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The Perfective, the Progressive and the (dis)closure of situations: comment on the paper by María J. Arche

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Abstract

In the present paper, inspired by María J. Arche's work, "The construction of viewpoint aspect: the imperfective revisited" (2013, this issue), I add several pieces of evidence in favor of her proposal that viewpoint aspect does not alter the fundamental situation aspect properties of predicates. Namely, I discuss the temporal interpretations in Capeverdean, a Portuguese-based Creole language for which the salient opposition in the domain of viewpoint aspect is not between the imperfective and the perfective, but rather between the Progressive and the Perfect, here taken as semantically complex categories that involve certain temporal characteristics; crucially, imperfectivity is one of the features of the Progressive and a perfective viewpoint is part of the semantic complexity of the Perfect. I also discuss the role of *for*-time durational adverbials when combined with the perfective and propose that, in their presence, the relevant final boundary when telic predicates are at stake is not the culmination of the event, but rather the final point described by that time-argument. This proposal accounts nicely for the fact that, in these specific contexts, there is no contradiction in having this perfective clause conjoined with the assertion that the underlying telic situation is not completed.

Keywords: *Situation aspect, Perfect/Progressive, Perfective, for-time adverbials*

1. The imperfective revisited: Arche's proposal

The main drive of Arche's (2013) paper is to show that viewpoint aspect does not alter the situation aspect properties of predicates. She focuses on Spanish as the source of empirical evidence and offers novel views on the imperfective. Elaborating on well-chosen examples, she convincingly demonstrates that the fundamental situation aspect properties are preserved throughout the derivation: (i) telic situations remain telic even in the absence of culmination that obtains when their description is combined with the progressive; (ii) stative situations remain stative even when the Verb Phrases (VPs) that describe them are able to combine with the progressive; (iii) non-stative situations remain non-stative even in the ability and habitual readings that result from the combination with the imperfective (either in the present tense or the past imperfect).

Regarding situation aspect, Arche assumes the proposals in Borer (2005): verbal predicates enter the derivation as roots and acquire their fundamental properties by combining with the relevant syntactic projections. She argues that the central distinction in this domain is that of homogeneity vs. heterogeneity. Still following Borer (2005), she contends that predicates are homogeneous by default and that they are converted into heterogeneous predicates if they combine with a Quantity projection. In other words, predicates are homogeneous only if they are both cumulative and divisive. If they do not have both of these properties, they are heterogeneous. She emphasizes that even this role played by the syntactic structure in the genesis of situation aspect is not a coercive mechanism, for it does not work as an operation that intervenes to "solve conflicts", but only to create meaning.

Regarding viewpoint aspect, Arche contends that it is construed in the syntax via a set of functional projections containing interval-ordering predicates (Zagona 1990; Stowell 1993, 2007; Klein 1994, 2009; Demirdache and Uribe-Etxebarria 2000, 2007) and quantifiers over occasions (Verkuyt 1999). Although not all combinations give equally natural results, all types of predicates may serve as the input to these functional projections (even some states may combine with the progressive), which provide them with a viewpoint aspect interpretation and do not change the situation aspect properties that they have acquired in the syntax.

More specifically, Arche's article discusses the roles of the progressive, the continuous and the habitual. She also analyses some Spanish combinations with perfective morphology that yield a type of progressive reading.

An important characteristic of the progressive reading in Spanish is that it may have distinct morphological expressions: a periphrasis containing a copular verb plus the main verb in the present participle (1), or an inflected imperfect form (2).¹

- (1) Marta estaba dibujando un castillo (cuando la visité).
Marta be:PST.IMPF.3SG drawing a castle (when I visited her)
'Marta was drawing a castle when I visited her.'
- (2) Marta dibujaba un castillo (cuando la visité).
Marta draw:IMPF.3SG a castle (when I visited her)
'Marta was drawing a castle when I visited her.'

As Arche points out, one can see by the translations into English that the two sentences have an identical interpretation. She takes this as an argument that the inflected and the periphrastic forms are in free alternation. It remains unclear, however, whether this is also the case when the inflected imperfect form occurs without an adverbial of the type *cuando la visité* 'when I visited her'. In other words, if, in the absence of this expression, the imperfect has a habitual reading, then it cannot be maintained that (1) and (2) are in free alternation, since only in (1) is the progressive reading independent of the adverbial expression.

Arche then challenges the association between the perfective and the interpretation that the eventuality is finished (Comrie 1976). She shows that a Spanish sentence involving the description of a telic situation and a perfective viewpoint aspect gives the expected grammatical results with *in-time* adverbials, but it also gives acceptable results for most speakers with *for-time* adverbials. Consider the following sentences from examples (21) and (22) in her paper:

- (3) Marta dibujó un castillo en diez minutos.
Marta draw:PFT.3SG a castle in ten minutes
'Marta drew a castle in ten minutes.'
- (4) ? Marta dibujó un castillo durante diez minutos.
Marta draw:PFT.3SG a castle for ten minutes
'Marta drew a castle for ten minutes.'

These two types of durational adverbials are taken cross-linguistically to be good diagnostics for (a)telicity: *for-time* adverbials are good with atelic and bad with telic predicates; *in-time* adverbials are good with telic and bad with atelic predicates. Arche explores the account of these Spanish data according to which the presence vs. absence of completion of a telic situation (as seen in (3) and (4), respectively) derives from a different syntax-semantics of the perfective viewpoint. Whenever a telic predicate in the perfective can be understood with absence of completion, it can be paraphrased by a "perfective progressive". She notes a difference between creation and non-creation verbs and gives a further example with a non-creation one, *colorear* 'color', to sustain her point. (Arche 2013: (25)):

- (5) Marta estuvo coloreando un castillo (durante diez minutos),
Marta be:PFT.3SG coloring a castle (for ten minutes),
pero no lo terminó.
but NEG it finish:PFT.3SG
'Marta was coloring a castle (for ten minutes) but she did not finish it.'

