Optional past tense in Wolof

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In this paper, we discuss the interpretation of past temporal marker *oon* in Wolof (Niger-Congo; Senegal). We argue against previous accounts that treat it as a "discontinuous past", and show that the cessation inference associated with *oon* is a conversational implicature. Thus, *oon* can receive an analysis as a vanilla semantic past tense.

1 Introduction

In this paper, we discuss the interpretation of past temporal marker **oon**[1] in Wolof (Niger-Congo; Senegal). The past marker *oon* is optional in discourses about the past. Previous analyses have treated *oon* as a **discontinuous past**, i.e., "past and not present" (Plungian & Auwera 2006, also see Church 1981; Robert 1991). The main evidence for this claim comes from a cessation inference associated with the use of *oon*. For instance, comparing (1) and (2), the addition of *oon* in (2) gives rise to a cessation inference that the result state of the event (here, the subject being gone) no longer holds at present.

(1) Dem-na-∅   Ndar.
     go-C-scl.3sg Saint-Louis
     "He left for Saint-Louis (and is still there)."
     "Il est parti à Saint-Louis (c'est toujours vrai, il n'est pas l'à)." (Robert 1991: p. 279)

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[1] The past marker surfaces as *oon* if the preceding element ends in a consonant, and as *woon* if it ends in a vowel, as a result of a phonological hiatus repair.

(2) Dem-**oon**-na-∅   Ndar.
     go-PST-C-SCL.3SG Saint-Louis
     "He had left for Saint-Louis (and has since come back)."
     "Il était parti à Saint-Louis (et en T_0, il est revenu)."   (Robert 1991: p. 279)

The use of *oon* with stative predicates gives rise to the inference that the state no longer holds in the present, as illustrated by the translations in (3)-(4).

(3) Tiit-na-a.
     afraid-C-SCL.1SG
     "I am afraid."   (Torrence 2012: p. 25)

(4) Tiit-óon-na-a.
     afraid-PST-C-SCL.1SG
     "I was afraid (but I am not now)."   (Torrence 2012: p. 26)

The idea from the past literature, then, is that *oon* is a discontinous past marker, which asserts that a state of affairs held at a past time, and does not hold at the present (speech time). This proposed semantics contrasts with that of the past tense in languages like English, which makes no claim about the state of affairs at present. For instance, in (5), we have a discourse about a past time, and the past tense is used in each clause. These uses of the past tense in English simply refer to the topical past time, and make no claims about the state of affairs at the speech time. For instance, the sentence in (5c) only makes a claim about the past topic time (the time of looking in the room), and not about the present; intuitively, the book is still in Russian at the speech time (if it exists).

(5) Context: A judge poses question (a) to a witness, who replies with (b)-(c):
     a. What did you notice when you looked in the room?
     b. The light was on. There was a book on the table.
     c. It was in Russian.   (Klein 1994)

In this paper, we argue that *oon* is in fact not a discontinuous past, but rather a vanilla past marker, parallel to the past tense in English. We show that the cessation inference of *oon* is not part of its conventional meaning, but rather is a conversational implicature, arising due to competition with tenseless clauses. In this respect, Wolof *oon* is similar to other optional past markers in other languages, as has been argued in the recent literature, e.g., Bochnak (2016) for Washo (Hokan/isolate, California and Nevada), Cable (To appear) for Tlingit (Na Dene, Alaska and British Columbia).

The paper proceeds as follows. In section 2, we discuss the temporal interpretation of tenseless clauses in Wolof, while in section 3 we turn to the interpretation of *oon*, and show that it behaves like an ordinary past tense marker. Section 4 contains our analysis, including a proposal for deriving the cessation implicature associated with *oon*. In section 5 we survey some syntactic evidence that suggests that *oon* does not behave syntactically like a tense head. Section 6 concludes.

