the syntactic subject either does or does not locate the predicated property in a given time T ('this man is/is not bad'). This is why, even when, aspectually speaking, the verb is perfective, a stative verb situated in relation to the time of speech (as indicated by a primary conjugation) will have present meaning (*cf.* 36). With this type of verb, various qualitative degrees may be distinguished for the process ('he is really/very/not very bad'), epistemological variations are also possible ('I have heard/am certain that… he is bad'), but it is impossible to split the stative process into different temporal phases. Thus in Wolof, to indicate entry into a state, a derivational suffix (*-si*) must be used, which transforms the stative verb into an inchoative dynamic verb, with past meaning in the primary conjugations, as in the following example:

(40) *Moo* *bon* *-si*
SUBJFOC3SG be.bad INCHO
'He is the one who has become bad.'

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Dynamic verbs show very different behaviour regarding time: actions may be segmented; they may be quantified and various phases within the action may be pinpointed. These phases correspond to process quantities in relation to time. Thus quantities of time and quantities of process are linked and a speaker may indicate whether, at a given point in time, a process has been completed or not: 'there, my braids are undone' or 'he has left'. Among the verbs sharing these properties two categories may be established: (a) those with an inherent natural boundary which renders them telic (*i.e.* once this limit is reached, the event can no longer continue); in this description they will be labeled 'discrete' (e.g. 'to leave', 'to undo'); and (b) verbs which are quantifiable and do not possess any inherent boundary, *i.e.* they are atelic. Here they will be labeled "dense" (e.g. 'to read', 'to eat'). As for quantification, dense verbs are particularly malleable, giving them two-fold usage: they have the possibility of being delineated by additional determiners, in which case they can become discrete. For example the verb 'eat' is dynamic but does not contain any internal boundary which would indicate when the process's term has been reached (i.e. it is a dense verb); however, certain quantity-defining arguments can render the predicate discrete. For example in 'eat a chicken', 'chicken' is what makes it possible to say when the process 'eat a chicken' is complete. When a discrete process, whether discrete by nature or through specific arguments, is complete and localized in speech time, it thereby takes on past meaning.

On this question in Wolof, the verbs which I will call "dense", because their usage is double depending on the presence of arguments (or lack thereof) making the verb discrete, are either atelic dynamic verbs or verbs which can be either stative or dynamic, depending on the construction. From a tense-aspect perspective, this latter category of verbs can function either as discrete or as compact verbs, depending on the arguments present. The temporal values of the types of process in Wolof, in primary conjugations, can be summarized as follows:

Table 7. Aktionsarten and aspect-tense values for affirmative primary conjugations (except Null tense and Presentative)

	Stative verbs	**Dynamic verbs**	**Bivalent verbs**
Aspectual properties	compact	discrete	dense
Temporal value	present	past	past/present

In an earlier study (Robert 1991: 309), I identified the following elements which make the process discrete, triggering past meaning for all dense verbs in primary conjugations:

– transitive as opposed to intransitive uses (see (38) and (39) above)
– the presence of a discrete *vs.* a dense object (41), (42)

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– whether the object is animate or inanimate (43), (44), (45)
– temporal determiners, either with or without discrete function (46), (47)

Thus contrary to words or noise (41), a language is not an object with delineated boundaries. Therefore in example (42) the verb *dégg* 'hear' functions as a stative verb ('understand') and no longer as a discrete verb:

(41) *Moo* *ko* *dégg*
SUBJFOC3SG OPR3SG hear
'He is the one who heard it.'

(42) *Moo* *dégg* *wolof*
SUBJFOC3SG hear wolof
'He is the one who understands Wolof.'

The same is true in the examples below, where in (43) the person functions as a compact object giving the verb *bañ* stative meaning ('refuse, hate') and present reading whereas inanimate arguments (such as words (44), or a complement predicate (45)) make the verb discrete, so that it functions as a dynamic verb with past reading:

(43) *Bañ* *na* *ma*
refuse PRF3SG OPR1SG
'He hates me.'

(44) *Bañ* *na* *ko*
refuse PRF3SG OPR3SG
'He refused it (his proposal).'

(45) *Bañ* *na* *dem* *foofu*
refuse PRF3SG go there
'He refused to go.'

Lastly, a distinction should be made between the two temporal arguments in examples (46) and (47): the first ('for a long time') does not define any precise boundaries, therefore the verb functions as a dense verb; in the second, the temporal argument ('for ten years') sets a limit, rendering the process discrete, and setting the notional limits on a temporal plane, so that the verb takes on past meaning.

(46) *[the interlocutor says he want to become a member of parliament, MP]*
Nekk *nga* *ko* *bu* *Ø* *yàgg*
be.located PRF2SG OPR3SG REL (NULL3SG) last
'(MP) you have been one for a long time (and still are one).' (XCL)

(47) *Nekk* *naa* *buur* *fukki* *at*
be.located PRF1SG king twenty:CONN year
'I was king for ten years (but am not any longer).'

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Null tense and the Presentative also oppose (basic) perfective forms and suffixed imperfective forms, but the various Aktionsarten do not display the same differences between dynamic verbs (with past reading) and stative verbs (with present reading) as for the other conjugations, because of the temporal peculiarities of these two paradigms.

The Presentative reports a current state of affairs by situating the predicate in the speaker's space-time (see Robert (1991) for details). More specifically, this conjugation indicates that the process is happening at the same time as the speech act, close to (*vs.* remote from) the speaker's space, as indicated by the spatial suffix:[9] *-i* for proximal (48), *-a* for distal (49).

(48) *mu ngi* *dëkk* *ci* *dëkk* *bi*
PRES3SG:PROX live LOC:PROX town DEF:PROX
'(at present) he is living in the town nearby.'

(49) *mu nga* *dëkk* *ca* *dëkk* *ba*
PRES3SG:DIST live LOC:DIST town DEF:DIST
'(at present) he is living in the town far away.'

Therefore, with *all* verb types, the Presentative refers to a current, ongoing process, and is the only conjugation to do so. In the following example, the Presentative (in the primary "perfective" form) is used with a dynamic verb to refer to the current situation; Example 50 constrasts the imperfective form of the Null tense in the question and the perfective form of the Presentative in the answer.

(50) *Faatu, lu muy def?*
Fatou what NULL3SG:IPFV do
'What is Fatou doing?'
Mu ngi raxas waañ wi
PRES3SG:PROX wash kitchen DEF
'She is washing the kitchen.'

In some rare cases, *i.e.* with punctual action verbs, the Presentative may refer to the immediate future (see 3.3.3). In Section 4.1 we will see that the imperfective suffix has specific effects on this conjugation.

The temporal specificities of the Null tense are different: this conjugation holds a special place in the system, defined by its being the only non-tensed conjugation. With this conjugation, the process is anchored (located) in an unspecified situation.

9. Note that spatial reference pervades this language: among others, the definite determiner (class consonant + *i* ~ *a*) and the locative prepostion (*ci* ~ *ca)* are also built with these spatial suffixes, as shown in examples (48) and (49). For more details on spatial deictics in Wolof, see Robert (2006).

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In other words, the verb is endowed with the properties of a predicative operator, but the event is not located in time, nor is the speaker committed to it. Therefore, lacking temporal and modal specifications, the sentence is *not* a complete assertion and the clause *depends* on some extra-clausal element to specify in which situation this event is located and true (Robert (1991), (1996), (2010b)). The Null tense is therefore clearly a dependent verb form, used as a 'relative tense' (Chung & Timberlake 1985: 210) for secondary events and providing the well-known uses of the "consecutive" or "sequential" verb form commonly attested in African languages (Heine & Nurse, 2008: 107), but its uses are not limited to these. The Null tense clause can have several different temporal values, depending on the temporal and assertive status of the previous locator: the locator can be absent (as in *wh*-questions), it can be a verb (when the Null tense is used in a complement clause), an argument in a preceding clause (in relative clauses), a clause (in final clauses), an utterance (in narratives) or a situation (in proverbs or stage directions). In order to understand the various modal and temporal values of Null tense (past, present, but also gnomic or irrealis), one has to remember the particular relationship between this conjugation and its temporal locator as this sets it apart from a simply neutral tense: there is a necessary and sufficient link between the clause containing the Null tense and its locator, together constituting a complete and valid sentence: the specification of the locator *triggers* the validation of the Null clause.

For *wh*-questions in dialogues, there is no previous locator, but the moment of speech functions as the temporal anchoring point, so the same usual temporal values are found for stative verbs (present) and dynamic verbs (past), as in the following examples:

(51) *Roof bi, nu mu mel?*
stuffing DEF how NULL3SG look.like
'What does the stuffing look like?' (XSW)

(52) *Feebar bi, kañ la la dal?*
illness DEF when COMPFOC3SG OPR2SG reach
'When did you fall sick? '(*lit.* 'the illness, when did it reach you?') (H)

In proverbs, the Null tense clause is used with all Aktionsarten to illustrate the present situation through a general statement which holds true independently of the speaker's time and commitment. It therefore has gnomic value, which can be expressed by the simple present or future in French, and by the present in English:

(53) *Ku bëgg lem, Ø ñeme yamb*
REL want honey NULL3SG be.brave bees
'Qui veut du miel ne doit pas redouter les abeilles.' (D)
'He who seeks honey must not fear bees' (*lit.* 'is brave [when faced with] bees').

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In other cases, the temporal value of the Null tense predicate depends on the previous locator. In tales, which open with a past marker (*-oon*) provided by another conjugation (namely the Verb Focus), the subsequent events (by definition corresponding to dynamic verbs), described in the Null tense, are interpreted as past:

(54) *Dafa amoon kenn nit ku amoon ñaari jabar.*
'[Once upon a time] there was a man who had two wives.'

[…] *Soxna si dellu joxaat ko benn peppu dugub.*
'[…] The old woman gave him another grain of millet.'

Kumba Ø def ko ci biir gënn, dëbb,
Kumba (NULL3SG) do OPR3SG LOC belly mortar pound

gënn gi fées dell.
mortar DEF fill IDEOPH
'Kumba put it in the mortar, she pounded it, the mortar filled up (with couscous).' (T)

It is worth noting that in this narrative context, stative verbs are rarely used with the Null tense in independent or main clauses, and if so, then they receive a dynamic interpretation, as *fees* ('to be full') does in this example (for explanation, see Section 3.3.3). More generally, stative verbs, in particular those expressing a quality, show aspectual peculiarities with the Null tense. They are rarely used with the Null tense and, when they are, tend to acquire unusual inchoative meaning. This peculiar behavior of quality verbs with the Null tense can be accounted for by this conjugation's specific aspectual properties (see Section 3.3.3).

Lastly, when the Null tense is used in subordinate clauses, whether they be temporal[10] or conditional subordinates, relative, completive or consecutive clauses, then the temporal meaning of the Null tense clause depends on the outside locator element. Thus the Null tense predicate may have past (55), general present or gnomic (56), or future or irrealis (57) meaning, independently of the process type. The various temporal meanings are illustrated below for dynamic verbs:

(55) *Kii, dégg nga li mu la wax*
DEM hear PRF2SG REL NULL3SG OPR2SG talk
'That [girl], you heard what she said to you.' (XSW)

(56) *Lu mu def rekk, neex na ko.*
REL NULL3SG do only please PRF3SG OPR3SG
'Everything she does pleases him.' (XSW)

10. The temporal meaning of the process in the Null tense in temporal subordinates depends not only on the temporal meaning of the subordinator but also on the various anteriority or concomitance suffixes. For further details see Section 4.1.3.1.

