

## Future particles in Haitian Creole

Moles Paul and Bridget Copley  
LangSÉ (FLA-UEH)/Paris 8 and SFL - CNRS/Paris 8

### 1 Introduction

There are three future particles in Haitian Creole (HC): *ap*, *pral*, and *a(va)*, as shown in (1).

- (1) Jan *ap/pral/a(va)* wè Jak.  
Jan AP/PRAL/A(VA) see Jak  
'Jan (future) see Jak.'

In addition, *ap* also has a non-future-oriented, progressive reading. As shown in (2a), an *ap* sentence can be ambiguous between a future-oriented reading and a progressive reading; these can be disambiguated with temporal adverbials, as shown in (2b) and (2c).

- (2) a. Jan *ap* dòmi.  
Jan AP sleep  
'Jan is sleeping/will sleep.'  
b. Jan *ap* dòmi kounye a.  
Jan AP sleep now DET  
'Jan is sleeping now.'  
c. Jan *ap* dòmi demen.  
Jan AP sleep demen  
'Jan will sleep tomorrow.'

For the purposes of this paper, we will set aside the progressive reading of *ap* and concentrate on its future reading.

There exists morphological variation in all three HC future particles: *ava* can also be realized as *a* or *va*; *ap* can also be realized as *ap*, *ape* or *pe*; and *pral* can also be realized as *apral*. Consensus (Valdman, 1978; Sylvain, 1979; Déchaine, 1991; Lefebvre, 2006; Damoiseau, 2005; DeGraff, 2007; Lainy, 2010; Glaude, 2012) exists that *a(va)* reflects an 'uncertain future'. We agree with this characterization, and we will not have much to say about it, though we will present *a(va)* examples to show contrasts with the other future particles. Consensus also exists (idem) that the future-oriented reading of *ap* reflects a 'certain future'. We will disagree. While we will not provide a denotation for *ap*, we will show that in a number of respects, it behaves like English *will*. As for *pral*, not much has been said in the literature (though see Damoiseau (2005); DeGraff (2007)). Damoiseau (2005) treats *pral* as prospective aspect (imminence). We will question this idea of imminence

and provide a denotation for *pral* that is based on the idea of causal, not temporal imminence, i.e., direct causation. Finally, since *pral* sentences show an important difference compared to another construction that has been argued to involve direct causation, namely English futurates (Copley, 2005, 2018) we speculate on the nature of this difference.

## 2 Some background information on future expression in HC

Sylvain (1979) asserts that in HC, the morpheme *ap* indicates an action that doesn't come to an end or a state that has not yet begun. But the author also points out that *ap* can express the future. The morpheme *pral* are also mentioned by her, indicating an action or a state that has not begun yet. Sylvain also notes that when *pral* is followed by a verb, it points out the period which precedes the action or the state in its development from the present or the future. She gives the following example to illustrate her thought:

- (3) M *pral* ekri.  
1SG PRAL write  
'I am going to write. I am about to write.'

Sylvain (1979) also reports that *a(va)* in HC locates the action or the state in the future. But she calls our attention to the fact that in the negative sentences, *ava* must be replaced by *ap*. Thus, the negation of (4a) is (4b) and not (4c). Sing (2009) proposes an interesting explanation that allows us to understand why *a(va)* does not accept *pa*. According to the author, (4c) is not possible because *a(va)* expresses uncertainty and *pa* certainty.

- (4) a. Li *ava* rete.  
3SG AVA stay  
'He/she (future) stay.'  
b. Li *p* *ap* rete.  
3SG NEG AP stay  
'He/she (future) not stay.'  
c. \*Li *pa* *a(va)* rete.  
3SG NEG AVA stay  
'He/she (future) not stay.'

Damoiseau (2005, 2014), for his part, argues that the future expressed by the morpheme *ap* is certain, while the one expressed by *a(va)* is uncertain. Thus, according to him, in (5a), the speaker is certain whereas in (5b), they are uncertain. The author does not, however, propose any linguistic test to illustrate his viewpoint.

- (5) a. Jan *ap* wè Jak.  
Jan AP see Jak  
'Jan (future) see Jak.'

- b. Jan ava wè Jak.  
 Jan AVA see Jak  
 ‘Jan (future) see Jak.’

