

**Grammaticalization of Tense, Aspect, and Mood
Markers in Haitian Creole:
A Synchronic Approach**

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Abstract

The current study investigates the tense, aspect, and mood markers in Haitian Creole, an analytic language, and tests whether they bear out the hypothesis proposed in [Hengeveld \(2011\)](#). The hypothesis states that the development of TAM markers follows a set path in grammaticalization and that their scope, defined based on the different semantic layers of the Representational Level in Functional Discourse Grammar ([Hengeveld & Mackenzie, 2008](#)), can only increase but not decrease over time. Results show that the tense, aspect, and mood markers in Haitian Creole do indeed conform with the hypothesis, even to the precision of specific cells in the possible paths defined by Functional Discourse Grammar.

List of Glossing Abbreviations Used

1	first person
2	second person
3	third person
ANT	anterior
DEF-FUT	definite future
DET	determiner
FUT	future tense
IMP	imperfective mood
IND-FUT	indefinite future
SG	singular

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1 Introduction

1.1 Topic and Goals

In this paper I explore whether the synchronic distributions of tense, aspect, and mood markers in Haitian Creole follow the prediction about grammaticalization made by Functional Discourse Grammar (henceforth FDG, Hengeveld & Mackenzie, 2008). FDG, as a typologically based theory of language structure, sees grammaticalization as “a combination of contentive and formal change” that is predicted to follow certain paths. On the content side, they entail a step-wise and systematic increase in scope. On the formal side, they entail a step-wise and systematic decrease in lexicality (Hengeveld, 2017). Haitian Creole was chosen as the subject of the investigation because to my best knowledge there is only one study that tested the hypothesis of grammaticalization made in FDG, namely Villerius (2017), and Haitian Creole as an analytic language does not mark tense, aspect or mood by using affixes. The verb in a finite clause is invariant and always occurs in its simple form. In Haitian Creole, temporal relationships, mood, and aspect are encoded by means of markers occurring between the subject and the verb (Lefebvre, 2006). Even with the markers, the tense, aspect, and mood are still often interpreted according to context and can be ambiguous (Glaude, 2013). The current paper investigates whether the synchronic distribution of TAM markers in Haitian Creole reflects the grammaticalization path as predicted by the hierarchy in the FDG framework. In doing so I hope to assess the hierarchy with examples from Haitian Creole which would help validate the hierarchies of Hengeveld (2011, 2017). This is especially the case for the claim that formal and semantic change are independent processes, since in analytic languages elements can become more grammatical over time without reducing their form.

1.2 Outline of the Paper

The structure of the current paper is as follows: the next section provides background information of the process of grammaticalization according to the account of Functional Discourse Grammar, especially the grammaticalization of tense, aspect, and mood markers. In the third section, I present a brief typological introduction to Haitian Creole, and sketch out the TAM markers used in Haitian Creole and map out their distribution in the FDG model. The fourth section discusses whether the synchronic distribution of the TAM markers in Haitian Creole is in accordance with the predictions made by FDG. The fifth and final section concludes.

2 Background

2.1 Grammaticalization in FDG

Grammatical categories are organized in layers under the framework of FDG. More specifically, the pragmatic layers constitute the interpersonal level, and the semantic layers constitute the representational level. The relationship between layers and their scopes are illustrated in Figure 1. From lower to higher layers, the Situational Concept (f) is the set of properties of a possible State-of-Affairs; a State-of-Affairs (e) is the situated real or hypothesized situation the speaker has in mind; the Episode (ep) is a thematically coherent combination of states-of-affairs that are characterized by unity or continuity of time, location, and participants; the Propositional Content (p) is the mental construct entertained about a state-of-affairs ([Hattner & Hengeveld, 2016](#)). Contrary to the argument in the formal perspective that grammaticalization takes place in first language acquisition ([Roberts & Roussou, 2003](#)), functional approaches consider grammaticalization to be drawn out from usage ([Boye & Harder, 2012](#)).