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(57) *Boo* *ko* *toppee,* *bu* *ëllëgee,*
when: NULL2SG OPR3SG follow:ANTER when to.morrow:ANTER
lu *la* *dal,* *yaa* *ko* *def* *sa* *bopp* *han!*
REL OPR2SG reach SUBJFOC2SG OPR3SG do your head PTCL
'If you follow her, in the future, whatever happens to you will be your own fault!' (XSW)

The general underlying mechanism is as follows: (a) when the locating event is completed, for the Null tense, one finds the usual meanings for perfective forms: present for stative verbs, past for dynamic verbs; (b) in other cases, for stative as well as for dynamic verbs, the Null tense predicate is to be interpreted as a future or irrealis, including gnomic or general statements. The temporal meanings of the (perfective) Null tense are summarized in Table 8 along with those of the Presentative. Further details on the interclausal uses of Null tense can be found in (Robert 2010b).

Table 8. Aktionsarten and tense and aspect values for the Null tense and Presentative

	Perfective Null tense		**Presentative**
Context:	**Stative verbs**	**Dynamic verbs**	
Questions	ongoing present	past	
Proverbs	gnomic	gnomic	
Narratives (independent clauses)	*stative verb > past inchoative dynamic verb	past	– ongoing present for all Aktionsarten – imminent future for punctual verbs
Subordinate clauses: (depending on the locator)	– general present – future – irrealis	– past – general present – future – irrealis	

3.3 Three perfectives for one zero morpheme

As we saw above, the Wolof verbal system is based on focalization and polarity features and is organized into conjugations situated in relation to the time of speech, except the Null tense. Moreover, the focalizing conjugations have clear present perfective meaning. Lastly, for all conjugations, simple forms are distinguished from suffixed forms, thus establishing *secondary* distinctions between simple forms with perfective meaning and derived forms with imperfective meaning. My hypothesis is that if the perfective forms may bear the zero marker (*i.e.* absence of marker), from an aspectual perspective, it is because their tense and aspect meanings are *already* established by the specific operations which mark each one of them; this is why aspectual distinctions only intervene in a second phase, on a structural level. This implies that there

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are several ways of assigning perfective meaning to the various conjugations. Such a position makes it possible to account for the system's asymmetries: zero marker for the perfective *vs.* suffix for the imperfective, specific effects of the Null tense on the various types of process.

The question then is to understand how the unmarked (present) perfective meaning is construed for all of these conjugations. Examining the meanings of these conjugations shows three ways of construing the perfective, so that the present perfective serves as the system's basic form. These three types of perfective are highly different in their construal and their (secondary) opposition only converges in the imperfective suffix. Indeed, this is the only analysis which makes it possible to explain why the imperfective is expressed by suffixation of the form which has the function of a perfective; otherwise the two forms would be in contradiction: the same as the incompatibility between the Perfect and the imperfective suffix *-y*.

3.3.1 *Perfect and resulting state*

This conjugation does not consist of a simple perfective marker but rather corresponds to the definition of the perfect proposed by Comrie (1976: 12), who clearly differentiates between perfect and perfective as follows:

> The term "perfective" contrasts with "imperfective", and denotes a situation viewed in its entirety, without regard to internal temporal constituency; the term 'perfect' refers to a past situation which has present relevance, for instance the present result of a past event.

This double relevance of the perfect is further characterized by Maslov (1988: 64) in terms of phases:

> The term "perfect" may only be applied to those verb forms (or verb-phrases) whose meanings, to one degree or another, include **two temporal phases**: that of precedence, and that of sequence. The situations corresponding to these planes are in one way or another related, as cause and effect. Usually, one of the two situations seems to be semantically more important, while the other serves, as it were, as a background, often barely suggested.

As shown by previous studies of its usage in context (Robert 1991, 2010b), the Wolof Perfect indicates more specifically that a process *already* known to be ongoing has henceforth reached its *expected end-point* or term, so that there is nothing to add, no further variation: a stable resulting state has been reached at the time of speech. This point is clearly illustrated by the following examples: in order to inform the interlocutor that a woman has given birth, for instance as an explanation of why she looks tired, the Verb focus conjugation (58) is used rather than the Perfect; in fact, the Perfect (59) can only be used in order to announce that the *expected* event has now happened.

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According to my consultant's comments, if this Perfect sentence were used without such a background, the interlocutor would certainly say that he did not even know that she was pregnant.

(58) *Dafa* *wasin*
VBFOC3SG give.birth
'she gave birth (that's why she's tired).'

(59) *Wasin* *na*
give.birth PRF3SG
'(there) she has given birth.'

Thus while with the Verb focus the informational content is conveyed by the propositional content or the event expressed by the predicate (*p*), with the Perfect, the informational content relies on the fact that the expected endpoint of the ongoing process has been reached. With dynamic (or action) verbs that take place over time and have a temporal term, this conjugation indicates that any temporal variation or instability is now eliminated; hence the past interpretation of the process (see 3.2). This conjugation thus provides the classical attributes of perfect conjugations, such as 'to have finished doing *p*' (60) or 'to have already done *p*' (61). Depending on the context, emphasis can also be laid on the resulting state (62).

(60) - *Yaa ngiy* *lekk?*
PRES1SG:IPV eat
'Are you eating?'
- *Déédéét,* *lekk* *naa* *(ba* *noppi).*
no eat PRF1SG (until stop)
'No, I have finished eating (my meal).'

(61) *Sarax* *bi* *àgg* *na.*
alms DEF arrive PRF3SG
lit. 'The alms have (already) arrived'
That is 'I have already given' (meaning: I won't give any more). (SP)

(62) *Yow* *Yàlla* *tàccu* *na* *la!*
you God applaud PRF3SG OPR2SG
'You, God has applauded you', a formulaic expression meaning 'you are lucky' (XCL)

In Wolof, the Perfect is also possible with stative verbs. Stative verbs have no temporal phases and no unfolding over time (they are compact, see 3.2). They do not express the same tense and aspect meanings, but, instead, present interpretation and modal or subjective uses. Due to the properties of these Aktionsarten, the elimination of variation or instability corresponds here to the elimination of the *epistemic* variation

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surrounding the predicate. Therefore, with stative verbs, the Perfect indicates that there is no doubt as to the assertion, and conveys the speaker's viewpoint, with several possible contextual meanings: expected conformity (63), the speaker's agreement (64), polemic or decisive assertion (for more details see Robert (1991: 52–67), (1994) and (2010b)).

(63) *[a person who was looking for a rope of a certain length]*
Buum bi gudd na.
rope DEF be.long PRF3SG
'(All is well) the rope is long (enough)' [gloss: we've found it at long last!]

Note here that the stative value of the verb ('to be long') does not result from the completion of an action: clearly, the rope is not long now because it has been lengthened, the rope is simply long enough for the intended purpose; the comparison is not between two phases of an unfolding process of lengthening, but between the previous need (which functions as the expected "endpoint") and the confirmation that the rope meets the expectations. This semantic argument can be added to the necessary use of the causative suffix for a dynamic interpretation of stative verbs (*see* 3.3.3). In Wolof, verbs expressing a quality are true stative verbs, not states resulting from the completion of a process.

(64) *[two people looking at a boubou (robe)]*
A — Bubu bii, dafa rafet.
boubou DEM VBFOC3SG be.beautiful
'This boubou is beautiful.'
B — Rafet na (de)!
be.beautiful PRF3SG (PTCL)
'This boubou is beautiful [indeed]' ~ 'it is (definitely) a beautiful one' [SP]

To conclude this section, the perfective status of the Perfect in the overall verbal system is clearly a secondary effect, stemming from its core definition of a resulting state. From the tense and aspect perspective, the Perfect behaves like a perfective marker producing the usual (different) meanings for stative and non-stative verbs. However, as with any perfect, it differs from a plain perfective marker because of its phasal background (the endpoint of the process was already expected) and the various nuances arising from its uses, including the resulting state. Remarkably, only the Perfect inflection is postposed to the lexical verb stem (along with the Negative conjugation): this particular morphosyntactic property can be interpreted as reflecting the semantic value of this conjugation, which indicates that the process was already known to be ongoing (at the first mention of the verb stem) and has henceforth reached its expected end-point (postponed inflection as a confirmation). Being a resulting state by defini-

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tion, the Perfect conjugation is the only one to be incompatible with the imperfective suffix. However, the Perfect inflection can be suffixed to the predicative "variant" of the imperfective with specific future meaning (*cf.* 4.2.2).

3.3.2 *Focus and presupposition*

The perfective value of focusing conjugations stems from a very different semantic configuration: the tense and aspect values in these conjugations result from the presupposition involved in focus.

In order to explain the various uses and meanings of focusing forms, I have defined focus (Robert 1993, 2010a) as a specific mode of identification: in a focused sentence, assertion consists in the qualitative designation of an element whose *existence* is presupposed. In other words, the focused proposition consists of a "split assertion" involving the *temporal presupposition* of the predicative relationship (*e.g.* 'someone left' in (35)) and the *qualitative designation* of the focused constituent ('He is the one who left'). In fact, I prefer to call the former a '*pre-construed assertion*' inasmuch as the speaker explicitly indicates (by using focus markers) that the predicative relation already holds true, independently of the present statement and commitment, and is warranted by a prior statement. In synthetic systems such as Wolof, focus is grammaticalized in the verb morphology and merged with the TAM markers. The temporal presupposition (or preconstrual) of the predicate as already being true at the moment of speech results in the verb having a perfective meaning; thus dynamic verbs need to be completed in order to already be "true" at the moment of speech and are therefore interpreted as referring to past events ((5) and (35)); in contrast, stative verbs must be valid but not past in order to be true at the moment of speech, they are therefore interpreted as having present meaning ((36) and (37)). Thus the predicate's temporal presupposition in focused sentences explains why the unmarked focused conjugations (with a Ø suffix for tense and aspect) have perfective present meaning in Wolof. This perfective is clearly distinct from the Perfect, as it is construed without any prior representation of an end-point to be reached, and thus there are no issues of conformity: it is purely temporal and is simply the result of the predicative relation's preconstrual in the focalized sentence, in a language where focus is grammaticalized in the verbal morphology and which is constrained from a tense and aspect perspective.