2 Temporal interpretation of tenseless clauses

Wolof finite indicative clauses have an obligatory complementizer layer (Martinović 2015). There are several types of complementizers with different syntactic and information-structural properties; these differences do not concern us here as they do not affect the temporal interpretation. We therefore gloss all complementizers as C.

Tense marking and negation are only possible in the presence of a complementizer (Njie 1982). Wolof also has *minimal clauses* (Sauvageot 1965; Church 1981; Dialo 1981; Robert 1991; Zribi-Hertz & Diagne 2003), which can be used in a narrative context and appear to be smaller than TPs (Zribi-Hertz & Diagne (2003) consider them to be *v*Ps, but they can contain imperfective aspect, which suggests they are at least as big as an AspP). The tense of such clauses is interpreted with respect to a previously introduced temporal anchor. In this paper we are therefore only concerned with clauses that contain the CP and TP layers.

In clauses with no overt tense/aspect marking, stative predicates receive a present interpretation by default, as in (6)-(7).

(6) Baax-na-∅.
     good-C-scl.3sg
     "It is good."/ ⁺*"It was good."*

(7) Da-ma   mer.
     do.C-scl.1sg angry
     "I am angry."/ ⁺*"I was angry."*

Meanwhile, eventive predicates receive a default past interpretation, as in (8)-(9). As shown in (10), activities pattern with other eventive predicates, rather than states.

(8) Xale yi   lekk-na-ñu   ceeb.
     child the.PL eat-C-SCL.3PL rice
     "The children ate rice."/ [#] *"The children are eating rice."*

(9) Musaa dem-na-$\emptyset$.
     Moussa leave-C-SCL.3SG
     "Moussa left."/ [#] *"Moussa is leaving."*

(10) Musaa fécc-na-$\emptyset$.
     Moussa dance-C-SCL.3SG
     "Moussa danced."/ [#] *"Moussa is dancing."*

However, these defaults are not tied to the aspectual class of the predicate per se. Derived statives (e.g., eventive predicates co-occurring with 'imperfective' *di*) can also have present temporal reference, as in (11)-(12).

(11) Usmaan-a   di (>Usmaanay) gis Musaa.
     Oussman-C   IMPF   see Moussa
     "It's Oussman who sees Moussa."

(12) Daf-a-$\emptyset$ di (>dafay) añ,   mën-ul   ñëw.
     do-C-SCL.3SG IMPF   eat.lunch, can-NEG come
     "He is eating lunch, he cannot come."
     "Il est en train de manger, il ne peut pas venir."   (Robert 1991: p. 263)

To account for these facts, we follow the pragmatic principles of Smith & Erbaugh (2005); Smith, Perkins & Fernald (2007) for default temporal interpretation of tenseless clauses. These principles were developed to account for temporal interpretation of the tenseless language Mandarin (Smith & Erbaugh 2005), and have been applied to other tenseless languages, such as Navajo (Smith, Perkins & Fernald 2007) and Hausa (Mucha 2013). The three main principles—the Deictic Principle, the Simplicity Principle of Interpretation, and the Bounded Event Constraint—are given in (13)-(15):

(13) **Deictic Principle**
     Situations (events) are located with respect to UT
     (i.e., utterance time is the default reference point)

(14) **Simplicity Principle of Interpretation**
     Choose the interpretation that requires the least information added or inferred.

Hierarchy of Simplicity:

a. RT = UT: Present time reference is the simplest kind of temporal reference since (i) an utterance event always provides a time interval to which an RT variable can be anchored, namely UT; (ii) present interpretation requires no displacement of either the time or world of evaluation

b. RT < UT: Past time reference is more complex since it requires the displacement of RT from the concrete utterance event

c. RT > UT: Future time reference involves both RT shifting by also modal displacement, and thus increases the level of abstraction

(ensures that present is preferred over past, which is in turn preferred over future)

(15) **Bounded Event Constraint**
Bounded events are not located in the present. Speakers follow a tacit convention that communication is instantaneous. The present perspective is incompatible with the report of a bounded event, because the bounds would go beyond that moment.
(bounded events cannot be located in the present)