According to predictions made in [Hengeveld \(2017\)](#), there are three potential pathways for lexical items to increase their scope and one potential pathway for

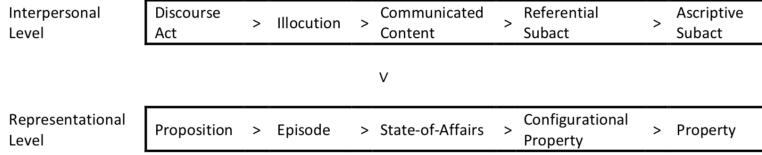


Figure 1: Relationship between Levels and Layers in FDG, adapted from Hengeveld(2017, pg.3)

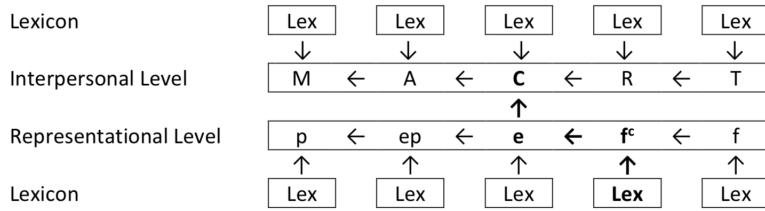


Figure 2: A model of contentive change (Hengeveld 2017, pg.13)

the lexicality decrease. The scope increase may happen within levels, and across levels. When it happens within levels, the diachronic changes in scope only develop from lower to higher layers but not the other way around ¹. The within-level scope increase could happen at both the representational level and the interpersonal level. When the scope increase happens across levels, it also only develops from a lower level to a higher level, namely from the Representational Level to the Interpersonal Level. The last of the four potential pathways is the lexical change involving the fundamental change of a lexical element into a grammatical element. Figure 2 shows a model for various possible pathways of contentive change defined in FDG².

The proposed pathways have been confirmed in studies on diachronic changes in several languages such as Mexican Spanish ([Dávalos, 2017](#)), Persian ([Davari & Naghzguy-Kohan, 2017](#)), Dutch ([Olbertz & Honselaar, 2017](#)), and Tundra Nenents ([Jalava, 2017](#)). Additionally, due to the gradual, stepwise nature of grammaticalization process, it is implied that if markers have more than one meaning, these meanings should be on adjacent semantic layers.

¹ “Lower” here refers to the locations more to the right side and bottom side of the hierarchy in Figure 1, and “higher” refers to the locations more to the left and top side.

²M = move, A = discourse act, C = communicated content, R = referential act, T = ascriptive act, p = propositional content, ep = episode, e = state-of-affairs, f^c = configurational property, f = property, Lex = lexeme

In addition to the hierarchy above, Hengeveld (2017) also addresses formal change, stating that the function of an element can develop from fully lexical to fully grammatical without implying that the element reduces its form. The change of function and meaning are independent processes from each other, but when a linguistic item changes its meaning (i.e. widens its scope), it will not become more lexical.

2.2 The Grammaticalization of TAM Markers

Hengeveld (1989) specifically argued that the diachronic development of TAM markers starts from the lower scope to the higher scope, and not in the opposite direction. In other words, as with other lexical items, TAM markers also increase their scope over time and follow a predictable path based on the hierarchical ordering of the semantic layers.

In FDG, TAM-categories are classified in terms of their semantic scope (Hengeveld & Mackenzie, 2008; Hengeveld, 2011). This scope configuration in FDG includes five semantic layers: property, situational concept, state-of-affairs, episode, and proposition. TAM-expressions do not fall under the same layers of the semantic organization. Aspect is subdivided into quantitative and qualitative distinctions; Tense is subdivided into relative tense and absolute tense; Evidentiality is subdivided into inference, deduction, and event perception distinctions; Mood is subdivided into subjective modality, absolute (ir)reality, relative (ir)reality, and participant-oriented modality distinctions. The distribution of the markers is presented in Figure 3, with the scope decreasing towards the right ³.

In terms of diachronic change of the TAM-markers, the hierarchy in FDG predicts that the origin of aspect markers is either the verbal or non-verbal predicate, which is on the layer of property (Hengeveld, 2011). Grammaticalization to the higher scope follows a certain path. As lexical predicates are grammati-

³Hengeveld (2017) switched the term Situational Concept to Configurational Property. The current paper follows Hengeveld (2017) in using the term Configurational Property.