3.3.3 *The Null tense and Presentative: Minimal structuring and a global view of the process*

As mentioned previously (3.2), the Null tense is the only non-tensed conjugation. More precisely, with the Null tense, the verb has the (syntactic) properties of a predicative operator, but the speaker does not express any commitment and the event is not located in the speaker's time (Robert 1996, 2010b). Thus, the temporal value of the Null tense clause depends on the status of the external locator in its specific mode:

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the predicate is located in an unspecified situation *and* the specification of the locator triggers the validation of the Null clause. According to this minimal specification, from an aspectual point of view, the verb is minimally specified and is simply referred to as a notion without internal structuring, and which has the potential of being validated. The process is taken in its entirety, as a whole, without the construal of any phases with a beginning or an end. In fact, this characterization corresponds to the standard definition of perfectivity, which "indicates the view of a situation as a single whole, without distinction of the various separate phases that make up that situation" (Comrie 1976: 16). Thus in Wolof, the Null tense probably corresponds to the standard perfective marker, but once again, these aspectual characteristics are only part of its definition, or more precisely follow from its definition as indicating that the predicate is minimally specified and validated in a situation that needs to be specified by an extra-clausal locator. Hence its various temporal and modal values, and its uses as a dependant mode, which is not typical of an ordinary perfective marker.[11]

By contrast with the Perfect, the Null tense's perfectivity results more from minimal structuring and a global overview of the process than from the indication that the endpoint has been reached. Modality is also very different in this case since the Perfect, as we mentioned above, presupposes that the completion of the process was already expected, while with the Null tense, the validation of the predicate is triggered by an extra-clausal locator with consecutive effect, without any previous expectation from the speaker. This analysis (Robert 1991, 1996 and 2010b) can explain the peculiar effects of the Null tense on verbs expressing qualities. Stative verbs, in particular those expressing a quality, are rarely used with the Null tense in clause chaining or sequences, and tend to acquire unusual inchoative meaning, as is the case for the stative verb *bulo* ('to be blue' according to Diouf 2003) in the following example:

(65) *Benn yoon rekk laa ko sumb, mu bulo*
one time only SUBJFOC1SG OPR3SG dip NULL3SG be.blue
'I only dipped it in once and it became blue'

This inchoative meaning for stative verbs is unusual in Wolof and is only found when they are used in the Null tense. For instance *fees* is an intransitive stative verb meaning 'to be full, filled' as in (66) with Verb focus or in (67) in the Null tense of a relative clause; as with all stative verbs, it usually requires the causative *-al* suffix in order to become a transitive dynamic verb with the meaning 'to fill up' as in (68):

11. Interestingly, viewing the predicate comprehensively (and thus rendering it compact) and disconnected from the speaker's time and commitment corresponds to what Culioli has described as an "aoristic configuration" (1978). Note that in its prototypical uses in narratives, the Null tense corresponds to a standard 'aorist' referring to past and punctual events.

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(66) *Xolam* *dafa* *fees.*
heart: POSS3SG VBFOC3SG be.full
'His heart is heavy' (*lit.* 'His heart is full') (D)

(67) *Bul* *jaay* *nag* *wu* *fees* *wi*
PROH2SG sell cow REL be.full DEF
'Do not sell the cow which is in an advanced stage of pregnancy' (*lit.* 'who is full') (D)

(68) *Feesalal* *xàmb* *gi*
be.full:CAUS:IMP.SG big.vat DEF
'Fill the big earthenware vat' (D)

However, in example (54) above, taken from a narrative, *fees* in the Null tense shows the specific inchoative value meaning 'fill up with'. This peculiar behavior of quality verbs in the Null tense in narratives can be accounted for by the conjugation's specific temporal and aspectual properties. Concerning the process's actualization, the extra-clausal locator's specification triggers the Null clause's validation (*cf.* 3.2.4); aspectually, the process is viewed comprehensively, without any internal structuring. In narrative contexts where all Null tense events follow one another in a temporal sequence, following some previous temporal anchoring, a stative verb is naturally reinterpreted as an event (and therefore as a dynamic verb) triggered by the preceding event. As indicated by Chung and Timberlake (2005: 217–8), "applied to states, closure (or completion) implies a complete change of state, specifically inception then cessation", hence the inchoative meaning of stative verbs in the Null tense in this context.

As we will see in Section 4.1.2, the effects the imperfective suffix has on verbs in the Null tense are different from those it has on verbs in the other conjugations: with the imperfective suffix, instead of being punctual, verbs become durative.

Although temporally different, the **Presentative** shares the same aspectual properties as the Null tense in its (primary) perfective as well as its (suffixed) imperfective form.

The Presentative reports a *current state of affairs* by situating the predicative relationship in the speaker's space-time. The informational content in this case consists in the localization of the predicative relation within the discourse situation, whence its meaning of current present or of a recent event which has been updated, for example by just being witnessed by the speaker. Contrary to the Perfect or the focusing conjugations, but like the Null tense, there is no presupposition here, no previous expectation: the process occurs at the time of speech and serves to define the discourse situation and the events affecting the speaker; these events happen to him suddenly and, strictly speaking, unexpectedly, whence a mirative value in some of its uses (for details, see Robert (1991: 165–197)). This definition explains why the Presentative is typically used by reporters for live events such as comments on soccer games. Here

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too, the process is not internally structured; it is viewed as a whole, simply and comprehensively defining a current situation. This definition holds true for all verb types, see (48) and (50).

That is why punctual or instantaneous verbs such as *daanu* 'to fall down' or *tëb* 'to jump', for which it is difficult to describe the process as comprehensively defining a current situation at the time of speech, tend to have (proximal) future value when used with the Presentative (69). However this 'future' clearly refers to an imminent event that can define the current situation; the future interpretation is produced by the impossibility of the boundaries of this punctual process to strictly coincide with the (open) boundaries of the speech situation. This point is confirmed by the impossibility of combining this (imminent) 'future' value of the Presentative with a temporal modifier indicating a time clearly distinct from 'now', such as *ngoon* 'this afternoon' or *déwén* 'next year'.

(69) *Jàppal* *xale* *bi,* *mu ngi* *daanu!*
take:IMP.SG child DEF PRES3SG:PROX fall
'Hold the child, (can't you see that) he is about to fall!'

In the same way, under specific circumstances (see Robert (1991: 188–9)), a dynamic verb may have (immediate) "past" interpretation with the Presentative. This is by no means the common meaning of dynamic verbs with this conjugation, which prototypically refers to the current present.

Here again, as with the Null tense, the Presentative appears to provide the aspectual characteristics of a perfective, denoting the situation as a single whole; however, this "perfectivity" is a by-product of the Presentative's core meaning, *i.e.* indicating that the process is occurring at the time of speech, without having been foreseen by the speaker and serving to define the discourse situation. This conjugation thus primarily refers to a current present. The specific effects the imperfective marker has on this conjugation will be presented in Section 4 for all verb types.

In summary, this overview of the Wolof verb system has revealed that the common perfective (completive) value of the basic conjugations actually relies on three distinct configurations induced by the semantics of each conjugation. Perfective meaning is produced:

- by a resulting state for the Perfect
- by a temporal presupposition in the focusing conjugations
- by minimal structuring and a comprehensive view of the process for the Null tense and Presentative.

These three configurations are very different but converge in their common "perfective effect" when contrasted with the imperfective forms. Perfectivity appears here as an

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aspectual by-product of the conjugation's core meaning. This explains why the perfective category is unmarked in Wolof and is only construed as such in its secondary opposition to the imperfective, which is formed by derivation of the perfective. This analysis of Wolof, which posits a basic dissymmetry between perfective and imperfective is bolstered by statistics established by Church (1981: 180). He indicates that in his corpus, the average percentage of imperfective forms in a given text is only 15%, which means that 85% of all forms are perfective, *i.e.* primary conjugations.

4. Imperfective

As indicated above, all simple conjugations in Wolof may be derived in the imperfective (or incompletive) by adding the morpheme *-y* or *di*, the latter being considered a variant of the former. At first glance the morpheme *-y* has the usual, expected uses for an imperfective in a tensed system without any specific forms for the various sub-categories of imperfectives such as the habitual, continuous or progressive. The specific issues that must be tackled in such a case are (a) to identify the semantic distinction between perfective and imperfective for verb forms which have present meaning in both cases, *i.e.* stative verbs with all conjugations on the one hand, and all types of process in the Presentative on the other; (b) to define the precise conditions in which the imperfective variant *di* is used, as it is not always in free variation with the suffix *-y*; and lastly, (c) to examine in detail the meaning of the few compound forms which bear both the morpheme *di* and the suffix *-y*. Let us begin with presenting the general uses of the suffix *-y*.

4.1 The imperfective suffix (*-y*)

In Wolof, imperfective forms are made by suffixing *-y* to the flexional part of basic conjugations. The suffix preserves the conjugations' general properties but modifies their aspectual characteristics. The effects differ between tensed and non-tensed conjugations. Importantly, the Perfect is the only assertive conjugation that cannot receive the imperfective suffix (**lekk naa-y*).

4.1.1 *Temporal effects: Present, future, habitual and gnomic*

The most obvious effect of the imperfective suffix is that it changes the temporal value of dynamic verbs from past (with bare conjugations) to ongoing present (compare (15) and (16) above). This holds true in particular for the focusing conjugations, but also for the relevant uses of the Null tense, namely in questions in dialogues (contrast the perfective (70) and the imperfective form (71)) or in relative clauses (72) where the time of speech serves as the default tense locus.

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(70) *Lu.tax mu dem?*
why NULL3SG leave
'Why did he leave?'

(71) *Lu.tax muy dem?*
why NULL3SG:IPFV leave
'Why is he leaving' ~ 'will he leave?'

(72) *Mag gi ngay wax, tey jii la*
elder REL NULL2SG:IPFV talk today DEM VBFOC3SG
gëna am.
be.more:CONJ have
'The birthright you are talking about, it is today that it is even more a reality.' (XSW)

About the imperfective suffix, it is worth noticing that while several Wolof conjugations can serve to form non-verbal predicates, two of them (Subject focus and Verb focus) must bear the imperfective suffix in order to do so (for further details, see Robert (1991: 159–164)); in this case they form a predicate with present reference. To obtain past meaning, the past suffix must be added to the predicative variant of the imperfective (*doon*).

Note that in the following example, there is temporal equivalence between the perfective forms for stative verbs (*moo xam*) and the imperfective forms for dynamic verbs (*moo koy boot*), both referring to the same (general) present situation:

(73) ***Moo*** *xam lu tilim ci sama doom,* […]
SUBJFOC3SG know REL be.dirty LOC my child,
'She is the one who knows what is unclean in my child, […]'
moo *xam feebaram,* ***moo koy***[12]
SUBJFOC3SG know fever:POSS3SG, SUBJFOC3SG OPR3SG:IPFV
boot ci diggu ginnaawam gi.
carry.on.the.back LOC middle:CONN back:POSS3SG DEF
'she is the one who knows if he is sick, she is the one who carries him on her back.' (XSW)

The imperfective suffix may also give dynamic verbs habitual (74) or future (75) meaning, we will comment further on this below (4.1.2). It may also, with the Verb focus conjugation only, denote gnomic value (76).

12. The imperfective suffix is moved on the object clitic (see 2.3.2).

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(74) — *Yow, loo doon ci hôpital bi?*
you what:NULL2SG to.be LOC hospital DEF
Looy liggéey?
what:NULL2SG:IPFV work
'You, what are you in the hospital? What is your profession?'
Damay bale ak fobeere.
VBFOC.1SG:IPFV sweep and clean.windows
— 'I sweep and clean the windows.' (XSW)

(75) *Xam nga nu may def ci yow?*
know PRF2SG how NULL.1SG:IPFV do LOC you
'Do you know how I am going to behave with you?'
dama lay dàq.
VBFOC.1SG OPR:IPFV chase.away
'I am going to fire you.' [XSW]

(76) *Garab gii dafay faj soj*
medicine DEM VBFOC3SG:IPFV treat cold
'This medicine treats colds.'