Here, one of the questions that we can ask is whether certainty really is part of the meaning of *ap*. Our thesis is that the meaning of *ap* does not include certainty, and that the only reason that the future reading of *ap* is termed ‘certain’ is by contrast to *a(va)*.

- (6) a. Mwen sèten Jan ap wè Jak.  
 I certain Jan AP see Jak  
 ‘I’m certain that Jan (future) see Jak.’  
 b. #Mwen sèten Jan a(va) wè Jak.  
 I certain Jan A(VA) see Jak  
 ‘I’m certain that Jan (future) see Jak.’

The speaker can use *ap* if they are certain that the eventuality described by the preadjacent will occur, but they can also use *ap* if they are uncertain.

- (7) Mwen doute Jan ap wè Jak.  
 1SG doubt Jan AP see Jak  
 ‘I doubt Jan (future) see Jak.’  
 (8) Eske Jan ap wè Jak?  
 Q Jan AP see Jak  
 ‘(future) Jan see Jak?’  
 (9) Si Jan ap wè Jak, m ka wè l tou.  
 If Jan AP see Jak 1SG might see 3SG also  
 ‘If Jan sees Jak, I might see him too.’

Damoiseau (2005, 2014) proposes another way to express the difference between *ap* and *pral*. According to him, in HC *ap* can express the future whereas *pral* would only serve to mark the prospective aspect. *Pral* would be used to locate the process or the state expressed by the verb in the development of the utterance time (10a). It indicates the imminence of the action whereas *ap* locates the action in a period which has no coincidence with the utterance time (10b). Thus, he concludes, *pral* requires imminence.

- (10) a. Jan pral manje mango a.  
 Jan PRAL eat mango DET  
 ‘Jean (future) eat the mango.’  
 b. Jan ap manje mango a.  
 Jean AP eat mango DET  
 ‘Jean (future) eat the mango.’

According to Damoiseau, in (10a), *pral* is acceptable because it expresses an imminent action. In (10b), it is not so acceptable because there is no imminence. Unfortunately, however, the author does not propose any definition for what he calls imminence. Let's try to see therefore what imminence in time could mean to him. As a first try, let us suppose that imminence in time is as in (11):

- (11) Imminence in time, first try at a definition:  
 An eventuality  $e$  is imminent with respect to an utterance time  $t$  iff the run time of  $e$  begins right after  $t$ .

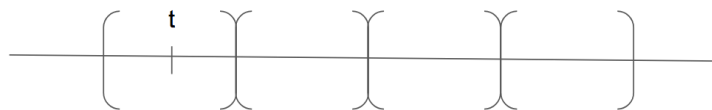
If this is the right definition of imminence in time, we would expect (12) to be infelicitous if uttered in 2019. But in HC, (12) is felicitous; the speaker conveys that Jan will take his retirement the year after the present time, in 2020.

- (12) Jan pral pran retrèt li an 2020.  
 Jan PRAL take retirement 3SG in 2020.  
 'Jan (future) take his retirement in the year 2020.'

But let's not give up yet, maybe we are mistaken about the right definition of imminence. To be as generous as possible to Damoiseau, let's propose another definition, supposing instead that imminence is to be defined as in (13):

- (13) Imminence, second try at a definition:  
 An eventuality  $e$  is imminent with respect to an utterance time  $t$  iff it happens in the unit of time that comes immediately after the one that includes  $t$ .

Central to this definition is the intuitive idea that time can be broken down variously into units of time, as in (1). The labels of the units can be, for example, "Monday" "Tuesday", "Wednesday" ...; "2019", "2020", "2021" ...; or even, conceivably, "school", "career", "retirement".



**Figure 1:** Timeline with units of time

If (13) is the right definition of imminence, we expect (14) to be infelicitous. But in HC, we can felicitously have (14), where we are in January and the speaker utters that Jan will do something three months later.

- (14) Jan pral fè li nan 3 mwa.  
 Jan PRAL do 3SG in 3 months  
 'Jan (future) do it in 3 months.'

We see here that this second definition of imminence does not work any better than the first definition. We conclude therefore that imminence *in time* is not part of the meaning of *pral*.