Given these possibilities, she argues for the following points: (i) progressivity is not associated with imperfective marking only (the discussion of these Spanish data allows her to disentangle imperfectivity from progressivity); (ii) perfective forms may be internally complex, susceptible to being deconstructed.

¹ List of abbreviations: 1SG/1PL – 1st person singular/plural, etc.; COMP – complementizer; HAB – habitual; IMPF – imperfect; NEG – negation; PFT – perfect; POSS – possessive; PREP – preposition; PRES – present; PROG – progressive; PST – past; TMA – temporal morpheme (this is used in some cases for preverbal *ta*, which has a complex aspectual and modal function).

Therefore, the details that apply to the progressive with telic predicates also apply to perfective sentences with telic predicates that can be paraphrased by a perfective progressive.

It is a well-known cross-linguistic fact that when telic predicates combine with the progressive there is no assertion about the culmination of the process. Arche, however, refuses to take this as evidence that the progressive makes telic predicates undergo “de-telicization” (cf. Bertinetto 1994; Borer 2005; a.o.). Instead, she convincingly shows that the felicitous use of the progressive does not depend on the actual final culmination of the eventualities. For this reason, she argues that there is possibly no conflict between telicity and progressivity. As she correctly points out, the heterogeneity typical of telic predicates does not depend on completion: heterogeneous predicates maintain this property even when only a part of the event is understood as instantiated (cf. example in (1): possibly, only a part of the castle was already drawn when I visited Marta, and yet this does not affect the heterogeneity of the predicate).

She uses different diagnostics to demonstrate this preservation of heterogeneity of telic predicates in the progressive. One concerns the well-known contrast that creates the imperfective paradox (Dowty 1979). The reasoning is as follows: if the progressive were an atelicity head, then accomplishment predicates would show an entailment pattern identical to the one exhibited by activity predicates (6a). In other words, accomplishment predicates in the past progressive would entail the corresponding past non-progressive version. This is contrary to fact, as we see below (6b):

- (6) a. Marta was swimming → Marta has swum
 b. Marta was drawing a castle → Marta has drawn a castle

The other diagnostic used by Arche is the possible combination, in Spanish, with adverbials like *gradualmente* ‘gradually’ (Piñón 2000), which are possible only with telic situations (i.e. heterogeneous situations). These adverbials can still appear when the relevant predicates are combined with the progressive, which shows that the latter has not destroyed heterogeneity.

These data are essential to establish the following points in her analysis of incomplete accomplishments: (i) completion or lack thereof is clearly located within the domain of viewpoint aspect; one piece of evidence in support of this is that, in general, when a perfective yields an incomplete accomplishment reading, as in (4), it can be paraphrased by a perfective progressive, an equivalent to what we have in (5); this seems a good sign of a different underlying viewpoint aspect semantics; (ii) the component of the imperfective responsible for yielding the incomplete reading is a subpart of what is generally known as progressive. The author highlights that this approach has interesting advantages in comparison with former proposals on incomplete accomplishments for other languages.

Here lies one point that I will take issue with in section 5: the specific role of the adverbial in (4). Note that, as Arche also points out, whereas the *for*-time adverbial in (5) can be dispensed with for the correct progressive reading (perfective progressive), in (4) we absolutely need the *for*-time adverbial in order to attain the same reading—and the consequent absence of completion.

One final note on the main ideas in her paper that are relevant to the current commentary is that it establishes the fundamental distinction between the progressive, the habitual and the ability readings following Verkuyl (1999), Ferreira (2005), and Arche (2006): the syntax of the progressive includes a quantifier over occasions by virtue of which reference is made to one instantiation of an event; habituality includes a quantifier over occasions that yields the reading where reference is made to multiple occasions—not a universal quantifier but one of the family of “many”; in contrast, continuous viewpoint seems to not involve any quantifier over particular occasions. One important fact is that the multiple occasions referred to in the habitual reading involve the perfective aspect. The aspect head capturing the perfectivity of each instance does not receive any morphological form in Spanish, but it is visible for the semantics component: a *for*-time adverbial is only allowed in the presence of the perfective. Arche discusses this example (her (71)):

- (7) Cuando era pequeña Marta nadaba durante cinco horas.
 when be.IMPF.3SG young Marta swim:IMPF.3SG for five hours
 ‘When she was young, Marta used to swim for five hours.’

The adverbial *durante cinco horas* ‘for five hours’ restricts the duration of the interval for each of the (perfective) instantiations of the underlying eventuality and she persuasively argues that it modifies the Event Time and not the Assertion Time (as defended in Demirdache and Uribe-Etxebarria 2004).

2. A general comment

I find Arche's analysis very insightful and her arguments compelling. However, in several instances her paper seems to reinforce several points of prior analyses more than challenge some of the so-called "classical" views.

Take the effects of the progressive on telic predicates: there is a body of literature on incomplete accomplishments, which, as the expression indicates, are still seen as heterogeneous, in the sense that she demonstrates them to be—that is, given the line of reasoning underlying the imperfective paradox or by applying some syntactic tests like the possible combination with such adverbs as the Spanish *gradualmente* 'gradually'. The modal, intensional approaches, for instance, have proposed that the progressive establishes a relation between an event in progress and the corresponding complete event that might never attain its completion (Dowty 1979; Landman 1992; Bonomi 1997; Portner 1998, among others). The non-modal approaches (Vlach 1981; ter Meulen 1985; Bach 1986; Parsons 1990, among others), which are grounded in an event-based semantics, establish in their own terms the relation between telic event descriptions in progressive and in non-progressive sentences. In both cases, it seems to me that there is no clear negation of the heterogeneity of telic situations.