The Deictic Principle states that the utterance time is the default reference point for temporal interpretation. Together with (14a), this predicts a present interpretation as a default. However, by (15), bounded events – which covers (perfective) eventive predicates – cannot be located in the present. These are then shifted to a past interpretation, given (14b). This setup also predicts that future reference with tenseless clauses is dispreferred. In many tenseless languages, additional morphology must be used to achieve future time reference (Matthewson 2006; Tonhauser 2011; Bochnak 2016). This is indeed also the case for Wolof, where the imperfective marker *di* is used for future reference, as in (16)[2]

(16) Di-na-a   toog ceeb-u-jën.
IMPF-C-SCL.1SG cook rice-GEN-fish
"I will cook ceebujën."

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[2] See Bochnak & Martinović 2017 for discussion and an analysis of imperfective *di* and its future uses.

3 The interpretation of *oon*

Turning to the semantics of *oon*, we argue that it is a regular past tense marker. We offer four pieces of evidence for this claim: (i) clauses with *oon* are obligatorily interpreted as past tense; (ii) the cessation inference does not always occur with *oon*; (iii) *oon* is not an English-style perfect; (iv) *oon* is found in counterfactual conditionals.

First, we find that *oon* is only compatible with past time reference. In addition to the examples we have already seen, we add (17)-(18) below.

(17) Baax-**oon**-na-∅.
      good-PST-C-SCL.3SG

      "It was good."/ # *"It's good."*

(18) Xale yi   lekk-**oon**-na-ñu   ceeb.
      child the.PL eat-PST-C-SCL.3PL rice

      "The children ate rice."/ # *"The children are eating rice."*

Second, the cessation inference associated with *oon* is not always present for all speakers.[3] Recall the data in (1)-(2), repeated here, which show that the use of *oon* can trigger a cessation inference.

(19) Dem-na-∅   Ndar.
      go-C-SCL.3SG Saint-Louis

      "He left for Saint-Louis (and is still there)."
      "Il est parti à Saint-Louis (c'est toujours vrai, il n'est pas l'ʻa)." (Robert 1991: p. 279)

(20) Dem-**oon**-na-∅   Ndar.
      go-PST-C-SCL.3SG Saint-Louis

      "He had left for Saint-Louis (and has since come back)."
      "Il était parti à Saint-Louis (et en T_0, il est revenu)."   (Robert 1991: p. 279)

However, when a past topic time is overtly specified, e.g., by a time adverbial as in (21), there is no cessation implicature.

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[3] There is both interspeaker and intraspeaker variation in this. Some speakers insist on the cessation inference in some contexts but not in others, and for some speakers it is never present. We have not found any speakers for whom the cessation inference is obligatory in all contexts that we tested.

(21) Musaa jënd(-**oon**)-na-∅ oto bu bees at bi jall waye
Moussa buy(-PST)-C-SCL.3SG car C$_{Rel}$ new year C$_{Rel}$ past but
mu-angi (> mungi) ko di (> koy) dawal bë léegi.
SCL.3SG-C OCL.3SG IMPF drive until now

"Moussa bought a new car last year and he is still driving it."

With predicates such as *xaru* 'kill oneself', many speakers report that the use of *oon* implies that Moussa is now alive again, or that the suicide was unsuccessful (i.e., a cessation inference is detected). However, this effect is reported to go away for some speakers in particular contexts; e.g. if (22) is said as part of the story of Moussa's life, or if we are retelling the events of, for example, last week.

(22) Musaa xaru(-**woon**)-na-∅ ayubés yëlle weesu.
Moussa kill.oneself(-PST)-C-SCL.3SG week ? past

"Moussa killed himself last week."

The example (5) from Klein (1994) is also felicitous in Wolof for most of our speakers, as shown in (23). Even though the book presumably still exists and is still in Wolof, *oon* can be used in the answer in (23c).

