Chapter 10

Optional past tense in Wolof

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In this paper, we discuss the interpretation of the past temporal marker *oon* in Wolof (Niger-Congo; Senegal), in light of recent claims in the literature regarding its status as a so-called "discontinuous past." We show that the cessation inference associated with *oon* is a conversational implicature. Thus, *oon* can receive an analysis as a plain semantic past tense.

1 Introduction

There has been some debate in the recent literature regarding the semantic nature of so-called "discontinuous past" markers. On the one hand, Plungian & van der Auwera (2006), to whom the term "discontinuous past" is due, characterize its meaning as "past and not present" or "past with no present relevance."

On the other hand, Cable (2017) argues that the apparently discontinuous semantics of the Tlingit (Na Dene, Alaska and British Columbia) decessive form (Leer 1991) is actually a defeasible implicature, i.e., not part of the conventional semantics of the tense form. Cable assigns a plain past tense semantics, and the implicature of "not present" or "no present relevance" is derived via competition with temporally unmarked clauses, which can receive either a past or present interpretation. Cable further observes that discontinuous pasts are found exclusively in languages where overt past marking is optional,[1] and thus calls into

[1]By "optional" past, we are referring to the fact that past temporal reference can also grammatically be achieved with temporally unmarked clauses. Speakers may nevertheless make use of optional past markers for specific rhetorical purposes, as highlighted by Plungian & van der Auwera (2006).

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question whether the category of discontinuous past exists at all in natural language.

In this paper, we contribute to this discussion by examining the past temporal marker *oon*[2] in Wolof (Niger-Congo; Senegal; see Church 1981; Robert 1991). This tense marker was identified by Plungian & van der Auwera (2006) as a discontinuous past, and the Wolof data formed an important part of their argument for the existence of discontinuous pasts in the world's languages. The main evidence for this claim comes from a cessation inference associated with the use of *oon* in contrast with temporally unmarked past-referring sentences.[3] 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.[4]

(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 là).'
(Robert 1991: 279)

(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: 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: 25)

[2]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.

[3]Like Cable, we follow Altshuler & Schwarzschild (2012) in using the terminology of "cessation" to describe this inference.

[4]In examples taken from other sources, we modify the morpheme glosses according to the analysis of Martinović (2015). For examples from Robert 1991, we keep the original French translation and add our own colloquial English translation. The translations do not represent our analysis of the Wolof forms.

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

The analysis of *oon* as a discontinuous past 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 still 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 past marker with a conventional meaning parallel to the past tense in English. Using diagnostics similar to those that Cable (2017) used in his study of Tlingit, 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 temporally unmarked clauses (see also Bochnak 2016 on optional past in Washo (Hokan/isolate, California and Nevada)). In this respect, Wolof *oon* is similar to other optional past markers in other languages, as has been argued in the recent literature. In this respect, we concur with Church (1981), who also showed that *oon* does not always have a "discontinuous" interpretation (though with different terminology and analytical tools).

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

Unless noted otherwise, all the data in the paper were obtained by the second author in Saint-Louis, Senegal, during March 2016 and April–May 2017. All speakers were native speakers of Wolof, and Wolof was their first language. The data represent judgments of nine speakers, age 30 to 68. We use direct elicitation

in order to replicate as closely as possible the data used in previous works on so-called discontinuous pasts in other languages (Bochnak 2016; Cable 2017).

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 in Wolof 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.[5] The temporal interpretation of such clauses is determined 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.'

[5] 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.

(9) Musaa dem-na-∅.
Moussa leave-C-SCL.3SG
'Moussa left.'/ #'Moussa is leaving.'

(10) Musaa fécc-na-∅.
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).[6]

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

(12) Daf-a-∅ 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: 263)

To account for these facts, we follow the principles of Smith & Erbaugh (2005); Smith et al. (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 et al. 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.

[6] In the examples, *-y* is an allophonic realization of *di*; see Dunigan 1994, Torrence (2005; 2012), Martinović (2015).

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 but 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 cover (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).[7]

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

[7]See Bochnak & Martinović 2018 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. The main pieces of evidence for this claim are that clauses with *oon* are obligatorily interpreted as past, and the cessation inference (i.e., "discontinuous" interpretation) does not always occur with *oon*. We also show that *oon* is not an English-style perfect, and that *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.[8] 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 là).'
(Robert 1991: 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: 279)

[8] 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.

However, when a past topic time is overtly specified, e.g., by a time adverbial as in (21), there is no cessation implicature.[9]

(21) Musaa jënd(**-oon**)-na-∅ oto bu bees at bi jáll, waye
Moussa buy(-PST)-C-SCL.3SG car C new year C past but
mu-angi (> mungi) ko di (> koy) dawal ba léegi.
SCL.3SG-C OCL.3SG IMPF drive until now
'Moussa bought a new car last year, but 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 attempt 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 bi weesu.
Moussa kill.oneself(-PST)-C-SCL.3SG week C 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 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.'