One specific case of these "classical" views is the proposal for English that "the progressive operator turns sentences into stative sentences" (Vlach 1981:284). This seems particularly focused on the truth conditions of event descriptions when combined with the progressive. The author uses "their way of interacting with point adverbials" to illustrate the fact that they pattern with states in this respect. See the contrast in (8), adapted from Vlach's examples:

- | | | |
|-----|---|----------------------------|
| (8) | a. Max was here when I arrived. | [state] |
| | b. Max was building a house when I arrived. | [progressive telic event] |
| | c. Max ran when I arrived. | [non-progressive activity] |

In (8a), a stative sentence, and in (8b), a telic event description combined with the progressive, Max was here/building a house prior to my arrival; in (8c) Max started running when I arrived. In the terminology of the present paper, for both (8a) and (8b) the Assertion Time is ordered *within* the Event Time. This is not the case for (8c). This does not make any predictions, however, regarding what the progressive does to the whole set of situation aspect properties of events.² Moreover, Vlach's proposal applies to process sentences, either when they denote activities or when they denote the process parts that lead to accomplishments or achievements (although the author states that the processes leading to achievements are difficult to specify).³ He ends his paper by saying: "[...] the process that goes on when the progressive of Φ is true is always one that will lead, if continued, to the truth of Φ ." Hence, it seems not to be violating the fundamental situation aspectual distinctions.

In the same vein, I take issue with Arche's statement that: (i) the progressive has been considered not to combine with states since at least Lakoff (1966); (ii) there is a prior idea that habitual viewpoint works as an operation that turns all predicates into states. Regarding the combination of states with the progressive, there is attested empirical evidence against that radical position (cf. Davidson 1993:371–410, for English), and several formal analyses have taken this into account, emphasizing that individual-level states (which describe a more-or-less permanent property of the individual) are the only ones truly prohibited from occurring in the progressive (Taylor 1977; Dowty 1979, among others). Nevertheless, as Arche points out, the exact effects of the progressive when it combines with states are still to be clarified. As for the consideration that generics and habituals share some properties with stative situations, this does not amount to the claim that they are completely converted into states. On the one hand, it is true that in

² Hallman (2009b), among others, has discussed several diagnostics to distinguish dynamic events combined with the progressive from stative situations: their interaction with agent-oriented modifiers (eventive sentences in the progressive support them, states do not) or their behaviour in pseudocleft constructions (eventive sentences in the progressive cannot occur in them, but states can).

³ Rothstein (2004), among others, has defended that, when achievements seem to occur in the progressive, what really happens is that there is a shift from an achievement-type event to an accomplishment-type event. Crucially, even if this proposal is right, this is an operation between telic events, not a type of de-telecization.

English, among many other languages, generics and habitals are licit in the present tense, unlike episodic events not combined with the progressive. This fact is nicely accounted for if we assume that generics and habitals (and progressives, for that matter), just like states, have an unbounded interpretation and are true of instants of time (Taylor 1977); in this case, the relation with a point-like time reference (the Utterance Time, in the case of present tense) naturally emerges. On the other hand, it is fairly uncontroversial that habitual sentences do not share all the characteristics of basic-level statives, both at the syntactic and the semantic levels: “[they] allow the forms that are related to agency and control, unlike other statives” (Smith 1991:42), and they are interpreted as generalizations or regularities (Smith 1991, 2003), which is not the case with states.

In any case, as noted earlier, Arche’s main purpose is to demonstrate that the fundamental situation aspect properties are not altered by the combination with different viewpoint aspect heads. This goal is decidedly attained.

In the next sections I discuss some temporal readings in Capeverdean that will support two proposals in Arche’s paper: (i) the analysis of viewpoint aspect is construed in the syntax via a set of functional projections comprising interval-ordering predicates (Zagona 1990; Stowell 1993, 2007; Klein 1994, 2009; Demirdache and Uribe-Etxebarria 2000, 2007), in an operation that does not alter the fundamental situation aspect properties of predicates (section 3); (ii) the ongoing interpretation of accomplishments—thus, not including the culmination—may occur even in the absence of progressive morphology (section 4). Finally, I briefly discuss the role of particular temporal adverbials when combined with a perfective aspect: the adverbials of duration of the type *durante diez minutos* ‘for ten minutes’ (section 5).

3. Capeverdean: the Perfect and the Progressive

In the Santiago variety of Capeverdean, a Portuguese-based Creole language, there are three overt temporal morphemes, two of them preverbal (*ta* and *sata*) and a third one affixed to the verb (*-ba*).⁴ Some temporal meanings, however, can only be accounted for if we also assume the existence of a zero morpheme, which has received various treatments (see Pratas 2010 for an overview), and most recently has been analysed as a Null Perfect (Pratas 2011, 2012). The following examples illustrate a dynamic predicate (*kume pexe* ‘eat (the) fish’) in combination with these morphemes: \emptyset (Null Perfect), *ta*, *sata* and *-ba*.

(9) \emptyset V

N	kume	pexe	na	djanta.	[present perfect]
1SG \emptyset	eat	fish	PREP	dinner	
‘I have eaten (the) fish at dinner.’					

(10) *ta* V

a. N	ta	kume	pexe	(tudu dia).	[present attitudinal / habitual]
1SG	HAB	eat	fish	(every day)	
‘I am a fish eater.’ / ‘I eat fish (every day).’					

b. Manha,	N	ta	kume	pexe	na	djanta.	[future]
tomorrow	1SG	TMA	eat	fish	PREP	dinner	
‘Tomorrow, I will eat fish at dinner.’							

(11) *sata* V

N	sata	kume	pexe.	[present progressive]
1SG	PROG	eat	fish	
‘I am eating (the) fish.’				

(12) \emptyset V-*ba*

N	kumeba	pexe	na	djanta	antis	di N	ba	deta.	[past perfect]
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⁴ There are two other postverbal morphemes, *-du* and *-da*, which occur in passives, but I will not discuss them here, since passive constructions are out of the scope of this paper.

