

# Time notions in human language: empirical clues from Caboverdean

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## Goals

- to present my most recent takes on the expression of some **temporal meanings** in Caboverdean
- **to defend** that a comprehensive **analysis** of these linguistic phenomena – in this and other languages – **may bring clues about essential time notions in the human mind**
  - this implies a connection with some areas of philosophy and anthropology to both deal with the potential universals and uncover potential cultural differences regarding these notions
  - this goal has been motivated by the fact that, at least in this Portuguese-related language, the same temporal morphemes seem to mark different traditional interpretations, depending on the linguistic context
    - so, at some point I decided to look for a wider umbrella to accommodate these different instances of a given morpheme; that is, I have been trying to find the value that is common to them all

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## 1. The language

### ➤ Caboverdean is a Portuguese-based African language

– it is acknowledged as a creole, but I skip this label because of the misconceptions that consistently come with it (see for instance Mufwene 2010 and Aboh & DeGraff 2017)

- it is the mother tongue of virtually all inhabitants of the Republic of Cabo Verde (around half a million) and of most Cabo Verdeans living abroad (estimated 1 million)
- most of its lexicon is of Portuguese origin (see Quint & Moreira 2019, and references therein); only a small part is related to the West African languages spoken by the slaves that were violently brought there by the Portuguese colonists
- it displays many morphosyntactic features that are different from European Portuguese, such as:
  - Double Object Constructions
  - prohibition of null referential subjects
  - no verbal agreement, and
  - quite a small set of temporal morphemes





Reitmaier/Fortes, adapted by Beate Gresser, in Lang (2014)

## The settlement of the islands

Red: first islands to be peopled – including Santiago

Green: the ones that followed (light green: less peopled than the dark green)

White: the last ones to be peopled – including São Vicente

## 1. The language

- it has two main varieties, roughly associated with the two most populated islands of the archipelago:
  - the Sotavento variety, which developed in the 16<sup>th</sup> century, in Santiago, and then in other southern islands (Jacobs 2010, and references therein)
  - the Barlavento variety, which developed in the 17<sup>th</sup> century in the northern islands.
    - in São Vicente, now the most prominent of these northern islands, the first permanent community of speakers only settled in the early 19<sup>th</sup> century (Swolkien 2015, and references therein)
- these varieties are also spoken in other islands, with some variation of their own, but the data presented here are from Santiago and São Vicente – most of them produced in semi-spontaneous interviews, transcribed and tagged in the oral corpus LUDViC (Pratas 2020).
- there are many interesting features of variation at the phonological level, but these are not registered in this study

# 1. The language

- It is not an official language in its own country  
(it is in their plans, but these have been delayed by several factors)
- This means that there is no standard variety, and the attempts to settle an official spelling are sound but still limited  
(the Alfabeto Caboverdiano is meant to be phonologically motivated, but is indeed mostly based on the Santiago variety; and so people run into several problems when using it to write in other varieties – we can see this a lot in facebook posts, as was studied by Gillier 2019)
- Besides some scattered experiments of bilingual education, all the teaching is in Portuguese

# 1. The language

- These facts bring about very interesting challenges and, at the same time, some potential advantages, regarding our linguistic studies
  - challenge: in order to register the oral data we want to work with, we must take some orthographic decisions ourselves, and that's what we did in LUDViC
  - challenge with a potential advantage: Caboverdean internal variation is not officially contested/contradicted, which means that it runs quite spontaneously

## 2. Theoretical assumptions

### 2.1. About variation in general

- ✓ Language variation is about “alternative ways of 'saying the same thing’”  
(Labov 1969:738, fn20)

## 2. Theoretical assumptions

### 2.2. About variation: two more specific notes

✓ Borer-Chomsky conjecture:

All parameters of variation are attributable to differences in features of particular items in the lexicon (e.g., the functional heads). (Baker 2008:156)

✓ variation, in the ‘Labovian’ sense, involves “underspecification in the mapping between [functional] categories and morphological forms” (Adger & Smith 2010)

## 2. Theoretical assumptions

### 2.3. About tense and aspect

- Three different Times are relevant to the construction of temporal reference.
- These were labelled in Reichenbach (1947) as:
  - (i) Speech Time (S)
  - (ii) Event Time (E)
  - (iii) Reference Time (R)

## 2. Theoretical assumptions

### 2.3. About tense and aspect

- The proposal in Klein (1994) presents a new distinction, the one between past perfective and past imperfective.
  - Although this distinction between perfective and imperfective is not relevant here, the terminology adopted is that one in Klein (1994).
  