(23) Context: A judge poses question (a) to a witness, who replies with (b)-(c):

a. Lan nga gis bi nga xool-e neeg bi?
what C.SCL.2SG see when SCL.2SG look.at-ANT room the.SG

"What did you see when you looked at the room?"

b. Làmp bi tàkk-oon-na-∅. Am-oon-na-∅ benn téeré
lamp the.SG be.alight-PST-C-SCL.3SG. have-PST-C-SCL.3SG one book
bu ubbeeku si kaw taabal bi.
C$_{Rel}$ be.open on top table the.SG

"The light was on. There was an open book on the table."

c. Téeré wolof la-∅ (woon).
book Wolof C-SCL.3SG (PST).

"It was/is in Wolof."

Since the cessation inference is not always present, it is not part of the lexical semantics of *oon*. Therefore, we do not consider it a "discontinuous past" in the sense of Plungian & Auwera (2006), since it does not assert that a state of affairs fails to hold at speech time.

Third, we observe that *oon* does not behave like an English-style perfect. The English perfect does not co-occur with temporal frame adverbials (Klein 1992),

see (24). However, we have already seen in (21) that *oon* can co-occur with temporal adverbials.

(24) #I have bought a car yesterday/last year/on December 1, 2010.

The English perfect also displays so-called lifetime effects (McCawley 1971). The sentence in (25) is apparently infelicitous because Christopher Columbus is no longer living. However, as shown in (26), Wolof *oon* does not have this property.

(25) #Christopher Columbus has discovered America.

(26) Colombo féeñal(-**oon**)-na-∅   Amerik.
Columbus find-(PST)-C-SCL.3SG America
"Columbus found America."

Another property of the English perfect (and of so-called terminative aspects more generally, Bohnemeyer 2002), is that they assert that the result state of the perfect-marked event still holds. This means continuations like in (27) are infelicitous. These types of examples are nevertheless felicitous in Wolof with *oon*, as shown in (28).

(27) I have lost my glasses, #and now I (have) found them.

(28) Sama   lunettes réer(-**oon**)-na-∅-ma,   waye
POSS.1SG glasses   lose(-PST)-C-SCL.3SG-OCL.1SG but
gis(-**oon**)-na-a-ko.
see(-PST)-C-SCL.1SG-OCL.3SG
"I lost my glasses, but I found them."

Fourth, we find *oon* in counterfactual conditionals. Past tense marking is common cross-linguistically in counterfactual conditionals (Iatridou 2000; Halpert & Karawani 2012), including in English. The sentence in (29) has a present topic time (by the presence of *right now*), but has past morphology in the antecedent. We also see this in Wolof, where *oon* appears in counterfactual conditionals, as in (30).

(29) If I was in Paris right now, I would be eating a croissant.

(30) Su-ma   ragal-**oon**   rabi, di-na-a   tiit   léegi.
if-SCL.1SG be.afraid.of-PST spirit, IMPF-C-SCL.1SG be.afraid now
"If I was afraid of spirits, I would be afraid now."

Although the role of the past tense in counterfactuals is a matter still very much under debate, it is certainly striking that Wolof uses this marker in counterfactuals, just like in many other typologically unrelated languages.

In sum, apart from its optionality, *oon* behaves like a regular past tense familiar from English. We therefore propose to analyze it semantically as a regular past tense, just like other optional pasts in Washo (Bochnak 2016) and Tlingit (Cable To appear).

4 Analysis

We propose the following formal analysis for *oon*. We assume a pronominal or referential theory of tense, whereby the reference time of a clause is represented as a temporal pronoun located it in the T head (e.g., Abusch 1997; Heim 1994; Partee 1973, among many others). Like other pronouns, it bears an index, and receives its value from an assignment function g. Every finite clause contains a reference time pronoun, regardless of whether there is an overt tense morpheme or not. We treat *oon* as a tense feature which modifies the temporal pronoun, placing a presupposition on its possible values (i.e., restricting it to times in the past of the speech time).