The future reference of the imperfective clause is always interpreted as immediate or proximal, in continuity with the speech situation, except when the imperfective clause is the apodosis of a conditional clause (77). In this case, the future is still proximal, however the tense locus is not the time of speech but the fictive moment established by the conditional clause.

(77) *Bu Ø ko jamee, dafay dee*
when (NULL3SG) OPR3SG sting:ANTER VERBFOC3SG:IPFV die
'If it stings him, he will (certainly) die.'

It is worth noting that, when bearing the imperfective suffix, the Verb focus form often refers to a general property[13] as in (76), and is therefore also commonly found in proverbs (78), as is the Null tense. Thus Wolof has two ways of construing gnomic meaning. It may be expressed by a clause's absence of temporal anchoring; in this case, the clause refers to an absolute, given truth, which holds regardless of any situation (Null tense). Alternatively, it may be expressed by repetition of the property indicated by the clause (imperfective Verb focus); the clause then takes on a general truth meaning as, since it is habitual and belongs to an open series of events, it will necessarily continues.

13. For further explanation, see Robert (1991:266–7).

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(78) *Ndab, bu feesee day tuuru.*
container when be.full:ANTER VERBFOC3SG:IPFV overflow
'A container, when it is full, overflows.' (XSW)

As shown by the following proverb, this gnomic value can be linked to the imperfective's deontic component (*cf.* Section 4.1.4).

(79) *Ku bëgg ténj, dangay*[14] *taaru*
REL love mourning VERBFOC2SG:IPFV be.splendid
'[She] who enjoys widowhood must be beautiful.' ~ 'To like widowhood, one must be beautiful.' (SP)

The same temporal values are found for stative verbs bearing the imperfective suffix, such as the habitual in (80), the future in (81) and the present in (82).

(80) *Saaku ceeb lay war weer wu nekk*
bag:CONN rice COMPFOC3SG:IPFV must month REL be.located
'What he needs is a bag of rice every month.'

Stative verbs with the imperfective suffix may exceptionally refer to the future.[15] This future interpretation of the imperfective suffix with stative verbs is often found when they occur after a conditional clause (81) and always entails modal meaning such as probability or deontic.

(81) *Boo ci daggee lu bari, bii*
when:NULL2SG LOC cut:ANTER REL be.a.lot DEM
mooy ëpp
SUBJFOC3SG:IPFV be.in excess
'If you cut off too much of it, (inevitably) this one will be too big.'

(82) *…ma ne kon bon léegi, lii mooy wara*
NULL.1SG say PTCL PTCL NOW DEM SUBJFOC3SG:IPFV must:CONJ
faj lii
treat DEM
…thus I deduce what the cure must be. (H)
lit. 'I say so now, that is what the cure must be'

The question that then arises is to determine what are the specific effects of the imperfective suffix on stative verbs when the predicate has present interpretation (82). More

14. Interestingly, this generic use of the second person (singular) is often found in proverbs with this dissymetrical construction where a third person in an indefinite relative clause in the protasis is followed by a second person with the same referential value in the apodosis.

15. For explanations, see Robert (1991:268).

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generally, how does the imperfective form differ from the perfective when they both denote a present?

4.1.2 *Aspectual effects: Durative, uncompleted processes*

It is interesting to compare perfective and imperfective forms in the Presentative, since the aspectual suffix has no temporal effects on this conjugation, which refers to ongoing situations in both cases. With dynamic verbs, the imperfective suffix is used with the Presentative, when the predicate is ongoing but clearly not yet completed at the moment of speech, as in (83), where the person has not yet arrived.

(83) — *Ana Ami Jeŋ?*
where.is Ami Dieng
'Where is Ami Dieng?'

— *Mu ngiy ñëw.*
PRES3SG:IPFV come
'She is coming'. (*lit.* 'she is in the process of come')

Generally speaking, the imperfective is found with the Presentative whenever various moments within the process are distinguished, and the validation of the process, at the time of speaking, indicates that a portion of the process remains to be validated at a later moment. In other words, when the imperfective is used, the process is already true at the time of speaking, but is not yet complete, and must be validated at a later stage. This is why the imperfective must be used for example when there is a plural object which entails a certain progression. This cannot happen all at once; at a given moment in time, the action is either completed or still ongoing. Thus the question in (84) has two answers, one in the perfective (a), and the other in the imperfective (b):

(84) *Faatu, lu muy def?*
Fatou what NULL3SG:IPFV do
'Fatou, what is she doing?'

a. *Mu ngi sang xale bi*
PRES3SG bath child DEF
'She is bathing the child.'

b. *Mu ngiy sang xale yi*
PRES3SG:IPFV bath child DEF.PL
'She is bathing the children.'

The fact that the complement is in the plural in 84b divides the action into discrete portions or phases, contrary to the global, compact nature of the Presentative in 84a.

The aspectual value of imperfective suffix is also particularly clear with the Null tense conjugation. In this case, the temporal value of the Null tense clause depends on the previous locator (see 3.2), and the perfective and imperfective forms differ in their

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aspectual properties, as shown in the following example from a tale: the imperfective indicates a *durative* or *continuous* process (*muy togg* 'she was cooking'), here with background effect, while the perfective refers to a punctual event ('she took', 'she gave her'):

(85) *Cin li Ø tibb ci li muy togg,*
pot DEF (NULL3SG) take.a.handful LOC REL NULL3SG:IPFV cook
Ø jox ko ba noppi.
(NULL3SG) give OPR3SG until finish
'The pot took a portion of what it was cooking and gave it to her [to eat].' (T)

Interestingly, in the following personal narration, the only imperfective form appears with a predicate (*muy jooy*) explicitly specified as lasting continuously since the morning:

(86) *Man ma jiitu ko fi,* […],
me NULL1SG precede OPR3SG here
'For myself, I am arriving here before her […],'
sama doom, yaramam Ø gën
POSS.1SG child body:POSS3SG (NULL3SG) be.more
koo tàng, muy jooy ci suba ak tey
OPR3SG:CONJ be.hot NULL3SG:IPFV cry LOC morning with today
'My son, he is more feverish than her, he has been crying since morning.' (XSW)

The previously mentioned habitual reading of the imperfective with the temporal effects of imperfective (4.1.1) is, of course, produced by the aspectual properties of this form and holds true for the imperfective Null tense: in the following example, the process obviously does not refer to a single continuous action but to a repetition:

(87) [The speaker is explaining how he fell sick in 1954, describing the treatments he then followed in vain]
May naan garab rekk.
NULL1SG:IPFV drink medicine only
'I used to drink the medicines anyway.' (H)

In accordance with this durative value, the imperfective suffix with the Null tense yields further interesting meanings in interclausal uses.

4.1.3 *Interclausal effects: Concomitance in temporal clauses and parataxis*

4.1.3.1 Temporal and conditional clauses. The imperfective suffix is used in temporal and hypothetical subordinate clauses.[16] To express this type of subordinate,

16. For more details, see Church (1981:216ff) and Perrin (2005).

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Wolof has an interesting system based on two conjoint mechanisms: the first is the use of one of the three spatial deictics as subordinating morphemes (proximal *-i*, distal *-a*, or *-u*, not localized in the deictic space, see Robert (2006)). These serve to indicate the subordinate clause's temporal localization. The second mechanism is the use of two competing verbal suffixes which specify the relations between the main and the subordinate clauses (antecedence *vs.* concomitance); this is where the imperfective suffix comes into play.

When suffixed to the subordinating morpheme *b-*, the three spatial markers introduce, respectively, a subordinate clause situated in the recent past presented as close to the speech time, using *bi* (88); a subordinate clause situated in the remote past, far removed from the speech time, with *ba* (89); and with *bu* (variant *su*) a non-past (or irrealis) subordinate clause corresponding to a habitual or generic event (90), an event situated in a future moment (91), or a hypothetical moment with conditional clauses (92). The anteriority *vs.* simultaneity of the subordinate clause vis-à-vis the main clause is marked by morphemes suffixed to the verb of the subordinate clause, indicating either anteriority (*-ee*)[17] or concomitance (imperfective suffix *-y*), as shown in the paired examples below.

(88) a. ***Bi*** *mu* *wasinee,*
when:PROX NULL3SG give.birth:ANTER
fekkoon *na* *mu* *am* *ñaari* *doom.*
happen:PAST PFT3SG NULL3SG have two child
'When she gave birth (recently), she already had two children.'

b. ***Bi*** *muy* *dem,* *xaritam* *agsi.*
when:PROX NULL3SG:IPFV go friend:POSS3SG arrive:VEN
'Just when he left (recent event), his friend arrived.'

(89) a. *Ba* *nga* *ma* *soxlaa,* *danga*
when:DIST NULL2SG OPR1SG need:ANTER VBFOC2SG
ko *fekksi*
OPR3SG find:VEN
'When you needed me, you came to find him.' (XSW)

b. ***Ba*** *muy* *dem,* *xaritam* *agsi.*
when:DIST NULL3SG:IPFV go friend:POSS3SG arrive:VEN
'As he was leaving, his friend arrived.' (remote event)

17. Note that the *-ee* suffix does not appear when the subordinate verb carries the negative suffix *-ul*.

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(90) ***Boo*** *fay* ***dem*** ***ak*** ***woto,***
when:NOTLOC:NULL2SG there:IPFV go with car
dafay *mel* *ni* *lu* *jége*
VBFOC3SG:IPFV look.like like REL be.close
'Quand tu y vas en voiture, ça a l'air d'être proche.' (Diouf 2003: 121)
'When you go there by car it seems close.'

(91) a. *Bu* *ñu* *jógee,* *loolu* *lañuy* *def.*
when:NOTLOC NULL1PL leave:ANTER DEM VBFOC1PL:IPFV do
'When we have left here, that is what we will do.'

b. ***Booy*** *dëbb* *roof,* *nga* *jël* *kaani*
When:NOTLOC:NULL2SG:IPFV grind stuffing NULL2SG put chili
gu *sew* *gi*
that be.small DEF
'When you grind the stuffing, you will add the small chillies.'

(92) *Dinaa* *ko* *ko* *wax* ***bu*** ***~ su***
FUT1SG OPR3SG[18] OPR3SG talk when:NOTLOC ~ if
Ø *ñówee*
[NULL3SG] come:ANTER
'I will tell him that if he comes.'

Thus in these subordinate clauses the imperfective morpheme is suffixed to the Null tense (which is obligatory in temporal as well as in most subordinate clauses) and expresses simultaneity or concomitance between the two events (again with a background effect) conveyed by the main and subordinate clauses, independently of their temporal anchoring.

In order to complete this overview of temporal clauses, we must mention the possible use of two other verb suffixes, instead of *-ee* and *-y*, namely the temporal suffixes *-aan* and *-oon* (see 2.3.2). According to its definition, *-aan* is used to refer to an event occurring in unspecified (remote) past moments, therefore in temporal subordinate clauses it seems to be used for habitual past events referring to an unspecific past time as in (93).