1SG \emptyset eat:PST fish LOC dinner before of 1SG go lie.down
 ‘I had eaten fish at dinner before I went to bed.’

(13) *ta V-ba*

a. Un bes, N ta kumeba pexe (tudu dia). [past attitudinal / habitual]
 one time, 1SG HAB eat:PST fish every day
 ‘In the old days, I used to eat fish every day.’

b. Dia siginti, N ta kumeba pexe na djanta. [future of the past]
 day following, 1SG TMA eat:PST fish PREP dinner
 ‘The next day, I would eat fish at dinner.’

(14) *sata V-ba*

Kelora N ka bai pamodi N sata kumeba. [past progressive]
 that.time 1SG NEG go because 1SG PROG eat:PST
 ‘At that time I did not go/leave, because I was eating.’

As we can see in the examples, a present interpretation is only obtained when the predicates are combined with: (i) the attitudinal / habitual reading provided by the preverbal morpheme *ta* (as in (10a)) when there is no adverbial yielding a future interpretation (cf.(10b)); (ii) the progressive reading provided by the preverbal morpheme *sata* (11). The same aspectual / modal interpretations are shifted into the past when *-ba* is affixed to the verb, as in (13) and (14). Note that in (13b) we have come future reading, which corresponds to (10b), with the only difference being the ordering relation between Utterance Time and Assertion Time: a relation of inclusion (*within*) in (10b) and a relation of subsequence (*after*) in (13b). As for the examples in (9) and (12), where we have a past interpretation of the event, Pratas (2011, 2012) has proposed a Null Perfect analysis.

In the terms defined in Demirdache and Uribe-Etxebarria (2000, 2007), the salient opposition in Capeverdean in the domain of viewpoint aspect is between the Progressive and the Perfect, rather than between the Imperfective and the Perfective.⁵ The Progressive and the Perfect here are taken as semantically complex categories that involve certain temporal characteristics.

For the progressive readings the ordering predicates establish the following relations:⁶

- (15) for (11): Tense: UT-T is WITHIN AST-T [present]
 Aspect: AST-T is WITHIN EV-T [progressive]
- for (14): Tense: UT-T is AFTER AST-T [past]
 Aspect: AST-T is WITHIN EV-T [progressive]

The Utterance Time is *within* (present tense, (11)) or *after* (past tense, (14)) the time for which an assertion is made. In both cases, the ordering relation between the Assertion Time and the Event Time is one of inclusion (progressive aspect).

As for the Perfect readings, the ordering predicates establish the following relations:

- (16) for (9): Tense: UT-T is WITHIN AST-T [present]
 Aspect: AST-T is AFTER EV-T [perfect]
- for (12): Tense: UT-T is AFTER AST-T [past]

⁵ Demirdache and Uribe-Etxebarria (2007, 2014, this issue) incorporate (im)perfective aspect within their model, on the assumption that the ordering relation holding between the AST-T and the EV-T (which aspect serves to specify) can be established via anaphora. They argue that when temporal anaphora involves coreference, the resulting viewpoint will be perfective, and when temporal anaphora involves binding, the resulting viewpoint will be imperfective. I leave the consequences of this for future research.

⁶ I do not consider here the label REF-T for the external arguments of TP and of AspP, and go straight to the fact that, in this case, these reference times correspond, respectively, to the Utterance Time and to the Assertion Time.

Aspect: AST-T is AFTER EV-T [perfect]

The Utterance Time is *within* (present tense, (9)) or *after* (past tense, (12)) the time for which an assertion is made. In both cases, the ordering relation between the Assertion Time and the Event Time is one of *subsequence* (perfect).

The habitual readings are a more complex matter because they involve quantification and, thus, a modal analysis must be considered. I leave them out of the current discussion for two reasons: (i) the formal points in this analysis are still under research; (ii) the current paper is more specifically focused on aspect.

Crucially, Pratas (2011, 2012) proposes a Null Perfect analysis for the “bare forms” of some Capeverdean predicates in order to account for the following puzzle: in some contexts, the bare form of a predicate like *sabe risposta* ‘know the answer’ has a present temporal reading, in contrast to all eventive and some other stative sentences. Observe the following contrast:

- (17) a. N sabe risposta. [present]
 1SG know answer
 ‘I know the answer.’
- b. N kume pexe. [past]
 1SG eat fish
 ‘I ate (the) fish.’
- c. N kridita na Nhor Des. [past]
 1SG believe in sir god
 ‘I believed in God.’ [I was a believer]
 *‘I believe in God.’

According to the Null Perfect analysis: (i) all Capeverdean lexical verbs in root clauses combine either with a Progressive morpheme or a Null Perfect, which are in complementary distribution. This applies both to stative and non-stative predicates (therefore, it is not the case that these stative predicates show an eventive-like behaviour); (ii) the distinct temporal interpretations illustrated in (17) depend on the type of Perfect State located at the Assertion Time. On the one hand, for statives like *kridita na Nhor Des* ‘believe in God’ and all eventive predicates, the Perfect State is a type of “resultant” state (Parsons 1990; ter Meulen 1995).⁷ As specified in Portner (2011:1230), the “resultant state is to be distinguished from a result state. A resultant state is not an ordinary state which has been caused by the past event described by the sentence, but rather a kind of abstract state of the event’s ‘having occurred’”. For Capeverdean, I argue that, in this case, the Perfect State is not part of the event structure. In these circumstances, we obtain the simple

⁷ For the discussion of some stative properties of predicates like *kridita na Nhor Des* ‘believe in God’, see Pratas (2012), where, among other features, their temporal reading in a narrative has been tested. The line of reasoning behind this diagnostics goes as follows: eventive predicates advance the reference time in a narrative, whereas stative predicates do not (Kamp and Reyle 1993). Thus, we obtain the following contrast:

- (i) Un omi ta entra na bar. E sta duenti.
 one man PRES enter in.the bar. 3SG be sick
 ‘A man enters the bar. He is sick.’ [overlapping reading - state]
- (ii) Un omi ta entra na bar. E ta kridita na Nhor Des.
 one man PRES enter in.the bar. 3SG PRES believe in Sir God
 ‘A man enters the bar. He believes in God / He is a believer.’ [overlapping reading - state]
- (iii) Un omi ta entra na bar. E ta kume banana.
 one man PRES enter in.the bar 3SG PRES eat banana
 ‘A man enters the bar. He eats one/the banana.’ [sequence – non-stative]

I am grateful to Peter Hallman (p.c.) for the suggestion of this test.