We propose that a sentence such as (31) has the clause structure given in Figure 1.[4] Semantically, AspP denotes a predicate of times as in (32a), where we assume arguments of the verb are interpreted in their base position. The temporal argument slot is filled in by the reference time pronoun. When *oon*, defined in (32c), surfaces, it adds the presupposition that the reference time is located in the past of the speech time t_c. (In the absence of a morphological tense, we assume the value of the reference time pronoun in T is restricted by the pragmatic principles outlined in section 2.) The result is a proposition meaning, given in (32d).

(31) Colombo daf-a-∅   féñaal-oon Amerik.
      Columbus do-C-scl.3sg discover-pst America
      "Columbus DISCOVERED America"

(32) a. ⟦ AspP ⟧^{g,c} = $\lambda t \lambda w.$**discover**$(a)(c)$ at t in w

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[4] The example (31) is of a predicate focus sentence with *do*-support in C. We choose this clause type for illustration as the verb here stays low, unlike in some other cases when it raises to C taking *oon* with it. The clause structure is somewhat simplified from what Martinović (2015) assumes; any differences are not relevant for our analysis here. Additionally, the verb also raises through the Asp head and carries it on to T, but we omit this here for simplicity.
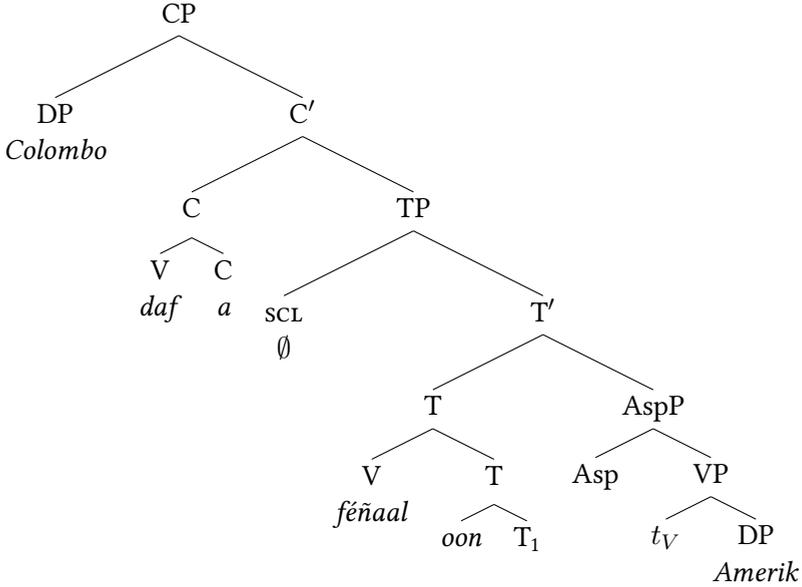
Figure 1: Wolof clause structure

    b. $⟦ \; T_1 \; ⟧^{g,c} = g(1)$

    c. $⟦ \; oon \; ⟧^{g,c} = \lambda t.t$; defined only if $t < t_c$

    d. $⟦ \; TP \; ⟧^{g,c} = \lambda w.\textbf{discover}(a)(c)$ at $g(1)$ in w ; defined only if $g(1) < t_c$

    Under this analysis, cessation is not part of the lexical semantics of *oon*, contra Church (1981); Robert (1991); Plungian & Auwera (2006). Instead, *oon* only adds a plain past presupposition, just like the past tense in English. The question, then, is how to account for the robust intuition, both by native speakers and previous authors, that the use of *oon* in many contexts generates a cessation inference.