	Propositional Content	Episode	State-of-Affairs	Situational Concept	Property
<i>Aspect</i>			Event qualification	Phrasal aspect (im)perfectivity	Predicate
<i>Tense</i>		Absolute tense	Relative tense		
<i>Evidentiality</i>	Inference	Deduction	Event perception		
<i>Mood</i>	Subjective modality	Absolute (ir)reality	Relative (ir)reality	Participant-oriented modality	

Figure 3: TAM categories in FDG, adapted from Hengeveld (2011)

calized, they widen their scope and become situated on the layer of situational concept as, for instance, phrasal aspect. This phrasal aspect marker could in turn further develop into a marker of relative tense, but not absolute tense. This hypothetical path shows that the movement towards the higher scopes cannot skip layers.

The unidirectionality of the path of grammaticalization in this hierarchy has two implications. The first is that the markers with lower scopes are more susceptible to change than the markers with higher scopes. The reason being simply that there are more layers for the items with lower scope to evolve towards than for the items with higher scope. The second implication concerns the synchronic distribution of the TAM-markers, namely that if a marker has more than one meaning, these meanings should be distributed step-by-step within the hierarchy without skipping layers, due to the reason that a marker should have attained the scope of one layer before moving to the next.

3 Haitian Creole

3.1 Typological Background

Haitian Creole (or *Kreyòl*, as Haitians call it) is a French-based creole spoken by about 9.5 million people in Haiti. It is the only language that is shared by the entire nation, the vast majority of which is monolingual. Haitian Creole, as the communal language of the new Creole community of colonial Haiti (known as Saint-Domingue in the colonial period), emerged in the 17th and 18th centuries out of the contact among regional and colloquial varieties of French and the various Niger-Congo languages spoken by the Africans brought as slaves to work the colony's land (DeGraff, 2007). This contact influenced the formation of a contact language, with its lexicon mainly coming from French (Glaude, 2013). The verbal morphology of Haitian Creole is very much similar to its West African substratum languages such as Fongbe. For instance, there are no subject/verb agreement markers for person and number, and no affixes encoding tense, aspect or mood. In both Haitian Creole and Fongbe, the verb in a finite clause is invariant and always occurs in its simple form. Temporal relationships, mood and aspect are encoded by means of markers occurring between the subject and the verb (Lefebvre, 2006). As can be seen in Figure 4, the TAM marking in Haitian Creole and Fongbe are quite parallel.

Lefebvre (2006) argues that the TAM markers of Haitian Creole derive most of their phonological representations from the French periphrastic expressions, and that they derive most of their semantic and syntactic properties from the corresponding lexical entries in Fongbe.

3.2 TAM Marking in Haitian Creole

According to Fattier (2013), Haitian Creole has at least ten tense, aspect, and mood markers including the zero marker (illustrated in Table 1), in addition to at least 13 combinations of the TAM particles (see Table 2). Lefebvre (2006) lists five TAM markers in her overview of the TAM system of Haitian Creole,

ANTERIOR	IRREALIS	NON-COMPLETE
• Past/Past perfect	• Definite future	• Habitual
H F te kò	H F ap ná	H F — nò
	• Indefinite future	• Imperfective
	H F a-va ná-wá	H F ap dò . . . wè
	• Subjunctive	
	H F pou ní	

Figure 4: Lefebvre (2006, pg. 112)'s inventory of Haitian Creole in comparison to its substratum language Fongbe (H = Haitian Creole, F = Fongbe)

among which three are tense markers (*te*, *ap*, *va*), one marks mood (*pou*), and one marks aspect (*ap*) ⁴. See Figure 4 for Lefebvre (2006)'s inventory of TAM markers in Haitian Creole.

Glaude (2013) included two combination usage listed in Fattier (2013) and concluded that the TAM system in Haitian Creole has five TAM markers⁵, and listed seven modality particles (see Table 3).

Since no other literature than Fattier (2013) lists more than five TAM markers in Haitian Creole, and there is no reason why the combination of TAM markers cannot be analyzed as separate markers occurring together (Glaude (2013, pg.97), in his chapter on the combination of TAM markers, only mentioned that the markers can combine as long as they follow a morphosyntactic hierarchy). The current paper follows Glaude (2013) and focuses on the three TAM markers *te*, *ap*, and *va*, that are not the end-product of a combination of multiple markers.