- ✓ In his model, the relevant three times are:
  - (i) Time of Utterance (TU)
  - (ii) Time of Situation (TSit)
  - (iii) Topic Time (TT) (this mediating time is defined by Klein as the time span about which an assertion is made)

(see also Stowell 2014 for a discussion of this terminology)

## 2. Theoretical assumptions

### 2.3. About tense and aspect

**Tense** is defined as the ordering of TT regarding TU

- This ordering may be:
  - (a) TT before TU - past tense
  - (b) TT includes TU - present tense
  - (c) TT after TU - future tense

Note: Klein later raises important questions about the notion Time of Utterance (i.e., the speech event itself takes time; so, what slice of it are we considering?), but here it simply means 'now', the deictic temporal anchor of root clauses.

## 2. Theoretical assumptions

### 2.3. About tense and aspect

**Aspect** is defined as the ordering of TSit regarding TT

- This ordering may be:
  - (a) TSit after TT - a prospective aspect
  - (b) TSit includes TT - the progressive
  - (c) TSit precedes TT - the perfect

Note that, whenever this combines with a Topic Time including the Time of Utterance – that is, a present Tense – we get the intuition that:

- (a) is about a future/subsequent situation
- (b) is about an ongoing situation, and
- (c) is about a past situation

## 2. Theoretical assumptions

### 2.3. About tense and aspect

→ And this nicely applies to Caboverdean

- ✓ This language exhibits a distribution of temporal morphemes such that (Pratas 2014, 2018, 2021):
  - many past, present, and future situations are expressed through aspectual relations in combination with the discourse context
    - we can thus argue that this is a tenseless language – in the sense of having no morphological marking for tense, thus expressing the relevant temporal notions by other means (see Comrie 1985)
  - a. In many cases, the TSit is indeed established in relation to a TT that includes TU – no morphological expression for tense is needed
  - b. Moreover, in many other cases – where TT does not include TU, which is signaled morphologically – the meaning of this morpheme cannot simply be Past Tense, since it appears in many constructions that are not necessarily about past situations. Therefore, this morpheme must be expressing something else (and we will soon be back to this).

### 3. Caboverdean temporal morphemes

#### 3.1. Declarative clauses

(a) the bare form of most verbs denotes a past situation

- this seems indeed a kind of non-periphrastic perfect (Pratas 2010)

(b) the progressive is marked by a dedicated preverbal functional morpheme,  
that appears in the allomorphs *sata* and *tita*

- the salient opposition regarding aspect is thus between the progressive and the perfect, rather than the one between the imperfective and the perfective

(Pratas 2014)

- *sata/tita* has then been proposed to be derived from *ta*, through a complete progressive cycle (Pratas 2018) (cf. for other languages Dahl 1985, Bybee & Dahl 1989, Bybee et al. 1994, Deo 2015)

- evidence for this is that the progressive was initially marked by *ta*, derived from the Portuguese reduced form *tá*, of *estar* 'be' (stage-level), and then extended its uses to the habitual (Schuchardt 1882, as translated in Hagemeyer & Holm 2008);
- it is only natural that some later reinforcement (some locative element, like *sa*, from some other reduction of *sta* 'be' stage-level) came to guarantee the distinctive marking of the progressive

(c) current *ta* marks habituais and generics, and also some subsequent situations

### 3. Caboverdean temporal morphemes

#### 3.1. Declarative clauses

- Then I needed to make some sense of the different uses of this current *ta*.

Comrie (1985): “[...] **realis** refers to situations **that have actually taken place** or **are actually taking place**, while **irrealis** is used for more **hypothetical situations**, including situations that represent **inductive generalizations**, and also **predictions**, including predictions about the future” (1985: 45)

- ✓ Therefore we may distinguish between... (Pratas 2018, 2021)
  - (a) the **perfect**  
and
  - (b) the **progressive**  
on the one side (let us call it **realis**)
  
  - and
  - (c) the **habituals**, **generics** and some **subsequent** situations  
on the other side (let us call it **irrealis**) (cf. Suzuki 1994 for another view that *ta* marks irrealis)

Note that this division is here unrelated to the truth of situations, rather capturing different types of temporal descriptions – perhaps these labels should be changed in a near future.