[9]We place *oon* in brackets to indicate that the sentences with and without *oon* are accepted by speakers in the context provided.

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

Third, we observe that *oon* does not behave like an English-style perfect.[10] 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, see 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.'

[10] We acknowledge that perfects in many languages do not have these properties.

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).[11]

(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, where the apparent discontinuous semantics are not part of its conventional meaning. We therefore propose to analyze it semantically as a regular past tense, just like other optional pasts in Washo (Bochnak 2016) and Tlingit (Cable 2017).

4 Analysis

We define tense as a morpheme whose conventional meaning relates a reference or topic time with the speech time, or possibly another evaluation time (Reichenbach 1947; Klein 1994). We assume a pronominal or referential theory of tense, whereby the reference time of a clause is represented as a temporal pronoun located 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).

[11] We do not intend this point as an argument against a discontinuous past analysis, but rather as evidence that *oon* behaves quite similarly to non-discontinuous pasts in more familiar languages.

We propose that a sentence such as (31) has the clause structure given in Figure 1.[12] 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 principles outlined in §2.) The result is a proposition meaning, given in (32d).[13]

(31) Colombo daf-a-∅ féñaal-oon Amerik.
Columbus do-C-SCL.3SG discover-PST America
'Columbus DISCOVERED America'

(32) a. $[\![\text{AspP}]\!]^{g,c} = \lambda t \lambda w.\textbf{discover}(a)(c)$ at t in w
b. $[\![\text{T}_1]\!]^{g,c} = g(1)$
c. $[\![\textit{oon}]\!]^{g,c} = \lambda t.t$; defined only if $t < t_c$
d. $[\![\text{TP}]\!]^{g,c} = \lambda w.\textbf{discover}(a)(c)$ 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 Plungian & van der 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 2017, for whom cessation inferences are analyzed as *scalar* implicatures). Following Levinson (2000), a marked message indicates a marked situation. We assume

[12] 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 in Figure 1 is somewhat simplified from what Martinović (2015) assumes; any differences are not relevant for our analysis here. For example, the non-pronominal subject in these clauses is in the left periphery (Spec,CP), and it is doubled by a subject clitic which is here represented in Spec,TP (the clitics all move to adjoin above TP at a late stage in the syntax). The details of the doubling are not relevant here; we assume that the non-pronominal argument is generated in the subject position in Spec,*v*P (omitted for simplicity). Additionally, the verb also raises through the Asp head and carries it on to T, but we also omit this here.

[13] Robert (1991) analyzes *oon* as a relative past, in which case the reference time can be related to an evaluation time other than the speech time, i.e., t_c in (32c) can be distinct from the speech time.

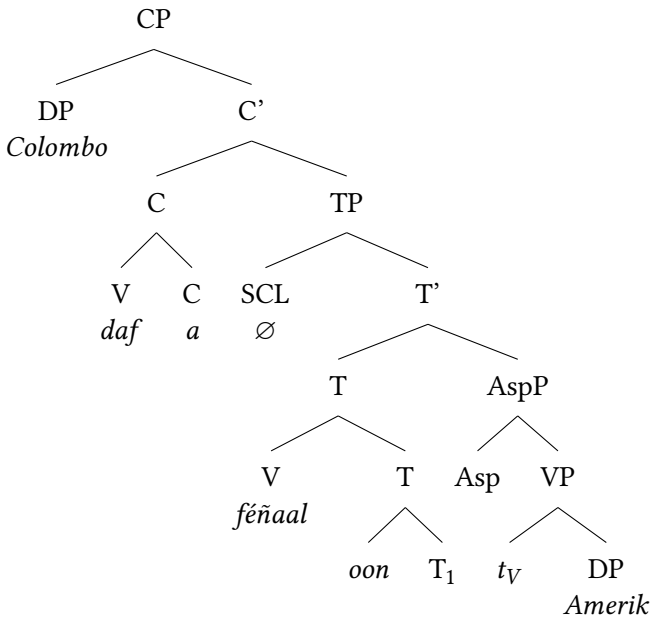

Figure 1: Wolof clause structure

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.[14] 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 plain 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,

[14] A reviewer points out the possibility that Gricean conversational maxims may not be followed in all cultures. At this point, we have no reason to believe they do not apply in Wolof, but leave further investigation into this question for later work.

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 démb
Moussa buy-PST-C-SCL.3SG car C new yesterday.
'Moussa bought a new car yesterday.'

5 Is *oon* a tense head?

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 ate fish.'

(35) Xale yi lekk-u(l)-∅-ñu **woon** jën.
child the.PL eat-NEG-C-SCL.3PL PST fish
'The children didn't eat 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: 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. Given that our definition of tense in §4 only makes reference to semantic notions, the question of whether *oon* behaves syntactically like a T head is orthogonal to the core aspects of our semantic analysis, where *oon* is treated as a tense (i.e., relating a reference time to speech time).

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 & van der 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 2017), the status of discontinuous past as a grammatical category is therefore called into question.

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Abbreviations

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

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