⁴Lefebvre (1996) argues that the tense marker *ap* and the aspect marker *ap* are two homophonous lexical entries due to the fact that there exists data drawn from a subset of speakers who allow two *aps* within a single clause (see, e.g. (20) in Lefebvre (1996)), while Glaude (2013) treats it as polysemy.

⁵One reviewer pointed out that it appears rather odd when both *tap* and *ta* mark anteriority if the interpretation should be “future imperfect”. I looked further into this, and according to Fattier (2013), *tap* comes from the combination of *te* and *ap*, with *te* as a marker for past reference and *ap* for both future certainty and progressive aspect. The marker *tap* as an end-product indicates “future of the past” in terms of tense, and imperfective in terms of aspect. *Ta* comes into being from the combination of the past reference marker *te* and the future uncertainty marker *a* (which is an allomorph of *va*). The marker *ta* also marks “future in the past” in terms of tense, and marks a conditional aspect which can be interpreted as a hypothetical future.

marker	lexical aspect	tense/aspect/mood
unmarked verbs	stative stative non-stative non-stative	non-past reference past reference past reference (specific object) non-past reference (generic object) habitual aspect
te(t)	stative non-stative stative adjectival phrases nominal phrases prepositional phrases	past,reference past,reference in the <i>if</i> -clause of counterfactual conditionals past reference
ap	stative verb non-stative verb stative (verbal or non-verbal) predicates, including adjectives	future (certain) progressive aspect inchoative aspect or future
konn	stative verb	habitual aspect
fin	stative vereb adjective	habitual aspect completive aspect
a (av, ava, va, v)	stative verb	future (uncertain)
pral (prale, apral)	non-stative verb stative verb	immediate future immediate future
sot	non-stative verb	completive aspect (post final phase)
fèk	non-stative verb	completive aspect(postfinal phase)
pran	non-stative verb	completive aspect

Table 1: TAM markers in Haitian Creole concluded by Fattier (2013)

combination	lexical aspect	tense-aspect-mood
te ap (tap)	non-stative verb stative verb	imperfective-past future in the past counterfactual
te konn	stative verb non-stative verb	past habitual
te fin	non-stative verb	past completive
ta (< te + a)	non-stative verb	conditional future in the past
av ap, t av ap	non-stative verb	future + progressive past+future+progressive
ta pral	non-stative verb	conditional + immediate future
te sot	non-stative verb	perfective past+completive aspect(postfinal)
te fèk	non-stative verb	perfective past+completive aspect(postfinal)
te pran	non-stative verb	imperfective past + imchoative aspect
fèk sot	non-stative verb	completive aspect (postfinal)
ap fèk sot	non-stative verb	future +completive aspect (postfinal)
te fèk ap	non-stative verb	past+ progressive aspect

Table 2: Some combinations of TAM particles according to [Fattier \(2013\)](#)

	Tense	Aspect	Mood	Interpretation
te	anteriority			past, perfective, past imperfective
ap		imperfective		progressive, habitual, certain future, inchoative
(v)a			posteriority	uncertain future
tap	anteriority	imperfective, perfective	conditional	future imperfective
ta	anteriority	imperfective	conditional, habitual	future imperfective

Table 3: TAM markers in Haitian Creole concluded by [Glaude \(2013\)](#), translation by the current author

3.2.1 The Marker *te*

The marker *te* is used in all French-based creoles as the marker of anteriority ([Glaude, 2013](#)). Although *te* always situates an event in the past with respect to the Utterance Time, the time of the event (Event Time) in the sentence sometimes coincides with the Reference Point (past), and sometimes is itself prior to the reference point (pluperfect) ([McCrindle, 2000](#)). Sentences containing the marker *te* and a dynamic verb are interpreted as pluperfect, while sentences containing the marker *te* and a stative verb are ambiguous, so are sentences containing the marker *te* and a resultative verb ([Lefebvre, 2006](#)).

The following is an example of the marker *te* used with a dynamic verb.

- (1) *Lefebvre (2006), p.116*

Lè m' rive, Mari te prepare pat.
When I arrived, Mary ANT prepare dough.