(93) *Boo* *am**aan*** *bu-tuut,*
when:NOTLOC:NULL2SG have:REMPST [old type of coin],
mën *nga* *cee* *jénd* *paketu* *mbiskit*
can PRF2SG LOC:CONJ buy packet:CONN biscuits
'Quand tu avais un *butuut*, tu pouvais acheter un paquet de biscuits.'
(Diouf 2003: 38)
'When you had a *bu-tuut* [old type of coin], you could buy a packet of biscuits.'

18. In this double-object construction, the first object pronoun encodes the recipient.

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The *-oon* suffix is much more common, since it is used in conditional clauses for expressing counterfactuals:

(94) *Bu* *ma* *fi* *nekk**oon**,*
when:NOTLOC NULL1SG here be:PST
kon *ma* *dem* *te* *duma* *fey* *dara*
PTCL NULL1SG go and EMPHNEG1SG pay thing
'Si j'avais été là, donc, je serais parti et je n'aurais rien payé.'
(Church 1981: 233)
'So if I had been there, I would have left and paid nothing.'

The following examples compare the use of *-oon* and *-ee* in conditional subordinate clauses:

(95) a. *Ndobin,* *dinaa* *ko* *fital,* ***su*** *ma* *ko* *gi**soon.***
bird.SP. FUT1SG OPR3SG shoot, if NULL1SG OPR3SG see:ANTER
'A calao (bird), I would shoot it, if I saw one.'

b. ***Su*** *ma* *gi**see*** *ndobin,* *dinaa* *ko* *fital.*
When NULL1SG see:ANTER. bird.SP. FUT1SG OPR3SG shoot
'When/if I see a calao (bird), I will shoot it.'

Note that in these uses, *-aan* and *-oon* can combine with the predicative variant of the imperfective morpheme (*daan, doon*).

4.1.3.2 Concomitance in paratactic structures. In an earlier study on the uses of Wolof conjugations in clause chaining (Robert 2010b), I found an interesting additional use of the imperfective with the Null tense, this time in paratactic structures. When suffixed with the imperfective marker, a Null tense clause in the apodosis tends to indicate temporal **concomitance** (with a connotation of contrast or opposition) with the protasis:

(96) [A first spouse is talking to her husband about the bad behavior of his second spouse]
Ñeme *na* *ñëw* *fekk* *ma* *lay*
dare PRF3SG come find me you:IPFV
defaral *njar*
prepare:BEN curdled.milk.with.water
muy *indi* *istuwaar?*
NULL3SG:IPFV bring quarrel
'She would dare come and make trouble (while) I am making you curdled milk?' (XSW) (*Lit.* 'She dares come find me preparing milk for you (and) she makes trouble?')

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The effect of simultaneity is clearly produced by the specific influence of the imperfective on the dependency expressed by the Null tense. This does not hold true for the other conjugations in clause chaining. Interestingly, I have found more or less the same interclausal meaning ('P1 though/and yet P2') when a *Presentative* in P1 is followed by the perfective (97) or the imperfective (98) Null tense in P2:

(97) [a child is shocked by the bad behavior of his brother who just beat him]
Mu ngi fekk may nelaw, mu dóor ma!
PRES3SG find OPR1SG:IPFV sleep NULL3SG beat OPR1SG
'He finds me asleep and he hits me!'

(98) *Paaka bi mu ngi ñaw be, nga koy foye!*
knife DEF PRES3SG be.sharp SO NULL2SG OPR:IPFV play:INS
'The knife is so sharp and (yet) you are playing with it!'

It seems that stative verbs are rarely used alone in the Presentative. However, they are frequently found in the protasis of a binary structure, with an action verb expressing an unexpected *contradiction* in the apodosis; in this case the sentence takes on the meaning 'he is… and yet…' as in (97) and (98).

This interclausal meaning is due to specific semantic features of the Presentative which expresses simultaneity between the event expressed by the process and the time of the speech act; moreover, the Presentative indicates that the present process was unforeseen (absence of presupposition or previous expectation). This point could explain some of the Presentative's modal effects (such as surprise or warning) as well as its interclausal meaning of discordance or opposition (always marking surprise) when combined with a Null tense process expressing an action unexpectedly triggered by the Presentative.

4.1.4 *Modal effects: Deontics and uncertainty*

Lastly, the imperfective suffix has lesser-known but important modal effects (Robert 1991: 265–269). Firstly, with the Verb focus conjugation, the imperfective suffix gives deontic meaning to the predicate. This particular effect is a by-product of its aspectual characteristics indicating that the process has already started, is ongoing and oriented towards its term but has not reached its endpoint, and must therefore continue. With a conjugation focusing on the lexical properties of the predicate, as with Verb focus (Robert 2010a), a possible effect of the imperfective suffix is to indicate that the sentence corresponds to a general property (Verb focus) which is always true (habitual value of imperfective), therefore the state of affairs *must* always be identical because it was before, is now and will continue to be true (the process is not completed, the endpoint has not been reached). Whence the gnomic value mentioned in Section 4.1.1 for general statements, as in (99). This deontic effect is even clearer when the process refers to a particular situation which has not actually started yet; in this case, the

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deontic value of imperfective is produced by the internal viewing of the process as being in its beginning stages, though not yet started, and geared towards its endpoint or completion.

(99) *Góor day am fulla.*
man VBFOC3SG:IPFV have character
'A man must have character.'

A further and even more interesting modal dimension of the imperfective appears in the comparison between perfective and imperfective forms sharing the same temporal present value, *i.e.* for all verbs in the Presentative, and for stative verbs in all conjugations. Thus in the following example, the consultant's comment reveals the epistemic differences between the perfective and imperfective Presentative; in (100a) the event is certain while in (100b) it remains uncertain.

(100) a. *Mu ngi dund* *(perfective)*
PRES3SG live
'He is alive.'

b. *Mu ngiy dund* *(imperfective)*
PRES3SG:IPFV live
'He seems to still be alive (for the time being, apparently, let's hope it will last).'

This connotation of uncertainty also triggers the following effects of meaning in an example where the Verb focus is imperfective: the doubtfulness expressed by the imperfective is reinforced by the interrogative particle *xanaa* which denotes a leading question expressing doubt ('by any chance…?') with conative overtones:

(101) *Yow xanaa danga may napp yow?*
you INT.NEG VBFOC2SG OPR1SG:IPFV fish you
'You, are you by any chance trying to trick me, you?' (XSW)
~ 'You wouldn't be trying to trick me now, would you?'

This modal uncertainty meaning wrought by the imperfective can also be seen in the following sentence deemed unacceptable by the consultant. According to him, the Presentative in the perfective cannot be used following the verb *defe* 'think, believe' (102a), because the conjugation would indicate certainty incompatible with the verb's meaning. However, the sentence is correct if the imperfective form is used (102b), as was later confirmed in an unelicited sentence (102c).

(102) a. * *Defe naa mu ngi sangu*

b. *Defe naa mu ngiy sangu*
think PRF1SG PRES3SG:IPFV bath:REFL
'I think she is washing.'

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c. *Defe naa mu ngiy ñëw de!*
think PRF1SG PRES3SG:IPFV come PTCL
'I think she is coming.' (SP)

Generally speaking, these modal distinctions constitute the only difference between the perfective and imperfective forms for all stative verb conjugations. It must be remembered that, contrary to dynamic verbs, stative verbs have present meaning in both the perfective and the imperfective, and the difference in meaning can be very subtle. The following examples highlight the distinctions between the certainty expressed by the perfective (a) and the imperfective forms' connotations of uncertainty ('likely but not certain') or incompleteness ('almost but not really') in (b):

(103) a. *Picc bii moo mel ni ndobin*
bird this SUBJFOC3SG look.like like bird.SP
'This bird looks (definitely/indisputably) like a calao.'

b. *Picc bii mooy mel ni ndobin*
bird this SUBJFOC3SG:IPFV look.like like bird.SP
'This bird sort of looks like a big calao (to my mind, questionable).'

(104) a. *Moo tolloog garab gi*
SUBJFOC3SG to.reach:with tree DEF
'He is as high as the tree.' (*Lit.* 'He has reached the tree').

b. *Mooy tolloog garab gi*
SUBJFOC3SG:IPFV to.reach.with tree DEF
'He is almost as high as the tree.' (*Lit.* 'He has almost reached the tree').

4.1.5 *Definition and summary*

The imperfective is classically defined as indicating an "explicit reference to the internal temporal structure of a situation, viewing a situation from within" (Comrie, 1976: 24). While not in contradiction with this definition, I prefer to give the following characterization of the imperfective, as it better accounts for its various uses in Wolof, particularly its modal effects:

> **Definition:** The imperfective indicates that the process is ongoing, that it is geared toward its term but that the endpoint or term has not yet been reached; this results in aspectual variation or instability.

The classic definition of the imperfective follows from this characterization. Note that the imperfective appears here as the symmetrical counterpart, not of the perfective, but of the Perfect, which indicates, as defined in 3.3.1, that "a process already known to be ongoing has henceforth reached its expected end-point or term so that there is nothing to add, no more variation, a stable resulting state has been reached." Contrary to the perfective, the Perfect and the imperfective implicate the process's phasal structuring,

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defined by the expected endpoint. With the Perfect this endpoint has been reached, resulting in the predicate's aspectual stability (posterior phase, external viewing with the previous phase in the background), while with the imperfective, this endpoint has not yet been reached, resulting in aspectual instability (interior viewing).

In this tense and aspect system, where the present perfective is the default value for the primary conjugations, the most obvious effect of the imperfective suffix is to change the temporal value of dynamic verbs from past (with zero suffix) to present. But this is not the only effect. Depending on the time interval over which the predicate occurs (the "event frame" in Chung & Timberlake's terms, 1985: 203), the imperfective predicate may have present progressive, habitual or future interpretation.

a. The progressive meaning implies an ongoing process and is possible only for verbs which unfold over time, *i.e.* durative dynamic verbs; with the Null tense, this progressive meaning corresponds to a durative in independent clauses, but in interclausal uses indicates concomitance with another event.
b. If the event frame corresponds to an extended period (unfolding beyond the current situation), the process's imperfectivity is interpreted as a repetition of the (entire) event, which started before and has not reached its endpoint, whence its habitual or gnomic meaning: it happened before, always happens and will happen again later (cf. the deontic value with Verb focus).
c. In the case of future meaning, the process is not quite ongoing yet, but the speaker considers that there is some foreshadowing of the event in the ongoing situation and that the process is oriented towards its completion, so that the event is probable; in fact, the future reading of the imperfective always refers to a proximal future, in continuity with the ongoing situation (for tensed conjugations, the speech situation); the epistemic dimension of this future is produced by the aspectual structuring of the imperfective: the predicate is "oriented" towards its completion; therefore it is "probable" but "not certain". This future value of the imperfective is rare and subject to constraints with stative verbs (cf. Robert 1991: 269).