# 3. Caboverdean temporal morphemes

## 3.1. Declarative clauses

### ❖ When TT includes TU

- Bare form of the verb – present perfect interpretation

Santiago

(1) N      duensi.  
    1SG    get.sick  
    'I got sick.'

(Sandra, LUDViC)

São Vicente

(2) N      pasá      un      one      sen      traboi.  
    1SG    spend    one    year    without    work  
    'I spent a year without a job.'

(Firmino, LUDViC)

# 3. Caboverdean temporal morphemes

## 3.1. Declarative clauses

### ❖ When TT includes TU

- Progressive – present ongoing interpretation

Santiago

(3) Kabuverdi **sata** dizenvolvi ben. (Daiana, LUDViC)  
Cabo Verde PROG develop well  
'Cabo Verde is developing well.'

São Vicente

(4) N **tita** falo-b d nha rialidad. (Firmino, LUDViC)  
1SG PROG speak-2SG of PPOSS.1SG reality  
'I'm telling you about my reality.'

## 3. Caboverdean temporal morphemes

### 3.1. Declarative clauses

#### ❖ When TT includes TU

- Present habituais and generics; in some contexts, however, these same sentences, as many others with *ta*, may have a subsequent episodic interpretation

Santiago

(5) N    **ta**    vendi    tomati,    alfasi    ku    pepinu.    (Carla, LUDViC)  
1SG    IRR    sell    tomato,    lettuce    CON    cucumber  
'I sell tomatoes, lettuce and cucumbers.'

São Vicente

(6) N    **ta**    estimulá    nhas    alune.    (Liziane, LUDViC)  
1SG    IRR    encourage    PPOSS.1SG.PL    pupil  
'I encourage my students.'

## 3. Caboverdean temporal morphemes

### 3.1. Declarative clauses

- And then the Santiago affix **-ba** and the São Vicente preverbal **tava** (with its own variant **tá**) enter the conversation
  - ✓ while Santiago **-ba** is well established as a verbal affix with its origins in the verbal affix **-va** from many past imperfectives in Portuguese, **tava** (and then **tá**) seems to be derived by analogy with the Portuguese first or third persons singular/past imperfective of *estar* (*estava*), and is now associated with distinct environments
  - ✓ this is a case of microvariation perfectly aligned with the Borer-Chomsky conjecture (Baker 2008), in that we have distinct morphological forms expressing the abstract properties of the same lexical items, although these properties may combine with others in one of the forms
  - ✓ and this is also in line with the view in Labov (1969 and subsequent works) that language variation involves different ways of saying the same thing.

## 3. Caboverdean temporal morphemes

### 3.1. Declarative clauses

#### ❖ When TT does not include TU

- Perfect in the past

Santiago

(7) **-ba**

N    **baba** Lisboa.

1SG go:BA Lisboa

‘I had gone to Lisboa.’

(Vitor, LUDViC)

São Vicente

- has a periphrastic construction for past perfect.

# 3. Caboverdean temporal morphemes

## 3.1. Declarative clauses

### ❖ When TT does not include TU

- Progressive in the past

Santiago

#### (8) *sata* + *-ba*

Na prinsípiu N ka **sata** konsigiba [...]  
PREP beginning 1SG NEG PROG be.able:BA [...]  
'In the beginning I wasn't being able [...].'

(Sandra, LUDViC)

São Vicente

#### (9) *tava* or *tá* + *ta*

No **tava ta** sperá dsizãu.  
1PL PROG wait decision  
'We were waiting for the decision.'

(Firmينو, LUDViC)

### 3. Caboverdean temporal morphemes

#### 3.1. Declarative clauses

##### ❖ When TT does not include TU

- Habitual, generic in the past

Santiago

(10) *ta* + *-ba*

N    **ta**    pasaba            difikuldadi.  
1SG IRR    go.through:BA    difficulty  
'I used to go through difficulties.'

(Sandra, LUDViC)

São Vicente

(11) *tava*

No    **tava**    intxí    korr    ku    kes    produt.  
1PL TAVA    fill    car    with    DET:PL    product  
'We used to fill the car with products...'

(Firmino, LUDViC)

### 3. Caboverdean temporal morphemes

#### 3.1. Declarative clauses

- The facts in (7), (8) and (10) had led to the idea that Santiago *-ba* marks:
  - ‘anteriority’ (Suzuki, ms; Baptista 2002)
  - or
  - ‘past’ (Pratas 2007, 2012, 2014)
  - that is, in the sense of Klein (1994), *-ba* marks TT before TU
- But these proposals had one problem: they did not account for those contexts whose temporal location is not the past.