‘When I arrived, Mary had prepared dough.’

The next two examples show the ambiguity in interpretation when the marker *te* is used with stative verbs and resultative verbs.

Stative verbs:

(2) *Glaude (2013), p.47*

Jan te renmen Mari
Jean ANT love Mari

- a. ‘Jean loved Mary.’ (imperfective)
- b. ‘Jean has/had loved Mary.’ (perfective)

(3) *Lefebvre (2006), p.116*

Mari te kònnèn Jan.
Mary ANT know John

- a. ‘Mary knew John.’ (past)
- b. ‘Mary had known John.’ (pluperfect)

Resultative verb:

(4) *Lefebvre (2006), p.116*

Mari te wè volè a.
Mary ANT catch sight of thief DET

- a. ‘Mary caught sight of the thief.’ (past)
- b. ‘Mary had caught sight of the thief.’ (pluperfect)

To situate the distribution of the use of the marker *te* into the FDG model, I now go through the above examples.

It is clear from the literature that the marker *te* locates the event to a time point prior to the utterance time. However it remains unclear whether the past tense in this case is relative or absolute. *Glaude (2013, pg. 48)* concludes that the morpheme *te* does not necessarily place the event in relation to a reference time and simply denotes that the event is anterior to the utterance time, and that it is a pure time marker that is under-specified. *Lefebvre (2006)* argues that the fact that a sentence containing *te* may be assigned different past readings (i.e. past or perfect), which are defined with respect to the reference point in different ways, suggest that *te* is best analyzed as a relative tense marker, rather

than an absolute tense marker. The current paper follows (Lefebvre, 2006) in analyzing the past tense as relative tense.

In (1) the verb *prepare* is interpreted as pluperfect according to (Lefebvre, 2006). According to Trask (2013), pluperfect expresses both past tense and perfect aspect. This locates the TAM marker *te* into the layer of both State-of-Affairs and Configurational Property. In (2), (3), and (4), the TAM marker can be either interpreted as expressing relative past tense, or pluperfect, hence can either fall in the layer of State-of-Affairs, or both in the layer of State-of-Affairs and the layer of Configurational Property.

3.2.2 The Marker *ap*

As was mentioned in a footnote in section 3.2, Lefebvre (1996) argues that the tense marker *ap*, which is used to express definitive future (future certainty), and the aspect marker *ap* which expresses imperfective aspect, are two homophonous lexical entries due to the fact that there exists speakers who allow two *aps* within a single clause (see, e.g. (20) in Lefebvre (1996)), while (Glaude, 2013) treats it as one polysemous lexical item. Since the imperfective aspect and the future tense have some overlap in semantics, the current study makes the assumption that *ap* is one polysemous TAM marker instead of two separate but homophonous particles, and that the phenomenon observed in Lefebvre (1996) is possibly duplication.

When used as a marker for future tense, according to Lefebvre (2006), *ap* conveys the speaker's attitude that the event referred to by the clause will *definitely* take place in the near future. Lefebvre (2006) suggests that it is best to analyze *ap* as an irrealis mood marker in this case. However, multiple linguists have pointed out that both the use of the term "irrealis" and treating it as a mood are in some ways problematic (e.g. Palmer, 1986; Bybee, Perkins, & Pagliuca, 1994; Bybee, 1998; Trask, 2013; De Haan, 2012). The current study analyzes *ap* as a marker for future tense, speaker intention, habitual mood, and

(im)perfect aspect⁶.

(5) *Lefebvre (1996), p.123*

M' ap vini.
I DEF-FUT come
'I will definitely come.'

In the FDG model for grammaticalization, the marker *ap* in (5) expresses both the speaker's intention and the future tense. This locates the marker in the layers of Episode and Propositional Content.

It is worth noting that the definitive future marker *ap* may assign a future perfect interpretation to a clause (which, according to Lefebvre (2006), is the only way in Haitian Creole to express future perfect), as shown in (6).

(6) *Lefebvre (2006), p.124*

Mari ap deja prepare pat.
Mary DEF-FUT already prepare dough
'Mary will already have prepared dough.'

In (6), *ap* expresses both an absolute future tense and the speaker's certainty that Mary will have already prepared dough (subjective epistemic). Hence the marker *ap* in this case falls into the layers of Episode and Propositional Content.