    We suggest that the cessation inference is a conversational implicature derived by the Gricean Maxim of Manner (cf. Altshuler & Schwarzschild 2012; Cable To appear, for whom cessation inferences are analyzed as *scalar* implicatures). Following Levinson (2000), a marked message indicates a marked situation. We assume that a past-referring clause containing *oon* is "marked" in comparison to a past-referring tenseless clause. A Gricean chain of reasoning proceeds as follows. A sentence with *oon* is morphologically more marked than a sentence without *oon*. Given that past marking is not required by the grammar of Wolof, the speaker (in most situations) could have used an unmarked form for past temporal reference. Since the speaker used a marked form, the hearer infers that the

speaker must believe that the situation is marked. That is, more than just a vanilla past meaning is intended by the speaker. The hearer infers that the state of affairs described does not hold at present, otherwise the simpler form could have been used. Therefore, cessation is an inference derived from the fact that *oon* is optional, and temporally unmarked clauses can also have past interpretations.

If the implicature calculation is based on Manner, whereby a marked message leads to pragmatic enrichment, the question arises as to why a *cessation* implicature in particular is calculated? Why could some other inference not be calculated? Apparently, other inferences are in fact possible and attested. For instance, Church (1981) claims that the use of *oon* often gives rise to a *remoteness* inference as well. Our speakers also seem to prefer *oon* when talking about a time in a more distant past. Some speakers even report they *must* use *oon* in those cases (e.g. when speaking about an event that occurred last year). This inference would also be a conversational implicature, and not part of the lexical semantics of *oon*, given examples like (33), where *oon* is possible with *demb* 'yesterday' (assuming one day ago does not count as 'distant').

(33) Musaa jënd(-**oon**)-na-∅   oto bu   bees demb
      Moussa buy-PST-C-SCL.3SG car C_{Rel} new yesterday.
      "Moussa bought a new car yesterday."

5 Is *oon* really a tense?

There is some indication that *oon* is syntactically not a head. First, in clauses in which the verb raises to C, *oon* is affixed onto it in affirmative cases, as in (34) but skipped over in the presence of negation, shown in (35). Martinović (2015; 2016) proposes an analysis of the affixation of *oon* in which she argues that *oon* affixes onto the verb postsyntactically (at PF) in a certain syntactic configuration, but not in others. Crucially, for her analysis to go through, *oon* cannot be a head, as it would then always be picked up by head movement. She therefore suggests that *oon* is a phrasal morpheme in Spec,TP.

(34) Xale yi   lekk-**oon**-na-ñu jën.
      child the.PL eat-PST-C-SCL.3PL fish
      "The children had eaten fish."

(35) Xale yi   lekk-u(l)-∅-ñu   **woon** jën.
      child the.PL eat-NEG-C-SCL.3PL PST   fish
      "The children hadn't eaten fish."

The second piece of evidence that casts doubt on the treatment of *oon* as a T head is that it can occur apparently affixed onto non-verbal elements, as reported by Torrence (2012).

(36) Kan-ati-**woon** la-ñu   dóor?
      who-again-PST C-SCL.3PL hit
      "Who did they hit again?"   (Torrence 2012: p.24)

Given the examples above, it is possible that *oon* is not a tense morpheme, but a particular type of a temporal adverbial (cf. Tonhauser 2006 on an optional past adverbial in Paraguayan Guaraní). We leave this only as a speculation at this point, as the matter requires further research.

6 Conclusion

We have argued that *oon* in Wolof marks past temporal reference, and can be given an analysis of a semantic past tense. The cessation inference detected by Church (1981) and Robert (1991), and analyzed as discontinuous past by Plungian & Auwera (2006), is not present in all uses of *oon*, and we argue this is a conversational implicature. Given that the same conclusion was reached for the optional tense languages Washo (Bochnak 2016) and Tlingit (Cable To appear), the status of discontinuous past as a grammatical category is therefore called into question.

Abbreviations

ANT = anterior; GEN = genitive; IMPF = imperfective; NEG = negation; OCL = object clitic; PL = plural; POSS = possessive; REL = relative; SCL = subject clitic; SG = singular

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