As with the Perfect, the imperfective's meaning is conditioned by Aktionsarten. With dynamic verbs, the imperfective's aspectual instability corresponds to a *temporal phasing and instability* which unfolds over time; it can refer to an ongoing process, an incomplete series of events, or an imminent event which has yet to happen but is likely to happen. With stative verbs on the contrary, there are not the same aspecto-temporal meanings but instead present interpretation with modal effects. Stative verbs have no temporal phases, no unfolding over time (they are compact, see 3.2), therefore the aspectual instability entailed by the imperfective corresponds in this case to an *epistemic instability* concerning the predicate, i.e. uncertainty, doubt concerning

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the predicate's or assertion's validation: the predicate is probably true but not certain. These modal effects can be paralleled (and contrasted) with those revealed by the Perfect's meaning with the same Aktionsarten (epistemic stability).

Table 9 summarizes the uses found for the imperfective suffixes in Wolof. When specific meanings are only possible with certain conjugations or with a specific category of verbs, this is indicated by italics.

Table 9. The Imperfective's range of meanings

Temporal effects	Modal effects	With Null tense only
– Uncompleted present:		– durative
– action in progress *(action verbs)*		– concomitance
– modal present *(stative verbs):*	– 'apparently'	
– general present	– 'almost but not really'	
– gnomic *(Verb focus)*	– 'likely but not certain'	
– habitual	– conative *(Verb focus)*	
– proximal future	– deontic *(Verb focus)*	

4.2 The predicative variant di

The imperfective suffix *-y* has a variant, *di*, which is generally described as being in free variation. However, while *di* may almost always be substituted for *-y* to constitute the imperfective of various conjugations, the inverse is not true; *-y* cannot always be used instead of *di*, the latter having a wider variety of uses. In fact, this variant has a different morphosyntactic status, which explains why it is not always interchangeable with *-y*. It is not a suffix but a freestanding morpheme with predicative function (Robert 1991: 220–7), more similar to an auxiliary (Voisin 2010) or copula[19] than to an affix, as I will now attempt to demonstrate. I consider that *di* is a predicative morpheme (copula or auxiliary) with imperfective meaning, containing the spatial deictic *-i*, which converges with the imperfective suffix in most of its uses. I will begin by examining the cases where *di* serves as a (free) variant of *-y*, then the cases where it cannot be used in its stead.

4.2.1 Di *as a determiner with aspectual meanings*

Di can be used in variation with *-y* as an aspectual determiner with imperfective meaning in most conjugations, as shown by the examples below: these are variants

19. Sauvageot, moreover, posits an underlying existence verb for *di* (1965: 102).

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of attested examples which I checked with Wolof speakers. *Di* is found in variation with *-y* with Subject Focus (105), Complement Focus (106) and Null tense, be it in an independent (107) or a subordinate clause (108); the specific case of the Perfect which cannot take the imperfective suffix (**lekk naay*) will be examined below (4.2.2).

(105) Variant of example (73)

moo	*ko*	*-y*	*boot*	*ci*	*diggu*
~moo	*ko*	***di***	*boot*	*ci*	*diggu*
SUBJFOC3SG	OPR3SG	IPFV	carry.on.the.back	LOC	middle:CONN

ginnaawam gi.
ginnaawam gi.
back:POSS3SG DEF

'she is the one who will carry him on her back.' (XSW)

(106)

Eh,	*yow*	*Sayar,*	*yow*	*laa*	*-y*	*wax.*
~Eh,	*yow*	*Sayar,*	*yow*	*laa*	***di***	*wax.*
hey	you	Sayar	you	COMPFOC1SG	IPFV	talk

'Hey, you, Sayar, it's you I'm talking to!' (XSW)

(107)

Lu.tax	*mu*	*-y*	*dem?*	(SP)
~Lu.tax	*mu*	***di***	*dem?*	
why	NULL3SG	IPFV	go	

'Why is he leaving' ~ 'will he leave?'

(108)

Mag	*gi*	*nga*	*-y*	*wax,*	*tey*	*jii*
~Mag	*gi*	*nga*	***di***	*wax,*	*tey*	*jii*
elder	REL.PR	NULL2SG	IPFV	talk	today	DEM

la gëna am.
la gëna am.
VBFOC3SG be.more:CONJ have

'The birthright you are talking about, it is today that it is even more a reality.' (XSW)

Under some conditions, e.g. in the presence of a lexical subject, the Null tense has the variant Ø (~ *mu*) for the third person singular. In narratives one may thus find the following four forms for the imperfective:

(109)

Kumba	*mu*	*-y*	*dox*	*~ Kumba*	*-y*	*dox*
Kumba	*mu*	*di*	*dox*	*~ Kumba*	*di*	*dox*
Kumba	NULL3SG	IPFV	walk	Kumba	IPFV	walk

'Kumba walked (for a long time).'

Moreover, in its repetitions in narratives, the imperfective full Null tense form is often replaced by a simple *di* (cf. 110), to emphasize the process's durative character.

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However, quite remarkably, the reverse is not possible: the variant Ø + *di* cannot be replaced by the full variant with the imperfective suffix *mu-y*:

(110) * *Kumba* Ø ***di*** *dox, mu* ***-y*** *dox.*
Kumba mu ***-y*** *dox,* Ø ***di*** *dox.*
Kumba Ø ***di*** *dox,* Ø ***di*** *dox.*
Kumba NULL3SG IPFV walk NULL3SG IPFV walk
'Kumba walked and walked.'

While *di* is also accepted as a variant of *-y* for the Emphatic Negative in the imperfective (*dumay dem ~ duma di dem*) and in the compound imperfect Future conjugation (*dinaa di* for *dinaay*, cf. infra 4.4), with Verb focus, native speakers are reluctant to accept the imperfective variant *di* (111), although they do mention that it is probably used in Gambian Wolof. In my view, this reluctance stems from the presence of the morpheme *da-* in the Verb focus, and that, independently of their origins, the morphemes *di-*, *du-* and *da-* currently constitute a paradigm in Wolof (cf. infra 4.3).

(111) *Dafa -y añ, mënul ñëw.*
? *Dafa di añ, mënul ñëw.*
VBFOC3SG IPFV lunch can:NEG3SG come
'He is lunching, he can't come.'

Similarly in the Presentative (112a), in the presence of the variant *di* (112b), speakers rectify the conjugation's form by replacing the simple deictic (*-i*), which is usually found in the conjugation, with a long suffix (*-ii*), found in demonstratives (112c). At present I am unable to account for this constraint.

(112) a. *Kumba mu ngi -y sang xale yi*
b. * *Kumba mu ngi di sang xale yi*
Kumba PRES3SG IPFV bath child DEF.PL
'Kumba is bathing the children.'
c. *Kumba mu ng**ii** di sang xale yi*
Kumba PRES3SG.DEM IPFVCOP bath child DEF.PL
'Kumba, here she is, bathing the children.'

Furthermore, in inflectional paradigms where the second person plural is in *ngeen*, *-y* is always replaced by *di*. It may be that *-y* cannot be suffixed to *ngeen* for phonetic reasons (**ngeen-y gis*).[20] Similarly, *di* replaces *-y* when, in accordance with the general

20. This constraint applies to all paradigms with the 2pl *ngeen,* namely the Null tense (*ngeen di gis* 'you saw' *vs.* 3pl *ñuy gis* ' they saw'), Complement focus (*loolu ngeen di lekk* 'this is what you eat' *vs. loolu lañuy lekk* 'this is what they eat'), Verb focus (*dangeen di lekk* 'it is that you eat' *vs. dañuy lekk* 'it is that they eat'), the Obligative (*nangeen di lekk* 'don't you eat' *vs. nañuy lekk lit.* 'Let them not eat'), and the Prohibitve (*buleen di lekk* 'do not eat (PL.)') where

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rule, the imperfective marker must move to the 2pl. object clitic (*leen* 'you PL.'), as in the following example:

(113) *Ma* *leen* ***di*** *ñaan* *ngeen* *bàyyi* *ma* *fii.*
NULL1SG OPR2PL IPFVCOP pray NULL2PL leave OPR1SG here
'I'm asking you to leave me here.'

Therefore there are three distinct configurations in the placement and form of the imperfective marker, depending on the following conditions: (*-y*) is suffixed to the inflectional marker in the absence of an object clitic (114a), (*-y*) is suffixed to the object clitic (b), but *di* is postposed to the 2pl. object clitic (c):

(114) a. *dama* ***-y*** *gis*
VBFOC1SG IPFV see
'It is that I see.'

b. *dama* *ko* ***-y*** *gis*
VBFOC1SG OPR3SG IPFV see
'It is that I see him.'

c. *dama* *leen* ***di*** *gis*
VBFOC1SG OPR2PL IPFVCOP see
'It is that I see you.' (PL.)

4.2.2 Di *in predicative function (dependent predicate, imperfective Imperative, Future)*

The morpheme *di* is also used to introduce a dependent predicate, with durative meaning. In this case, the predicate introduced by *di* serves as a converb (equivalent to a present participle) indicating a concomitant action, background to the main action (115).

(115) *Kumba* *aw* *ci* *yoon* *wi,* *di* *jooy*
Kumba walk.down.a.path LOC path DEF IPFVCOP cry
'Kumba went on her way, crying.' (T)

This type of usage highlights the predicative functions of *di*, contrary to *-y*. On the one hand, one notes a slight pause before the predicate introduced by *di*. On the other hand, in this type of use, *di* (116a) does not alternate with the suffix *-y*, but with the full variant of the Null tense in the imperfective (b) instead.

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the imperfective uses *di*, for all persons (*bul di lekk* 'do not eat'); it also applies to the 2pl. compound forms, which we shall examine below, namely the imperfective Future and the imperfective Negative.

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(116) *Maa ngi toog ci sama biir néeg*
PRES1SG be.sitting LOC my inside room

a. *Ø di dégg yépp, nga -y wax.*
IPFVCOP hear all NULL2SG IPFV talk

~ b. ***ma*** *-y dégg yépp, nga -y wax.*
NULL2SG IPFV hear all NULL2SG IPFV talk
'I am sitting in my room hearing everything (while) you are speaking.' (XSW)

The second predicate could follow directly, without the morpheme *di* or full Null tense form, but in this case would be interpreted as a second completed action:

(117) *Maa ngi toog ci sama biir néeg Ø dégg yépp*
PRES1SG be.sitting loc my inside room hear all
'I am in my room, (I) heard everything.'

Lastly, *di* is mandatory for forming the imperfective of certain conjugations, and in these cases cannot alternate with the suffix *-y*. First, as already mentioned (cf. 2.3.2 and summary in Table 10 below), all complex forms combining the past or negation suffixes with the imperfective are based on the morpheme *d-*, and are inserted between the inflections and the verbal lexeme (see example (118) below); thus for the past imperfective one finds *doon*, for the negative imperfective, *dul*, and for the past negative imperfective, *duloon*. To these, two other forms must be added, which seem to be possible only with Verb focus, namely *daan* for the past frequentative (*dama daan gis* 'I did use to see, then' ~ 'it is because I used to see, then'), *daawul* for the past negative frequentative (*dama daawul gis* 'I **did not** use to see, then' ~ 'it is because I did not use to see, then'). Given these forms' imperfective meaning, it is probable that *di* is at the origin of the basis *d-* for all of these forms.