A final note on this is about the gloss PRES (and not HAB) for the morpheme *ta* in these cases: in Capeverdean, only in narratives may the present tense have a non-generalizing interpretation (see Smith 2003 for a discussion on the various aspectual entities and tense in different discourse modes in English; I argue that some of these effects also hold in Capeverdean).

ordering relations described in (16), where the Assertion Time is *after* the Event Time.⁸ On the other hand, for *sabe resposta* ‘know the answer’, the Perfect State is a type of consequence or result state (Moens and Steedman 1988; Smith 1991); this consequent / result property causes this Perfect State to be part of the complex structure of a situation. In this case, and in the absence of adverbials or other information pointing to a different temporal anchor within the complex event structure, the Event part that should be considered salient in establishing the temporal ordering relations is the Perfect State. Therefore, the Assertion Time is *within* the Event Time. Consider an event-description like *sabe resposta* ‘know the answer’ combined with different tenses, the present (18a) or the past (18b):

- (18) a. N sabe risposta.
 1SG know answer
 ‘I know the answer.’
 b. N sabeba risposta.
 1SG know:PST answer
 ‘I knew the answer.’

We are now able to describe these relations in the following terms:

- (19) for (18a): Tense: UT-T is WITHIN AST-T [present]
 Aspect: AST-T is WITHIN EV-T [underlying perfect]

 for (18b): Tense: UT-T is AFTER AST-T [past]
 Aspect: AST-T is WITHIN EV-T [underlying perfect]

In this section, I have discussed some temporal interpretations in Capeverdean that endorse one of the main points in Arche’s paper: viewpoint aspect is construed in the syntax via a set of functional projections containing interval-ordering predicates (Zagona 1990; Stowell 1993, 2007; Klein 1994, 2009; Demirdache and Uribe-Etxebarria 2000, 2007). The next section discusses a particular case of incomplete accomplishments and demonstrates that, also in this Portuguese-based Creole language, viewpoint aspect does not alter the fundamental situation aspect properties of predicates.

4. One case of incomplete accomplishments in Capeverdean (Pratas and Hyams 2010)

The allegedly bare forms of dynamic predicates in Capeverdean have been analyzed in Pratas (2010) as containing a zero operator that adds a termination to atelic and a completion to telic predicates. This was an adaptation of the proposal in Hallman (2009a) for English telic predicates in the preterit.⁹ However, this proposal did not properly account for the distinction between, on the one hand, all the dynamic and most stative predicates, which have a past temporal interpretation in their bare forms, and, on the other hand, event descriptions like *sabe resposta* ‘know the answer’, whose bare form has a present reading. As shown in section 3, the Null Perfect analysis (Pratas 2012) nicely accounts for the viewpoint aspect properties of all types of situations. This Null Perfect, as noted above, is in complementary distribution with the Progressive *sata*.¹⁰ Recall that, although the Perfect is not to be confused with the perfective, Perfect sentences denote a state located at reference time, which is due to the prior closure of a situation (Smith

⁸ An analysis of some instances of non-finite perfect as a simple past tense construction has been put forward in Hoffmann (1966) and Stowell (2007) for English, and Hallman (2013) for Standard Arabic.

⁹ Hallman (2009a: 30) argues that “lexical telicity does not manifest itself as a completion entailment except in connection with a completiveness operator, a null counterpart to the progressive morpheme in English. This analysis is essentially the inverse of the more common approach [...] that takes the progressive operator to remove a completion entailment inherent in its base, but is supported by the interaction of proportionality and aspect [...]”

¹⁰ The less natural combination of specific situation types with each of these morphemes—for instance, states whose descriptions involve the copulas *e* and *sta* (BE individual-level and BE stage level, respectively) do not combine with the Null Perfect, and these and some other states do not combine with *sata*—is not unexpected; these restrictions have been attested for other languages and have been subject to intense debate, but I will not concentrate on them here.

1991:147). In other words, perfective viewpoint is involved in the English Perfect constructions (Smith 1991:148–149). I have claimed that this is also true for Capeverdean. Portner (2003:466) also argues that “the English perfect is perfective,” a characteristic that “it shares with the simple past.”

Importantly, in section 5 I will discuss what it means for a situation to be “closed”. My take is that the terms “closed” or “finished” traditionally associated with the perfective do not always entail that an underlying telic situation is “completed”; in other words, that it has culminated. Conversely, whereas we may say that an activity is “closed” or “finished”, to state that it is “completed” seems odd. These subtle distinctions will be explored through the relation between the perfective aspect and some specific temporal adverbials.

As for a specific case of the incomplete interpretation of accomplishments, which is the topic of this section, I will give evidence from a study of the acquisition of temporal morphology in Capeverdean (Pratas and Hyams 2010). The results of this study provide interesting clues concerning the internal structure of telic situations: when confronted with the bare forms of achievement or accomplishment predicates, which in adult language correspond to a Present Perfect—thus, roughly, a past temporal interpretation of a closed event—Capeverdean-speaking children (ages 2;6 to 3;6) interpret them as ongoing around 50% of the time. Pratas and Hyams’ analysis of these unexpected results suggests that Capeverdean children allow bare telic predicates to describe either a completed or an ongoing situation, depending on which slice of the event they focus on: (a) the process leading to the culmination, or (b) the consequent state.