### 3 Proposal: The meanings of *ap* and *pral*

We propose that the meaning of future-oriented *ap* is similar to that of English *will*, and that the meaning of *pral* is not *temporal* but *causal* imminence, i.e. direct causation.

#### 3.1 The meaning of *ap*

Several tests suggest that the meaning of at least the future-oriented reading of *ap* is similar to that of English *will*. For instance, like *will*, *ap* is felicitous as an offer, as shown in (15). In an offering context, in addition to whatever truth conditions of the form used, it must be true, according to the speaker, that if the hearer doesn't want the eventuality to happen, it won't happen (Copley, 2009).

- (15) In an offering context
- a. I'll make the coffee.
  - b. M *ap* fè kafe  
1SG AP make coffee DET  
'I (future) make the coffee.'

It should be noted that not all future forms are felicitous in offering contexts. For example, English *be going to* and HC *pral* are not:

- (16) In an offering context
- a. #I'm going to make the coffee.
  - b. #M *pral* fè kafe a.  
1SG PRAL make coffee DET  
'I (future) make the coffee.'

Copley argues that future forms like *be going to* which are not possible in offering contexts are aspectualized; that is, they have something like an imperfective operator on top of a future modal. A different approach is taken by Klecha (2011), who argues that the distinction is one of modal subordination. We will not choose between these accounts here. In either case, it is clear that future-oriented *ap* behaves like *will* in this respect.

Another similarity between future-oriented *ap* and *will* is that they both admit a "ratificational" reading (Mari, 2016; Giannakidou & Mari, 2016, 2018) but not a true epistemic reading. To see this, consider a context in which we do not know if Ariadne is sick or not, but we think so, and we are not necessarily planning on figuring out whether she is sick or not. In that case, it is possible to use an epistemic modal like *must* as in (17a), but not *will*, as in (17b). In uttering (17b), the speaker conveys that there will be a point at which someone checks to see if Ariadne actually is sick; this is the ratificational reading.

- (17) In a true epistemic context
- a. Ariadne must be sick.
  - b. #Ariadne will be sick.

This behavior contrasts with future forms in other languages that do admit a true epistemic reading, such as in Greek, in (18) (Giannakidou & Mari, 2016, , p. 6):

- (18) I Ariadne tha ine arrosti  
 DET Ariadne FUT be.3SG.pres sick  
 ‘Ariadne (future) be sick.’

In the case of Haitian Creole, epistemic contexts use *dwe* ‘must’ rather than *ap*. Thus, again, *ap* behaves like English *will*.

- (19) a. Li dwe malad.  
 3SG must sick  
 ‘She must be sick.’  
 b. Li #ap malad.  
 3SG AP sick  
 intended: ‘She (future, as in (18)) be sick.’

A third way in which future-oriented *ap* sentences behave like English *will* sentences is in their use for near-future promises. In French, for example, a near-future promise reading of present tense is possible, as shown in (20a) and (21a). However, the present tense is not possible either in English or in HC; *will* (usually cliticized as *'ll*) and *ap* must be used respectively as shown in the remaining examples.

- (20) a. J'arrive.  
 I-arrive  
 ‘I('ll) come (right) back.’  
 b. #I come right back. / I'll come right back.  
 c. #Mwen vini. / M ap vini.  
 1SG come / 1SG AP come  
 ‘I come (back)’ / I (future) come (back).’

- (21) a. Je te rappelle.  
 1SG 2SG call.back  
 ‘I('ll) call you back.’  
 b. #I call you back. / I'll call you back.  
 c. #Mwen rele w. / M ap rele w.  
 1SG call 2SG / 1SG AP call 2SG  
 ‘I call you.’ / ‘I (future) call you.’

The need for *ap* in near-future promises is thus another way in which HC *ap* behaves like English *will*.

### 3.2 The meaning of *pral*

We propose that *pral* requires causal, not temporal imminence. That is, the speaker must view the current situation as *directly* causing the eventuality described.

For example, if Jan wishes to buy a car and everything is already planned and he already has the money, both *pral* and *ap* as in (22) are acceptable; however, in the case where Jan has no money yet, even though *ap* as in (23a) is acceptable, *pral* as in (23b) is unacceptable.