(118) *Ah! bu ngeen* ***dul*** *téj néeg yi,*
ah when: NOT.LOC NULL2PL IPFVCOP:NEG close room DEF.PL
muus yi dañu fi -y dugg.
cat DEF.PL VBFOC3PL here IPFV enter
'Ah, if you don't close the rooms, the cats come in.' (XSW)

In all of these forms, *d(i)* appears without any inflection. However, this morpheme also has uses linking it to a copula, as it can serve as a basis for the suffixation of person and TAM markers for various imperfective conjugations. Thus *di* is obligatory for forming the imperfective Imperative. The basic Imperative is formed by the suffixation of *-(a)l* in the singular and *-(a)leen* in the plural to the verbal lexeme (*lekkleen !* 'eat (PL.)'). By contrast, the imperfective Imperative, formed around *di* (namely *di-l* in the singular and *di-leen* in the plural) is anteposed to the verbal lexeme: *dileen lekk* 'get into the habit of eating (PL.)!'. One must note that there is also a long variant (*deel* in

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the singular and *deeleen* in the plural); this variant is probably based on the imperative form in *-al* and results from the contraction: *di+al* > *deel*.

It may seem surprising to have an imperfective form for the imperative. In fact, for the imperative, the difference between the perfective and the imperfective lies in the distinction between how the order is to be carried out: either in a punctual and immediate manner (perfective) or with the general meaning of 'do, in a general manner' or 'get into the habit of doing' (imperfective). These distinctions are illustrated by the following examples:

(119) To a person to whom one is passing a glass:
Naan -al
drink IMP2SG
'Drink (now)!'

(120) To someone who does not drink enough:
Dil naan!
IPFVCOP:IMP2SG drink
'You should drink; you should get into the habit of drinking more.'

In the example below, one finds the imperfective form of the imperative because the temporal subordinate clause has generic meaning:

(121) *Boo xëyee suba teel,*
when:NOT.LOC:NULL2SG leave.in.the.morning:ANTER morning be.early
deel *wis ndox ci sa buntu néeg*
IPFVCOP:IMP2SG sprinkle water LOC POSS2SG door: CONN room
'When you get up early in the morning, sprinkle water on the door to your room.' (XSW)

There is a similar distinction between the perfective and imperfective forms of the Prohibitive:

(122) *Bul lekk*
PROH2SG eat
'Do not eat (now)'

(123) *Bul di tooñ*
PROH2SG IPFVCOP harm
'Do not harm (people)'

Finally, *di* is also the basis of the conjugation I have dubbed "Future": the Perfect inflection is suffixed to *di-*, as to an auxiliary (see Table 1). The Future based on the Perfect inflection shows aspectual and modal differences compared to the future expressed by the imperfective. The former indicates that it is certain that an event will take place at some future time; thus it is a future of certainty, distinct from the time

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of speech (124a and 125), whereas the imperfective future corresponds to a probable future, in continuity with the time of speech (124b and 126) as shown by the glossing provided by the consultants in the examples below.

(124) a. ***Dina*** *doy*
FUT3SG suffice
'This will be enough.' ['it is certain']

b. *Lii* *mooy* *doy*
DEM SUBJFOC3SG suffice
'This is what will suffice.' ['according to what I see, this will be enough', 'in all probability this will be enough, but we will see what happens']

(125) ***Dina*** *gor* *garab* *gi*
FUT3SG cut.down tree DEF
'He will fell the tree.' ['impossible if he is in the process of trying to fell the tree']

(126) *Dafay* *gor* *garab* *gi*
VBFOC3SG:IPFV cut.down tree DEF
'He will fell the tree.' ['it is likely, even though it is not known when']

The certain character of the Future is especially visible in the fact that it is difficult to use it if an element of uncertainty is introduced, as in the following example:

(127) *? **Dinaa*** *dem* *Dakaar* *bu* *ma* *amee* *pas*
FUT1SG go Dakar when:NOT.LOC NULL1SG have:ANTER ticket
'I will go to Dakar if I have a ticket'

Whereas the sentence is possible with an imperfective:

(128) *Damay* *dem* *Dakaar* *bu* *ma*
VBFOC1SG:IPFV go Dakar when:NOT.LOC NULL1SG
amee *pas*
have:ANTER ticket
'I will go' ~ 'I am going to Dakar if I have a ticket'

In Culioli's terms (1990: 130) future indicates a 'translation' of the tense locus, from the speech moment to a later moment; this conjugation thus preserves the properties of the predicate (as specified by the Perfect inflection), but these properties (certainty in this case) are valid only for that future moment.

The Emphatic Negative is also clearly based on the predicative morpheme in *du-* to which the Null tense endings are suffixed.[21] Given that this conjugation generally has

21. With a Ø variant in the 3SG. and 'contraction' into *-oo* in the 2nd person, as is the case when the Null tense is suffixed to subordinating or interrogative elements ending in *-u*. For a diachronic account of the 2nd person *-oo* forms, see Pozdniakov & Segerer (2004: 154).

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future meaning (as well as negating the property expressed by the predicate (cf. 2.2.1)), *du-* can be analyzed as *di* (imperfective) + *u-* (negative suffix). Indeed, the following example shows that the Emphatic Negative (*duma xeex*) has imperfective meaning, because its affirmative counterpart in the sentence is in the imperfective Verb focus (*dama koy uuf*):

(129) [About her co-wife]

Li	*nga*	*bëgg,*	*duma*	*ko*	*def,*	*maa*	*lànk.*
REL	NULL2SG	want	NEGEMPH1SG	OPR3SG	do	SUBJFOC1SG	refuse

'What you want, I will not do it, I refuse.'

Duma	*xeex*	*ak*	*moom,*	*duma*	*xulook*	*moom,*
NEGEMPH1SG	fight	with	s/he	NEGEMPH1SG	quarrel:with	s/he

'I will not fight with her, I will not argue with her,'

dama	*ko*	*-y*	*uuf*	*rekk.*
VBFOC1SG	OPR	IPFV	put.on.one's.lap	only

'I will just take her under my guidance.' (XSW)

Several reasons lead me to dub this form "Emphatic negative" rather than "Imperfective Negative", even though the latter would be justified in light of some of its uses. Firstly, this form is used to negate the future or habitual happening of an event, but not its present realization (as an ongoing or completed process) as an imperfective form should do; this latter value is conveyed by the Negative conjugation (cf. 2.2.1). Secondly, as we will see in the next section, this form can bear the imperfective suffix (*-y*). Lastly, there is a striking morphological parallel (and also morphosyntactic constraints) between the morphemes *di* and *du*, and the *da-* stem used for the Verb focus, traditionally labeled "emphatic". That is why I prefer the "Emphatic negative" label, although it is not entirely satisfactory. This labeling difficulty shows, at least, that the aspectual distinction between perfective and imperfective is not symmetrically realized in affirmative and negative sentences.

4.3 Analysis and summary

Another possible hypothesis is that, behind the three stems *di-* (predicative form of the imperfective and Future basis), *da-* (Verb focus basis) and *du-* (Emphatic Negative basis), are the three spatial deictics (*-i* proximal, *-a* distal, *-u* "not localized in the speaker's time and space") suffixed to a predicative marker (or copula), *d-* (Robert[22] 1991: 270–7, and 2006). This analysis as a *di-*, *du-*, *da-* paradigm would explain why speakers are reluctant to use *di* as a variant of *-y* with Verb focus (see Example 111 above) as this would entail having two elements from the same paradigm in a single

22. In this work, I analyze *d-* more precisely as a marker of the predicative center, dissociated from the verbal lexeme.

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sentence. The existence of regional variants (Cayor, Gambian and Lebu Wolof), where the Verb focus has a final *-a* (*dama-a dem*), strengthens this hypothesis of three copula behind the forms in *di-/du-/da-*: the *-a* would be the conjunctive verb suffix which is suffixed to the governing verb when the latter introduces a second dependent verb (*dama bëgg-a dem* 'I want to leave').

Whatever the hypothesis retained, it would seem that *di* serves as a morpheme with predicative function (either a copula or an auxiliary) in these latter uses. In which case, one could consider that the variants of the imperfective in *di* are in fact periphrastic forms. In favor of her analysis of *di* as an auxiliary, Voisin (2010) uses the specific placements of clitics with forms in *di*. Table 10 summarizes the various uses found for *di*. As shown in this table, the uses of *di* and *-y* converge in most but not all cases. To conclude, *di* should be considered as a functional competitor of the imperfective suffix, rather than as a free variant.

Table 10. Summary of the uses of *di*, independent morpheme with imperfective meaning

As a determiner with aspectual meaning:	
– Free variant of *-y*	– for the Null tense, Subject Focus, Complement Focus – constrained with the Presentative; hardly ever with Verb focus.
– Must replace *-y*	for all 2pl. inflections, 2pl. object clitic, and imperfective Prohibitive
In predicative function:	
– uninflected *di*	– To introduce a secondary predicate indicating simultaneity (in variation with the full form of the imperfective Null tense)
– *d-*	– To constitute complex morphemes (past and/or negative) with imperfective meaning in all conjugations: *d-oon, d-aan, d-ul, d-ul-oon*
– inflected *di-* (auxiliary)	– Mandatory for forming the imperfective Imperative (*dil, dileen*) – To form the Future, by suffixation of the Perfect inflection – To form the imperfective Emphatic Negative

4.4 Compound forms

To complete this overview of Wolof's verbal system we must mention two final paradigms which, if one considers that *di* is a variant of *-y*, would appear to be compound forms: these inflections comprise both the predicative morpheme *di* and the suffix *-y*. The existence of these two imperfective markers on a single form strengthens the hypothesis whereby *di* is not a simple variant of *-y* but instead an auxiliary or copula whose semantic effect converges with the imperfective suffix's meanings.

4.4.1 *The occasional*

Thus the Future may take the suffix *-y*, in which case it no longer has a future meaning, but rather indicates that an event happens sporadically.

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(130) *Dinay liggéey bant ba nga yaakaar*
FUT3SG:IPFV work wood until NULL2SG believe
ni bitim réw la jógé.
COMP exterior:CL country COMFOC3SG come.from
'At times he works the wood so well that it looks like it's imported.'

In the same way, in (131) the imperfective form indicates discontinuity and rarity, from a temporal perspective. From a subjective perspective, it indicates uncertainty, improbability:

(131) — *Dama soxla Moodu, xamuloo fu*
VBFOC1SG need Moodu know:NEG2SG where
muy nekk?
NULL3SG:IPFV be.located
'I need [to see] Moodu, you wouldn't know where he might be?'
— *A! Dinay nekk ci kër gi de, su*
ah FUT3SG:IPFV be.located LOC house DEF PTCL if [NULL3SG]
ko neexee…
OPR3SG please:ANTER
'Ah, at times he is at home, when he feels like it…'

In fact, it is difficult to use this form with compact (stative) verbs, which are not conducive to being divided up over time: the temporal discontinuity therefore leads to an intensive effect; as shown by (132), with compact verbs, the temporal rarity is reinterpreted as qualitative rarity: once again, distinguishing phases for processes which cannot be divided up into temporal units is equivalent to distinguishing varying degrees in the process. The temporal divisions become modal distinctions.