The fundamental goals of this study were to investigate: (i) the development of aspect/tense morphology in Capeverdean (more specifically, we wanted to know whether this acquisition is aspectually conditioned, i.e., whether there are “aspect first” effects), and (ii) the possible existence of a Root Infinitive (RI) stage in the acquisition of Capeverdean and its temporal/aspectual characteristics (see Hoekstra and Hyams 1998 for an overview of the RI stage in various child languages).

The grammatical properties presented in section 3 raise the following experimental questions: (i) At what point do Capeverdean children use/understand the progressive morpheme? (ii) What interpretation do they give to eventive bare verbs?¹¹ As for the interpretation of bare verbs, we tested two competing hypotheses (here adapted according to the Null Perfect proposal):

Hypothesis A: bare eventive verbs are finite for children (as they are for adults), and hence have a Present Perfect interpretation (cf. 9).

Hypothesis B: bare eventive verbs may be non-finite (i.e., RI-analogues), and hence they show the temporal/aspectual properties of root non-finite forms.

Importantly, cross-linguistically root non-finite forms are typically optional: the child in this developmental stage accepts both non-finite and finite root clauses. We would expect Capeverdean children to behave similarly. Finding support for hypothesis B, we further tested the Aspectual Anchoring Hypothesis (AAH, Hyams 2007, 2009), as in (20):

(20) In the absence of tense, the temporal meaning of a sentence is given by its situation aspect properties. The specific predictions are as follows:

- a. atelic verbs (activities): event is directly anchored to the Utterance Time (UT-T), hence ongoing.
 UTe.....
 |_____|
- b. telic verbs (achievements/accomplishments): 2 event variables; telic event variable (e2) linked to UT-T, hence the event (e1) is past. (See Hyams 2007, 2009 for discussion of these predictions.)

¹¹ We also tested a third combination, which involves two expressions marking a clearly perfective/closed interpretation of dynamic predicates: *dja ka* for activities and accomplishments, *dja* for achievements. These are not included here for two reasons: (i) the main point in our study, and also in the present paper, is to show the behaviour of children regarding the bare forms of predicates as opposed to the progressive; (ii) these expressions are more complex than the temporal morphemes: *dja* is more similar to an adverbial and *dja ka* involves a form of the aspectual auxiliary *kaba* ‘finish’; thus, it is not clear whether the comparison would be useful for our purposes.

UT [.....e1.....] e2
 └──────────┘

English bare verbs bear out the predictions of the AAH, as shown in (21) (Deen 1997; Torrence and Hyams 2004).

- (21) a. He lose it. [past] [Sarah, file 40]
 b. He fall down. [past] [Sarah, file 40]
 c. Play ball with him. [present] [Nina, file 39]

The predictions for the temporal interpretation of Capeverdean sentences and its relation with the aspectual properties of verbs are given in Table 1.

Table 1: Predictions for Capeverdean

Situation type	If finite	If non-finite
Activity	past/terminated	present/ongoing
Accomplishment	past/completed	past/completed
Achievement	past/completed	past/completed

We conducted a forced choice picture selection experiment involving two pictures: one showing an ongoing action and one showing the same action as terminated (activities) / completed (accomplishments and achievements). Given the difficulty in illustrating the different tenses for stative verbs (e.g. *sabe* ‘know’, *sta duenti* ‘be sick’), no stative verbs were tested.

We tested 36 Capeverdean speaking children (ages 2;6 to 3;6) who were all virtually monolingual—they would be systematically exposed to Portuguese only in school. The child was told that the experimenter does not understand Capeverdean very well and needs help; the child was then invited to help the experimenter by showing the matching picture for each sentence: *Bu ta bai mostra-m ki figura ki sta dretu, sin?* ‘You’re going to show me the picture that is right, ok?’ And then the invitation was repeated whenever necessary during the task, to remind the child what she should do. Here are examples for each situation type:

- (22) a. Kel patinhu sata nada. [activity]
 that little.duck PROG swim
 ‘The little duck is swimming.’
 b. Kel patinhu ø nada.
 that little.duck swim
 ‘The little duck has swum.’
- (23) a. Kel mudjer sata disenha un flor. [accomplishment]
 that woman PROG draw one flower
 ‘The woman is drawing a flower.’
 b. Kel mudjer ø disenha un flor.
 that woman draw one flower
 ‘The woman has drawn a flower.’
- (24) a. Kel minina sata txiga praia. [achievement]
 that girl PROG arrive beach
 ‘The girl is arriving at the beach.’
 b. Kel minina ø txiga praia.
 that girl arrive beach
 ‘The girl has arrived at the beach.’

If the child didn't answer right away, the experimenter rephrased the test sentence into a question: *Ki patinhu ki nada?* (Which little duck that \emptyset swim? 'Which little duck is it that has swum?').

The details of the results are as follows. For the VPs combined with *sata*, adults chose the ongoing picture 100% of the time and children in both age groups performed nearly perfectly, choosing the ongoing picture more than 91% of the time for all types of predicates. These results show that there are no "aspect first effects" (what Hyams 2007 refers to as "aspectual alignment"), i.e., children accept progressive *sata* with telic predicates as well as with activities.

For bare predicates, the adult performance is characterized by 100% choice of the past picture. Crucially, children behaved very differently from adults in this condition. With respect to activities, children chose the ongoing picture 78% of the time. This motivates two complementary observations: (a) children's bare atelic verbs are not uniformly interpreted as finite (contra hypothesis A); (b) children show an "RI" stage: we assume that the 78% of activity predicates that match the ongoing picture are non-finite and anchored through situation aspect, as predicted by the AAH: the event variable in the open predicate links to the Utterance Time, hence the interpretation is ongoing; the remaining 22% are finite and match the past picture, in accordance with the adult grammar. Capeverdean children show the same optionality that we find across child languages that show an RI-stage (see Hoekstra and Hyams 1998).