(22) In a context where Jan has money

a. Jan *ap* achte yon machin

Jan AP buy a car

‘Jan (future) buy a car.’

b. Jan *pral* achte yon machin

Jan PRAL buy a car

‘Jan (future) buy a car.’

(23) In a context where Jan has no money

a. Jan *ap* achte yon machin

Jan AP buy a car

‘Jan (future) buy a car.’

b. #Jan *pral* achte yon machin

Jan *pral* buy a car

‘Jan (future) buy a car.’

That is, when the current situation (including Jan’s intention and his financial situation) can directly cause Jan to buy a car, *pral* is possible; when it cannot, *pral* is not possible.

Likewise, when a cup is on the edge of a table, threatening to fall, *ap* is not entirely felicitous, as in (24a). However, *pral* is acceptable, as in (24b). On the other hand, when the cup is secure in the middle of the table and not threatening to fall, but a ball is rolling toward it, then *ap* is acceptable but *pral* is not, as shown in (25a) and (25b) respectively.

(24) In a context where the cup is threatening to fall off the edge

a. ?Vè a *ap* tonbe

glass the AP fall

‘The glass (future) fall.’

b. Vè a *pral* tonbe

glass the PRAL fall

‘The glass (future) fall.’

(25) . In a context with a ball rolling toward the cup

a. Vè a *ap* tonbe

glass the AP fall

‘The glass (future) fall.’

- b. #Vè a pral tonbe  
 glass the PRAL fall  
 ‘The glass (future) fall.’

Again, *pral* is acceptable when the causing conditions for the eventuality (here, the falling of the cup) are in place, but not when they are not yet in place (there is currently no force on the ball).

We propose, therefore, that the denotation for *pral* is as in (26a), with an example sentence given in (26b).

- (26) a.  $\llbracket pral \rrbracket = \lambda p \lambda s . \exists s' : s \text{ DIRECTLY-CAUSES } s' \ \& \ p(s')$   
 b.  $\llbracket Jan \ pral \ achte \ yon \ machin \rrbracket =$   
 $\lambda s . \exists s' : s \text{ DIRECTLY-CAUSES } s' \ \& \ \text{AGENT}(Jan, s') \ \& \ buy(s') \ \& \ s'$   
 $\text{DIRECTLY-CAUSES } s'' \ \& \ have(Jan, a \ car, s'')$

At this point we should stress that it is perfectly possible to have future reference, as with *pral*, but where the denotation does not have quantification over possible worlds, as in (26a). The speaker judges both what the relevant starting situation is and whether (or to what extent) it is likely to cause the described eventuality. Because there are different ways to judge these, there are indeed different possibilities at play; it is just that these possibilities are not reified and quantified over as possible worlds in the denotation. Rather, the present is transformed into the future through the laws of physics and rational behavior. The difference between the explicit quantificational view and the transformational view is reminiscent of the difference in phonology between Optimality Theory (calculate all the possibilities and choose the right one(s)) and traditional transformational rules (transform one form into another).

In the case of *pral*, we submit that it is not merely *possible* to treat its meaning in terms of a causal relation, it is also *useful* to do so. That is, what we are trying to distinguish is something like the length of a causal chain. It would be odd to try to do this in a quantificational, modal system in the sense of (e.g.) Kratzer (1981, 1991), because with either a shorter chain (the a examples) or a longer chain (the b examples), it seems like the kind of modality (circumstantial) is the same in either case; in any case the laws of physics and rational behavior are the same in either case. So, it is not clear how to distinguish between longer and shorter causal chains in that way. It is better, we think, to explicitly put the causal chain in the denotation.

#### 4 Discussion of the proposed denotation for *pral*

To further evaluate the proposed denotation in (26a), we compare it now to another future-oriented form that has been argued to involve direct causation: English futurates.

English futurates are also supposed to be direct causation between a current (usually intentional) state and a caused eventuality. But unlike English futurates, which require plannability, *pral* has no plannability requirement.

- (27) a. John wins the election tomorrow.



- b. John *pral* genyen eleksyon an demen.  
John PRAL win election DET tomorrow  
John (future) win the election tomorrow.'