When used as an imperfective aspect marker, a sentence containing *ap* can be interpreted as progressive. This is only possible if the clause contains a dynamic verb (Lefebvre, 2006), as in (7) and (8), but not in (9). Note, however, that this does not mean that when *ap* occurs with a dynamic verb, the sentence can only be interpreted as progressive. As is evident in (6), where the verb *prepare* is a dynamic verb, but the sentence is still interpreted as future perfect, possibly

⁶As will be shown in the examples that follow, the marker *ap* can assign both perfect or imperfect aspect to a verb. But within the framework of FDG, the perfect aspect and the imperfect aspect land in the same layer of Configurational Property, hence whether the aspect is perfect or imperfect does not affect the aim of the current study, ergo the use of the term "(im)perfect" here is somewhat justified.

due to the presence of *deja*. What Lefebvre (2006) meant was rather, that a progressive interpretation can only be possible when the verb is a dynamic verb, but the interpretation does not necessarily have to be progressive, as in (6).

- (7) Mari ap manje krab la.
Mary IMP eat crab DET
a. ‘Mary is eating the crab.’ Lefbvre (2006), p.116
b. ‘Mary will (or has the intention to) eat the crab.’ Glaude (2013),
p.49

- (8) Glaude (2013), p. 52

- Jan ap kondwi vwat a.
Jean IMP drive voiture DEF
a. ‘Jean is driving a car.’
b. ‘Jean will drive a car.’

- (9) Glaude (2013), p. 52

- Jan ap konnen lesion li.
Jean IMP know lesson 3SG
a. ‘Jean begins to know his lesson.’
b. ‘Jean will know his lesson.’

The progressive reading in (7-a) and (8-a) falls under State-of-Affairs. Both the imperfective aspect and the participant-oriented modality (having the intention to) in (7-b) and (8-b) belong to Configurational Property. The inchoative aspect in (9-a) is a State-of-Affairs operator, and the imperfective aspect in (9-b) falls under the layer of Configurational Property.

When occurring with a non-verbal head, the interpretation of the marker *ap*

depends on the lexical features of the predicate (Glaude, 2013).

(10) Glaude (2013), p. 49

Jan ap granmoun.
Jean IMP grow old

- a. ‘Jean is becoming old’
- b. ‘Jean will grow old.’

(11) Glaude (2013), p. 49

Jan ap doktè.
Jean IMP doctor

- a. *‘Jean is in the process of being a doctor.’
- b. ‘Jean will become a doctor.’

In (10), the verb *granmoun* “to age” allows two readings, but in (11), the predicate *doktè* “to be a doctor” excludes the progressive value (Glaude, 2013).

In terms of FDG layers, the progressive aspect in (10-a) is a State-of-Affairs operator, the absolute future tense in (10-b) and (11-b) belong in Episode.

It is also possible for the marker *ap* to assign a habitual interpretation to a sentence (Lefebvre, 2006). (12) is one example where *ap* assigns the habitual mood to the verb *joure*⁷.

(12) Lefebvre, (1996), p.120

Mari ap joure toutan.
Mary IMP swear all-the-time.

‘Mary swears all the time.’

The habitual mood in (12) falls under Propositional Content since it expresses speakers attitude and thus qualify as Propositional Content.

⁷Per Lefebvre (2006), the presence of the adverb *toutan* “all the time” in (6) prevents the sentence to be interpreted as progressive.

3.2.3 The Marker *va*

The marker *va*, historically derived from one form of the French verb *aller* ([Glaude, 2013](#)), is used in Haitian Creole as a marker for the indefinite future, and conveys the speaker's attitude that the event referred to by the clause might eventually or potentially take place at some undetermined point in the future ([Lefebvre, 2006](#))⁸.

The marker *va* has allomorphs such as *av* and *a*. [Lefebvre \(2006\)](#) sees the underlying form as *a-va*, while [Glaude \(2013\)](#) refers to the marker as *va*.

Below are some examples:

(13) *Glaude (2013), p. 53*

Yon jou ou (v)a wè m.
One day 2SG FUT see 1SG

'One day, you will see me.'