As for accomplishments and achievements, the predictions in table 1 say that, whether finite or non-finite, the sentences with these bare predicates should match the past picture. Surprisingly, however, roughly 50% of the time children chose the ongoing picture—56% for accomplishments and 47% for achievements. Pratas and Hyams (2010) account for this in the following way: telic predicates (unlike activities) have a complex event structure; they have a culmination + consequent state (Moens and Steedman 1988), and also a process that leads to their completion. Recall that, whereas the process leading to the completion of accomplishments is uncontroversial, the process leading to the completion of achievements is less clear (Vlach 1981, a.o.): some predicates allow for it or need it, while other predicates do not. The type of achievements used in our study allows for this process leading to the culmination, but, since these distinctions are still subject to cross-linguistic debate, I will concentrate here on the results for accomplishments. Therefore, under the view proposed in Pratas and Hyams (2010), both pictures are compatible with a non-finite structure for a bare accomplishment sentence, depending on which slice of the event the child is focused on—the process leading to the culmination, or the consequent state: if children focus on the process part of the event, they will choose the ongoing picture in accordance with the schema in (20a); if they focus on the consequent state, they will choose the past picture in accordance with the schema in (20b). Alternatively, children may assign a finite structure to the bare accomplishment sentences, in which case they will also choose the past picture. In other words, when they choose the past picture we cannot tell whether they are interpreting the sentence as non-finite (thus, focusing on the consequent state and using the schema in (20b)) or as finite (thus, an adult-like reading).¹²

In any case, the fact that the percentages of ongoing interpretations are different for each situation type (78% vs. 56%) may be analyzed in two ways: either (i) children assign a non-finite structure to activities more often than to accomplishments (which would need to be explained), or (ii) even if they assign a non-finite structure to activities and accomplishments in the same proportion (which is more plausible), it is only with accomplishments that they have the possibility of choosing between different temporal anchors. In the latter case, the clear preference for the process part of the event (56%) when compared to the consequent state (some unknown portion of the other 44%) is also to be explained. But the point here is that children show different options for each situation type.

In this section I have described the results and the conclusions of an acquisition study (Pratas and Hyams 2010) in which young children optionally interpret bare accomplishments (and activities; I leave the discussion of achievements for future research) as ongoing, in contrast to adults. Our interpretation of this is that they are allowed to treat bare predicates as non-finite (analogous to what we find in other languages that show an RI stage). When this happens, the temporal interpretation is anchored through situation aspect (as predicted by the AAH). With activity predicates the anchoring is straightforward, with accomplishments we assume that children optionally abstract away from the culmination. This is one more piece of evidence in favor of Arche's proposal that the ongoing interpretation of accomplishments—thus, not including the culmination—may occur even in the absence of progressive morphology. In no circumstance, however, does this interpretation imply that the situation has been de-telicized.

¹² Since there is no morphological marking for (non)finiteness in the language, these results can perhaps feed some future discussion about the true essence of (non)finiteness.

In the next section, I discuss the role of durational adverbials when combined with perfective aspect.

5. The effect of temporal adverbials

Recall the sentences in (25) and (26), which combine a telic predicate with a perfective viewpoint aspect, are grammatical in Spanish.

- (25) Marta coloreó un castillo en diez minutos.
 Marta color:PFT.3SG a castle in ten minutes
 ‘Marta colored a castle in ten minutes.’
- (26) Marta coloreó un castillo durante diez minutos.
 Marta color:PFT.3SG a castle for ten minutes
 ‘Marta colored a castle for ten minutes.’

Since the durational adverbials used are taken to be good diagnostics for (a)telicity (*for*-time adverbials are good with atelic and bad with telic predicates; *in*-time adverbials are good with telic and bad with atelic predicates), a tempting conclusion would be that what we have in (26) is an atelic situation.

Importantly, Arche shows that whenever a telic predicate in the perfective can be understood with absence of completion it can be paraphrased by a “perfective progressive”. (Her example is here repeated as (27).)

- (27) Marta estuvo coloreando un castillo (durante diez minutos),
 Marta be:PFT.3SG coloring a castle (for ten minutes),
 pero no lo terminó.
 but NEG it finish:PFT.3SG
 ‘Marta was coloring a castle (for ten minutes) but she did not finish it.’

As she also points out, however, the perfective preterit in (26) needs the combination with restrictive durational adverbials to produce the non-culminating reading (at least with many Spanish speakers), which is not the case with the perfective progressive (27). The explanation for this cannot be, she argues, that these durational adverbials cancel telicity, since they do not exclude the interpretation where the culmination is asserted: these sentences, both with the perfective preterit and the perfective progressive, can be used in a context where the culmination obtains.

- (28) Marta coloreó / estuvo coloreando un castillo (durante diez minutos),
 Marta color:PFT.3SG / be:PFT.3SG coloring a castle (for ten minutes),
 y lo terminó.
 and it finish:PFT.3SG
 ‘Marta draw / was coloring a castle (for ten minutes) and she finished it.’

I contend that the contrast between (26) and (27) regarding the durational adverbial—the former absolutely needs it for the progressive interpretation to be available, whereas in the latter the durational adverbial is optional—highlights the role of the *for*-time expressions in these perfective contexts. Thus, in sentences like (28) what we have are, in fact, two distinct event descriptions, although their meaning is related to the same act of color a castle. In the first clause, the one that is relevant in the current discussion, the event description includes a specific time argument, the interval denoted by the durational adverbial. (The formal details of these relations are left for forthcoming analysis.) In this case, what we get with the perfective is the notion of a closed / finished / terminated situation whose final boundary is the final point within a period of ten minutes, rather than the completion of color the castle. The culmination / completion of the telic situation described by ‘Marta colored a castle’ is clearly absent in here. This means that we also have two distinct situation descriptions for the perfective preterit depending on whether the *for*-time adverbial is absent or present: for ‘Marta colored a castle’, the final boundary is the culmination of color a castle; for ‘Marta colored a castle for ten minutes’, the final boundary is the closing point of a period of ten minutes. This is rendered more visible in the following contrast:

- (29) a. # Marta coloreó un castillo, pero no lo terminó.
 Marta color:PFT.3SG a castle, but not it finish:PFT.3SG
 ‘Marta colored a castle, but she did not finish it’
- b. Marta coloreó un castillo durante diez minutos, pero no lo terminó.
 Marta color:PFT.3SG a castle for ten minutes, but not it finish:PFT.3SG
 ‘Marta colored a castle for ten minutes, but she did not finish it.’