- (28)
- a. It rains tomorrow.
  - b. Lapli *pral* tonbe demen.  
rain PRAL fall tomorrow  
'It (future) rains tomorrow.'

There is one kind of exception to this rule for English futurates, namely "clockwork" or "natural" futurates. These clearly do not involve an intention or plan, since no one can plan the sun or the tide:

- (29)
- a. The sun rises tomorrow at 6.
  - b. The tide is high tomorrow at 4.

The idea in Copley (2018), however, is that the clockwork examples are not really an exception. English futurates are argued to make reference to direct causation from either a current intentional state *or* another causal state called a dispositional state, formally similar to an intentional state. As far as the grammar is concerned, Copley argues, intentions and physical dispositions look the same.

So, if English futurates and HC *pral* both involve direct causation from a current state, in what way are they different, such that their denotations yield the differences in (27) and (28)?

One *prima facie* attractive hypothesis would be that what is caused in English futurates is an eventuality which is obligatorily described with a time, whereas what is caused in *pral* sentences is an eventuality which is obligatorily not described with a time. This is plausible because if the cause is non-intentional, there are very few cases in the world where it can cause an eventuality to happen at a particular time—pretty much the sun, the tide, etc. But by hypothesis, *pral* is not limited to things caused [to happen at a particular time].

However, if this hypothesis were true, it would mean that the low position of temporal adverbials (lower than the causal relation contributed by *pral*) would have to be impossible in HC, and this is not the case. Low temporal adverbials are perfectly possible with *pral*, as shown in :

- (30) Brezil *pral* jwe ak Ajantin demen.  
Brazil PRAL play with Argentina tomorrow  
'Brazil (future) play Argentina tomorrow.'

As an alternative to this syntactic explanation, we could consider a conceptual explanation. What conceptual explanation could be adequate to explain the contrast in (27) and (28) between HC *pral* and English futurates? The idea should be something like this: While they both make reference to direct causation, HC *pral* is more permissive in what it accepts as a cause than English futurates are.

There are two theoretical distinctions in the literature that are reminiscent of the empirical distinction we are investigating, in that they admit different requirements

on causes. One is the distinction made by Mari & Martin (2007) between different kinds of ability; another is the distinction between necessary and sufficient cause, as understood by Pearl (2000). In fact, it may well be that these distinctions are the same distinction. While we will not be in a position to operationalize and test this hypothesis, we can show the similarities we see between the distinctions and how they might apply to the facts about *pral* and English futurates.

Mari & Martin (2007) propose a difference between *action-dependent ability* and *generic ability*. A generic ability is what is traditionally thought of as an ability; for example, the feat can be repeated if the holder of the ability wants. Generic abilities in this sense seem similar to the intentions in English futurates: one can only plan something if one has the ability to say whether something happens or not. Action-dependent ability, on the other hand, is literally dependent on the action; the action happens to be a cause of the result but there is no generic ability for it to cause a result. This seems more similar to the case with HC *pral*, where it is not necessary that the eventuality be plannable, but still there is a causal relation expressed.

The other idea that we speculate could be relevant is the distinction between necessary and sufficient cause. Philosophers have long relied on a more or less intuitive distinction between necessary and sufficient *conditions*; Pearl (2000) (and see also Pearl & Mackenzie (2018)) formally defines *necessary causes* and *sufficient causes* within a causal model framework (this framework is based on probabilities, but we will not use probabilities in this brief informal discussion). The idea behind a necessary cause is that the effect would not have occurred without the cause; the idea behind a sufficient cause is that the cause was “enough” in this particular case for the effect to happen.

According to Pearl (2000) and Pearl & Mackenzie (2018), in order to determine whether something is a necessary cause of a particular effect, we proceed as follows. In a situation where the cause and the effect both happen, we consider what would happen if the cause were removed. If the effect still would happen, the cause qualifies as a necessary cause. In order to determine whether a cause is sufficient, in a situation where neither the cause nor the effect happens, we should consider what would happen if the cause were to happen. If the effect would happen, then the cause counts as a sufficient cause.