(14) *Glaude (2013), p. 53*

Jan (v)a ale Pòtoprens yon jou.
Jean FUT go Port-au-Prince one day

'Jean will go to Port-au-Prince one day.'

[Lefebvre \(1996\)](#) shows that *va* occurs with different verb classes.

⁸[Glaude \(2013\)](#) used the term "le mode irrealis ou éventuel", which is in line with the description by Lefebvre.

Dynamic verb:

- (15) *Dumais (1988), p. 247*

M' a vini yon jou.
I IND-FUT come one day
'I will/might eventually come one day.'

Resultative verb:

- (16) *Lefbvre, (2006), p.129*

Mari a-va wè Jan.
Mary IND-FUT catch sight of John.
'Mary will eventually catch sight of John.'

Stative verb:

- (17) *Lefbvre, (2006), p.129*

Mari a-va malad.
Mary IND-FUT sick.
'Mary will eventually be sick.'

Examples (13) to (17) all express both an absolute future tense and the speaker's attitude at the same time. In the FDG model, this locates the marker *va* into the layers of Episode and Propositional Content, respectively.

4 Distribution Across Layers

4.1 The Distributions of Individual Markers

In this section, I sum up the distribution of TAM markers that was discussed in Section 3.2 with respect to the FDG layers.

4.1.1 The Distribution of *te*

The marker *te* expresses either relative past, or pluperfect, and distributes across the layers of State-of-Affairs and Configurational Property. When expressing pluperfect, the marker covers both the layers of State-of-Affairs and the layer of Configurational Property. When it is only marking a relative past tense, the marker lands in the layer of State-of-Affairs.

Table 4 summarizes the distribution of the marker *te* according to its functions.

<i>te</i>	p	ep	e	f^c
pluperfect			+	+
relative past			+	

Table 4: distribution of the marker *te* across layers according to functions

4.1.2 The Distribution of *ap*

The marker *ap* is probably the TAM marker that covers the most layers in Haitian Creole. As can be seen in Table 5, the marker spans from the lowest layer of Configurational Property all the way to the highest layer of Propositional Content, without skipping any of the layers in between.

Table 5 summarizes the distribution of the marker *ap* when expressing different tenses, aspects, and modalities.

<i>ap</i>	p	ep	e	f^c
definitive future	+	+		
future perfect			+	+
imperfective (progressive)			+	
participant-oriented modality				+
inchoative			+	
absolute future			+	
habitual	+			

Table 5: distribution of the marker *ap* across layers according to fucntions

4.1.3 The Distribution of *va*

The marker *va* has many allomorphs (including *av*, *a*, and *a-va*, according to Lefebvre, 2006), and it mainly expresses the future tense, sometimes accompanied by speaker's attitude towards the events. This locates the marker in the layers of Episode and Propositional Content, respectively.

Table 6 summarizes the distribution of the marker *va* in its two different functions.

<i>va</i>	p	ep	e	f^c
absolute future & speaker attitude				
speaker attitude	+	+		
speaker attitude	+			

Table 6: distribution of the markers *te* across layers according to functions

4.2 Summary of Results

The distribution of TAM markers in Haitian Creole is summarized in Table 7. I discuss the implications of the results in light of the research question of this study in the next section.

	p	ep	e	f^c
pluperfect			te	te
relative past			te	
progressive			ap	
future perfect			ap	ap
definitive future	ap	ap		
absolute future		ap		
		va		
speaker attitude		va		
participant-oriented				
modality			ap	
inchoative			ap	
habitual	ap			

Table 7: distribution of the all TAM markers across FDG layers

5 Conclusion

Functional Discourse Grammar predicts that as a result of the hypothesized diachronic change, the various meanings and functions of a TAM marker should occupy contiguous parts of the pathway of grammaticalization, as illustrated in (18):

$$(18) \quad p \leftarrow ep \leftarrow e \leftarrow f$$

On the basis of the results summarized in Section 4.2, we may now conclude that the synchronic distribution of the TAM markers in Haitian Creole is consistent with the prediction about grammaticalization made by FDG.

As Table 7 indicates, all three of the TAM markers investigated in the current study occupies contiguous steps in the grammaticalization pathway sketched out in (18).