In (29b), to conjoin the telic situation in a perfective clause with a possible continuation to the act of color a castle involves no contradiction, for nothing has been asserted concerning the culmination of this underlying event. What has been asserted is that the period of ten minutes has ended.

Note that this is different from Arche’s proposal. She alleges that, on the one hand, the culmination reading of perfective preterits emerges as an implicature in the absence of temporal modifiers restricting the interval to which the assertion applies. For instance, ‘Marta colored a castle’ may be an implicature emerging from the assumption that the information provided is the maximum amount of information relevant (Grice 1975).¹³ On the other hand, she argues, when the assertion is made for a limited amount of time, as in ‘Marta colored a castle for ten minutes’, assuming that the adverbial provides us with the maximum amount of information needed, the interpretation that she was coloring only for ten minutes emerges by implicature again. Under the view that I am proposing here, this latter assumption made by Arche is unnecessary.

Evidence in favor of my proposal comes also from Capeverdean. Observe one bare eventive closed situation, with an atelic predicate:

- (30) a. # Djon nada i inda e sata nada.
 Djon swim and still 3SG PROG swim
 ‘Djon has swum and he is still swimming.’
- b. Djon nada parmanha interu i inda e sata nada.
 Djon swim for.morning all and still 3SG PROG swim
 ‘Djon has swum all morning and he is still swimming.’

The sentence in (30a) is odd, for a continuation is unexpected to a closed situation. According to Smith (1991:107), when we combine an activity with a perfective viewpoint we present a terminated event: at some arbitrary point, Djon stopped swimming. Therefore, when we conjoin this with the assertion that the event continues, the results obtained are odd. Recall that a perfective aspect is at stake in this Capeverdean sentence, even though it is the perfective aspect that is part of the Perfect. As opposed to this, (30b) is absolutely fine. I argue that, in (30b), the salient final boundary that is under focus in the perfective is not the termination of the act of swimming—about which nothing is asserted—but the closure of a period denoted by the adverbial *parmanha interu* ‘for the all morning’. Hence, to conjoin the clause with the assertion that Djon is still swimming involves no contradiction. Therefore, these contexts constitute no argument against the traditional association of the perfective with the interpretation that the eventuality is finished. What is important is to focus on the correct event description.

Crucially, this analysis of the durational adverbial role is in line with what Arche proposes at another point in her paper, when she discusses the perfective aspect that is involved in habituality. Consider the example referenced at the end of section 1, here repeated as (31):

- (31) Cuando era pequeña Marta nadaba durante cinco horas.
 when be.IMPF.3SG young Marta swim:IMPF.3SG for five hours
 ‘When she was young, Marta used to swim for five hours.’

She argues that the adverbial *durante cinco horas* ‘for five hours’ restricts the duration of the interval for each of the (perfective) instantiations of the underlying eventuality and convincingly demonstrates that it

¹³ Smith (1991:107) also points out that, when we have a perfective aspect (and the examples that she presents include no durational adverbials), it is natural to infer that the telic event has been completed, since we are given no information to the contrary.

modifies the Event Time and not the Assertion Time (as defended in Demirdache and Uribe-Etxebarria 2004).

Returning to the Spanish data under discussion, the complex structures illustrated in (26) and (27), Arche points out that the ordering relation between Assertion Time and the Event Time is one of total overlap. She also accounts for this by proposing that, in these structures, there is more than one head involved. The upper Aspect head, morphologically expressed by the auxiliary verb in an analytical form, hosts a predicate of temporal ordering with the meaning of total coincidence (perfective); the lower head morphologically expressed by the present participle ending of the lexical verb has the content of an ordering predicate meaning *within*. Therefore, she argues that the lower head of the structure is in charge of accessing parts of the eventualities, which makes the preterit able to truthfully describe a situation where culmination is lacking.

It seems to me, however, that progressive aspect is not salient here, which is shown by the fact that it is impossible to combine these sentences with a point-like time reference in the way that the progressive does. In other words, the ordering relation between the Assertion Time denoted by an adverbial of the type ‘when I arrived’ and the Event Time could never be one of inclusion.

6. Final remarks

In the current paper, I have presented several pieces of evidence in favor of Arche’s (2013) proposal that viewpoint aspect does not alter the fundamental situation aspect properties of predicates. I have also made two further proposals: (i) in Capeverdean, a Portuguese-based Creole language, the salient opposition in the domain of viewpoint aspect is not between the imperfective and the perfective, but rather between the Progressive and the Perfect, here taken as semantically complex categories that involve certain temporal characteristics; crucially, imperfectivity is one of the features of the Progressive and a perfective viewpoint is part of the semantic complexity of the Perfect; (ii) the *for*-time durational adverbials when combined with the perfective are not good diagnostics for (a)telicity; either with telic or atelic predicates, they modify the Event Time and, thus, play a key role in defining the final boundary that is salient to the perfective; thus, with telic predicates the relevant final boundary is not the culmination of the underlying event, but rather the final point in the interval described by that time-argument. This proposal nicely accounts for (29b), which, in fact, involves no contradiction at all. The full extent of these effects, when we combine some durational adverbials with perfective aspect, is a topic under research, namely using empirical evidence from Capeverdean.

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