(132) *Kii, dinay soxor de!*
DEM FUT3SG:IPFV wicked PTCL
'This man, at times he can be (very, very) mean!' [comment: 'on the rare occasions when he is mean, he can be really extremely mean']

4.4.2 *Negating the habitual*

In a similar vein, while the Emphatic Negative serves to negate the happening of a process in the future, or to negate the process generally speaking (see Section 2.2.1), its imperfective variant introduces a temporal discontinuity, which appears to constitute the negative counterpart to the Future imperfective presented in the preceding section, as can be seen in the parallel structure in example (133).

(133) *Dinaay dem Cees, waaye dumay àgg ci Duudu*
FUT1SG:IPFV go Thiès but NEGEMPH1SG:IPFV arrive LOC Doudou
'I usually go to Thiès, but generally I don't go to Doudou's.'
~ 'it happens very often that I do not go to Doudou's.'

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In fact this form serves to negate the frequency of the process ("not to be used to doing"), often with emphasis on the event's rarity ("to do something, but only rarely"). Thus the imperfective suffix introduces interesting aspectual and modal nuances to the bare form: while the imperfective Negative may be used to negate the entire process, as the Emphatic Negative does (cf. (2)), it also indicates that there is nonetheless a possibility that the event will take place (cf. (3) and (133)); it corresponds to an affirmation of *doubt* as to the happening of the event happening in future ("probably but not at all certain"). The uncertainty this form marks explains its frequent use with the particle *xanaa*, which indicates the leading question 'by any chance?'.

(134) *Xanaa* *dooy* *lekk?* *Yaa.ngi* *sew* *bay*
INT.NEG FUT2SG:IPFV eat PRES2SG be.skinny until:IPFV
bëgga *dee*
want: CONJ die
'Are you not eating by any chance? You're deathly skinny.' (D)

As the glosses in (133) show, this paradigm serves to indicate that the process (p) already took place in the past, and that it happens infrequently. So it is not a case of affirming the repetition of *not p* ('never'), but rather of negating the process's repetition ('not often' = 'sometimes, but rarely'). The negation has scope over the process's aspect, here the imperfective. Denying the regularity is equivalent to insisting on the phenomenon's irregularity. Below is an example contrasting the presence *vs.* absence of the imperfective suffix:

(135) *Bi* *ma* *nekk* *Tugël* *yépp,*
when:PROX NULL1SG be.located France all
'Since I have been in France for so long,'

a. *duma* *bind* *sama* *waakër*
NEGEMPH1SG write POSS1SG household
'I no longer write to my family.'

b. *dumay* *bind* *sama* *waakër*
NEGEMPH1SG:IPFV write POSS1SG household
'I have lost the habit of writing to my family on a regular basis.'

The form bearing the suffix *-y* (b) indicates that the person still writes, but not on a regular basis, it is no longer a habit; with the simple form (a), the person no longer writes at all at the time of speech.

With stative verbs (when this form is permitted), the Negative imperfective tends to be interpreted modally rather than temporally: 'not often' becomes 'not well', as in (136).

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(136) *Duy* *mën* *dem* *jëndi* *kërin*
NEGEMPH3SG:IPFV can go buy:AND coal
'He isn't usually able to go and get coal.' [Added by a consultant: 'He can walk, but not well enough to be able to go and buy coal']

Therefore, with the Negative imperfective, the semantic effect of the imperfective suffix on stative verbs is modal: the temporal rarity is reinterpreted as qualitative rarity (as was the case for the occasional (cf. example (132)).

5. Conclusion

The Wolof verbal system consists of a set of primary conjugations in which tense and aspect are merged with other verbal specifications such as polarity, focus and person, originating probably from particles and pronouns. This synthetic system yields two levels of organization with regard to tense and aspect: the primary conjugations have present perfective (*i.e.* completive) value, it is therefore an aspect-tense system where all conjugations are tensed except one (the Null tense); these conjugations enter into secondary oppositions by means of aspectual and temporal suffixes. Thus the imperfective as well as past reference are derived from the bare (perfective) conjugations by suffixation. When opposed to these suffixed forms, the primary conjugations appear to have a common perfective value, referring to completed events, which can be structurally represented by a Ø suffix. The primary paradigms' perfective present value is analyzed here as a by-product of the specific meaning of each conjugation and appears to be produced by three different configurations (resulting state, focus presupposition, minimal and global structuring). This explains why, in Wolof, the present perfective is the unmarked form.

As an aspectual system, the Wolof verbal system is sensitive to the specificities of the different Aktionsarten. Due to their properties (compact *vs.* discrete processes), dynamic and stative verbs have different temporal values for the same verb forms; a third type of verb appears to depend on the contextual specifications for its aspectual functioning. Furthermore, this study of aspect in Wolof has revealed a remarkable regular shift from temporal to modal or subjective values, conditioned by the specific properties of Aktionsarten; due to stative verbs' compact nature, the aspectual phasing is transferred to the domain of assertion and epistemic modality. Thus, with stative verbs, the aspectual morphemes convey information on the speaker's attitude concerning the certainty (*vs.* uncertainty) or the completeness (*vs.* incompleteness) of the predicated quality. With the Perfect, the elimination of variation or instability corresponds to the elimination of the epistemic variation surrounding the stative predicate: there is no doubt as to the assertion (stable resulting state). Thus distinguishing between various phases for a compact predicate is equivalent to distinguishing moments where

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it is said to be true, areas of certainty *vs.* uncertainty: phases where the process is stable (perfect) correspond to a sure assertion; unstable phases (imperfective) correspond to moments where the process is unstable, that is where the assertion is probable but not certain. This mechanism is certainly at work in other languages, *e.g.* in English with the modal progressive (137), and deserves further investigation for generalization.

(137) a. *I'm warning you.* (Wright 1994: 469 in De Smet & Verstraete 2006)
b. *You're telling me you don't love me anymore.* (Wright 1995: 156, ibid.)

Moreover, the Wolof verbal system provides another peculiarity probably due to an ongoing grammaticalization process. The imperfective suffix has an unbound variant which, for morphophonological reasons, is obligatory in some cases and functions as a free variant in others, but also has specific predicative uses. This functional competitor of the imperfective suffix behaves like a defective auxiliary or copula. It is used, for example, to form a Future from the Perfect where the future is certain, contrary to the future expressed through the imperfective suffix, which is simply probable. The imperfective variant is also used in affirmative and negative compound forms, used to denote occasional events or processes.

Lastly, Wolof also has a very rich system of verbal auxiliaries used to express various aspectual or temporal specifications; these auxiliaries add to the originality of Wolof and stress the central role played by the verb in this language. The auxiliaries are often without equivalents in English, and must therefore be translated with adverbs, even though they are indeed verbs. They serve to introduce dependent verbs which they specify both temporally and aspectually. For example, *dal di*, 'do immediately'; *doog* ~ *soog* 'do for the first time'; *door, tàmbali, sog, dal* 'begin'; *faf* 'end up by doing, resign oneself to doing'; *faral* 'do often'; *géj* 'not have done for a long time'; *guddee* 'do late in the day'; *naaje* 'do late in the morning'; *mas* 'already have experienced'; *namm* 'intend to'; *tàmm* 'be used to doing'; *xal* 'end up by doing, do in the end'; *xas* 'do irreversibly'; *xaw* 'almost do, be a little'; and lastly *nar* 'be on the point of, have the intention of doing', with which we shall conclude this study:

(138) *Lii,* *moo* *nara* *doon*
DEM SUBJFOC3SG be.on.the.point.of:CONJ be
sunu *waxtaanu* *tey*
POSS1PL discussion:CONN today
'This is what our discussion will be for today.' (H)

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Appendix 1: Corpus and data references

When not otherwise indicated, the data come from native-speaker elicitation, following the method described in Robert (2004). The elicited utterances are always contextualized, that is produced with the description of a precise situation in which they would be used, and glossed by the consultant. Otherwise the following abbreviations are used for the various references:

D: Jean-Léopold Diouf's dictionary (2003).

G: *Gancax gi*, a TV play from the radio program *Jamonoy Tey,* broadcast by the ORTS (Office de Radiodiffusion-Télévision du Sénégal) on July 8, 1984.

H: *Feebar yi ak garab yi.* Debate about traditional healers on the radio program Horizon, broadcast by the ORTS (Office de Radiodiffusion-Télévision du Sénégal) on November 21, 1985.

SP: Spontaneous discourse taken down by the author in Dakar in 1985, 1986 and 2010.

T: The anthology of traditional Wolof tales and mythological narratives, edited by Kesteloot & Mbodj (see bibliography).

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XCL: The play *Xët cig lëndëm*, the manuscript of which was provided in 1985 by the Daniel Sorano Theater Company in Dakar.

XSW: *Xam sa waru gaar,* a play from an educational TV program, by the ORTS (Office de Radiodiffusion-Télévision du Sénégal) in 1986.

Grammatical abbreviations

:	in glosses, indicates a segmentable morpheme when the text is not segmented
1, 2, 3	first, second, third person
AND	andative verb suffix
ANTER	anterior suffix
AUX	auxiliary
BEN	benefactive verb suffix
CAUS	causative verb suffix
CL	class marker (class consonant for agreement in noun modifiers)
COM	comitative verb suffix
COMPFOC	Complement-focusing conjugation
COMP	complementizer (introducing complement clauses)
CONN	connective suffix (*-u* SG, *-i* PL)
CONJ	conjunctive verb suffix
DEF	definite determiner (class consonant suffixed to proximal or distal deictics)
DEM	demonstrative
DIST	distal spatial suffix
EMPHNEG	Emphatic negative conjugation
FOC	subject-focus particle or suffix
IDEOPH	ideophonic adverb expressing intensity
IMP	imperative
INCHO	inchoative verb suffix
INS	instrumental verb suffix
INT.NEG	interrogative particle with negative polarity
INV	inversive verb suffix
IPFV	imperfective suffix
IPFVCOP	imperfective copula (*di* ~ *d-)*
IPFVNEG	imperfective negative marker
ITER	iterative verb suffix (*-(w)aat*)
LOC	localizer: locative preposition (*ci* proximal, *ca* distal) or partitive pronoun
NEG	negative suffix
NEG(3SG)	Negative perfective conjugation (3SG)
NOTLOC	spatial suffix (*-u*) indicating absence of localization
NULL	Null tense conjugation
OPR	object pronoun
PST	past suffix
PRF	Perfect conjugation
PTCL	discourse particle
PL	plural
POSS(1SG)	(1SG) possessive determiner
PRES	Presentative conjugation (discontinuous morpheme)

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PROH(2SG)	Prohibitive conjugation (2SG)
PROX	proximal spatial suffix (-*i*)
REL	relative pronoun (class marker C+*i* or -*a* for the definite, +*u* for the indefinite)
REFL	reflexive verb suffix
REMPST	remote past suffix (-*(w)aan*)
SG	singular
SUBJFOC	Subject-focusing conjugation
VBFOC	Verb-focusing conjugation
VEN	venitive verbal suffix

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