I now take one further step and put the synchronic distribution of TAM markers in Haitian Creole to the test of more specified paths of development in grammaticalization as concluded by Hengeveld (2011).

According Hengeveld (2011), the possible destinations of tense and aspect in the course of grammaticalization are concluded in Figure 5.

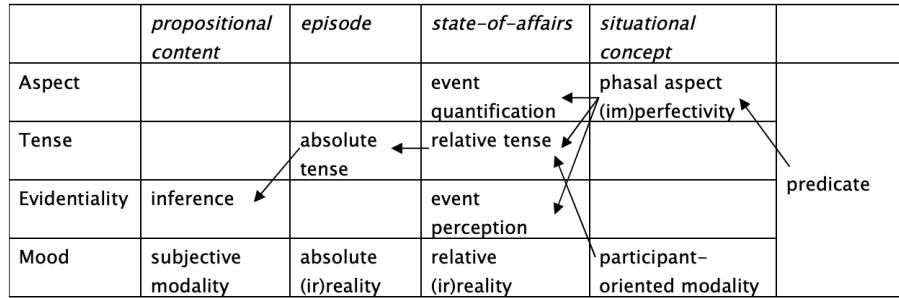


Figure 5: Attested developments in the grammaticalization of tense and aspect, adapted from Hengeveld (2011)

Figures 6 to 8 locate the individual TAM markers in the development process depicted in Figure 5.

As can be seen in the above figures, all the TAM markers investigated in the

	Propositional Content	Episode	State-of-Affairs	Situational Concept
Aspect			Event qualification	Phrasal aspect (im)perfect <i>te</i>
Tense		Absolute tense	Relative tense <i>te</i>	
Evidentiality	Inference	Deduction	Event perception	
Mood	Subjective modality	Absolute (Ir)reality	Relative (Ir)reality	Participant-oriented modality

Figure 6: The synchronic distribution of *te* in the potential destinations of tense and aspect depicted by Hengeveld (2011)

	Propositional Content	Episode	State-of-Affairs	Situational Concept
Aspect			Event qualification	Phrasal aspect (im)perfect <i>ap</i>
Tense		Absolute Tense <i>ap</i>	Relative tense <i>ap</i>	
Evidentiality	Inference <i>ap</i>	Deduction	Event perception	
Mood	Subjective Modality	Absolute (Ir)reality	Relative (Ir)reality	Participant-oriented Modality <i>ap</i>

Figure 7: The synchronic distribution of *ap* along the developmental path of grammaticalization as described in Hengeveld (2011)

	Propositional Content	Episode	State-of-Affairs	Situational Concept
Aspect			Event qualification	Phrasal aspect (im)perfect
Tense		Absolute Tense <i>va</i>	Relative tense	
Evidentiality	Inference <i>va</i>	Deduction	Event perception	
Mood	Subjective Modality	Absolute (Ir)reality	Relative (Ir)reality	Participant-oriented Modality

Figure 8: The synchronic distribution of *va* in the process of development of grammaticalization as described in Hengeveld (2011)

current study land onto one or multiple steps within the possible grammaticalization paths for TAM markers as defined in FDG. It is especially prominent in the case of the marker *ap* whose distribution covers all the layers and fits very nicely into the specific cells along the paths.

Although the synchronic distributions of the markers fit perfectly with the steps within the grammaticalization pathway in Figure 5, diachronic data is needed in order to show whether the TAM markers in Haitian Creole evolved into the current distribution along the path in the same directions as shown in the above figures, and hence to further confirm the diachronic prediction with respect to grammaticalization made by FDG.

Notwithstanding this open question, results in the current study show that the synchronic distributions of the TAM markers in Haitian Creole fit perfectly, even to the level of specific cells in the predicted path, with the synchronic correlate of the predictions made by FDG regarding grammaticalization, namely, that if a marker has various meanings or functions they should occupy contiguous parts of the pathway defined in FDG.

Recall that the current paper treats the multiple functions of *ap* as polysemy instead of accidental homophony (section 3.2.2). From the results, the distribution of *ap* conforms with the predictions made by FDG even when the different functions are treated as one single marker being polysemous rather than two separate homophonous markers which would entail two different paths.

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