How might these notions of cause explain the difference between *pral* and English futurates—namely that *pral* does not require plannability while English futurates do, even though they both involve direct causation? It seems to us, on a first inspection, that the intentional or dispositional state in English futurates should be both a necessary and sufficient cause, while the cause in the case of *pral* need only be sufficient. This would explain why *pral* is more permissive than English futurates.

## 5 Conclusion

In this paper, we were principally interested in two of the three future particles in HC: *ap* and *pral*. We questioned the idea of certainty proposed in the literature to describe *ap*, as well as the idea of imminence for *pral*. Certainty is not part of the meaning of *ap*; instead its meaning is close to that of English *will*. Imminence

in time is not part of the meaning of *pral*; instead its meaning seems to involve causal imminence. If this idea about *pral* is correct, it requires us to distinguish *pral* from English futurates, since the latter require plannability and *pral* does not. We presented two distinctions from the literature (Mari & Martin, 2007; Pearl, 2000) that may account for this distinction.

## References

- Copley, B. 2005. A grammatical and a conceptual distinction for modals. In *Proceedings of NELS*, ed. by L. Bateman & U. Cherlon, volume 35.
- Copley, B. 2009. *The Semantics of the Future*. Routledge.
- Copley, B. 2018. Dispositional causation. *Glossa: a Journal of General Linguistics* 3.
- Damoiseau, R. 2005. *Eléments de grammaire comparée français-créole haïtien*. Ibis rouge.
- Damoiseau, R. 2014. Pour une approche comparative de la grammaire créole: Créoles guadeloupéen, martiniquais, guyanais, haïtien. *Contextes et Didactiques* 4.
- Déchaine, R.-M. 1991. Bare sentences. In *Semantics and Linguistic Theory*, volume 1, 31–50.
- DeGraff, M. 2007. Kreyòl ayisyen, or haitian creole (Creole French). In *Comparative creole syntax: Parallel outlines of 18 Creole Grammars*, ed. by J. Holm & P. Patrick, 101–126.
- Giannakidou, A., & A. Mari. 2016. Epistemic future and epistemic must: nonveridicality, evidence, and partial knowledge. In *Mood, Aspect, Modality Revisited: New Answers to Old Questions*, ed. by A. Giannakidou, D. Klimek-Jankowska, & K. Migdalski.
- Giannakidou, A., & A. Mari. 2018. A unified analysis of the future as epistemic modality. *Natural Language & Linguistic Theory* 36.
- Glaude, H. 2012. *Aspects de la syntaxe de l'haïtien*. Université Paris 8 dissertation.
- Klecha, P. 2011. Optional and obligatory modal subordination. In *Proceedings of Sinn und Bedeutung*, volume 15, 365–379. Citeseer.
- Kratzer, A. 1981. The notional category of modality. In *Words, Worlds, and Contexts: New Approaches in Word Semantics*, ed. by H.-J. Eikmeyer & H. Rieser, 39–74. Berlin: de Gruyter.
- Kratzer, A. 1991. Modality. In *Semantics: An international handbook of contemporary research*. de Gruyter, Berlin.

- Lainy, R. 2010. *Temps et aspect dans la structure de l'énonciation rapportée: comparaison entre le français et le créole haïtien*. Rouen dissertation.
- Lefebvre, C. 2006. *Creole genesis and the acquisition of grammar: The case of Haitian Creole*, volume 88. Cambridge University Press.
- Mari, A. 2016. French future: Exploring the future ratification hypothesis. *Journal of French Language Studies* 26.
- Mari, A., & F. Martin. 2007. Tense, abilities and actuality entailment. In *Proceedings of the Amsterdam Colloquium*, 151–156.
- Pearl, J. 2000. *Causality: models, reasoning and inference*. Springer.
- Pearl, J., & D. Mackenzie. 2018. *The book of why: the new science of cause and effect*. Basic Books.
- Sing, G. F. 2009. Dynamique interne des créoles mauricien et haïtien: analyse contrastive du fonctionnement sémantique des marqueurs tma.
- Sylvain, S. 1979. *Le créole haïtien. Morphologie et syntaxe*. (Réimpression de l'édition de Wetteren-Port-au-Prince, 1936.). Slatkine Reprints.
- Valdman, A. 1978. *Le créole: structure, statut et origine*, volume 8. Institut d'études et de recherches interethniques et interculturelles.