### 3. Caboverdean temporal morphemes

#### 3.2. Conditional clauses

##### ❖ Still when TT does not include TU

Santiago

(12) Si N ka **staba** na Sal, N **staba** na Praia. (Miranda, LUDViC)  
if 1SG NEG be:BA PREP Sal 1SG be:BA PREP Praia  
'If I were not in Sal, I would be in Praia.' [she means this for 'now']

(13) Ta **serba** un tristeza pa bu pais (Brüser et al. 2002: 833)  
IRR be:BA one sadness to PREP PPOSS.2SG parents  
si bu ka **pasaba** na izami.  
if 2SG NEG pass:BA in exam  
'It would be sad for your parents if you didn't pass the exam.' [which time location?]

São Vicente

(14) S tud jent **tava** vivê sima mi, mund era dret. (Inês, LUDViC)  
if everybody TAVA live like 1SG world were right  
'If everybody lived like me, the world would be right.' [which time location?]

(15) N dzê k **tá** bá ser inpusível. (Firmino, LUDViC)  
1SG say that TAVA go be impossible  
'I said that it would be impossible.' [future of the past; which time location?]

### 3. Caboverdean temporal morphemes

#### 3.3. Contexts that are nonfinite in other languages

##### ❖ Still when TT does not include TU

##### ➤ Santiago

(16) N krê stud**aba** es anu (Edson, LUDViC)  
1SG want study:BA this year  
mas djá tenpu stá un bokadinhu pertadu.  
but already time be one bit tight  
'I wanted to study this year, but time is a bit tight.' [he still wants, but it's difficult]

(17) É pa nu bá panhab**a** lenha na txada, (Aldina, LUDViC)  
be for 1PL go fetch:BA firewood at wood  
pa nu vendeb**a**, pa nu pode vive**a**.  
for 1PL sell:BA for 1PL can live:BA  
'It was for us to go fetch firewood in the woods, for us to sell, for us to be able to live.'

Note that in (16) and in the last clause in (17), the 'finite' verbs (*krê* and *pode*) have no *-ba*, only the main ones do (*studa* and *vive*).

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

##### ➤ The modal approaches

- ✓ This label subsumes several proposals that consider some uses of past morphemes as ‘fake past’ and/or associate the past imperfective (in languages that have it) with the counterfactual (e.g., Dowty 1977, Iatridou 2000, Palmer 2006, von Prince 2019, and so on).
- ✓ Also the present has been viewed as having modal (or ‘noncanonical’) uses, such as the narrative present or the futurate present (e.g., Copley 2009, Klein 2010, and so on).
- ❖ But, as Binnick puts it:

“[Can] we not build adequate representations in which modal concepts are NOT utilized?” (Binnick 2010: 517).

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

❖ Still Binnick (2010)

Given «the dual temporal/modal functions of the past and future tense markers, some linguists have proposed defining the non-present tenses not in terms of temporal precedence or sequence but rather of detachment, understood as either detachment from the present or detachment from reality: ‘non-actuality’ (Strang 1968), ‘dissociation’ (Steele 1975), or, in deictic terms, ‘distality’ (Langacker 1978) or ‘remoteness’ (Joos 1964), as opposed to the ‘proximality’ of the present.» (Binnick 2010: 515)

✓ Possible bridge to a solution here?

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

❖ Yes, but...

(Pratas 2021)

- All these linguistic analyses mentioned in Binnick (2010) neglect the main feature about the past that I find of most importance, for it provides a fine explanatory power.
- this feature is certainly not ‘distance’, ‘distality’, ‘remoteness’, or even ‘non-actuality’, because we could intuitively attribute all these values to the future as well—and yet future morphology, in languages that have it, may be used to express detachment but does so in the epistemic sense, not in the temporal one (we often use it to express conjectures).

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

- **My own approach: Low Accessibility** (Pratas 2021)
- ✓ The notion of accessibility, which refers to a quality rather than any quantity of time remoteness, seems to me much more adequate:
    - accessibility is here defined as the perception/presentation of a given temporal location as being fully accessible—in the sense of us, from this perspective that we are conscious of (cf. Buonomano 2019, and Rovelli 2018), being able to put ourselves in there (here we have connections with philosophy and anthropology, and these will be explored in future studies)
    - if we feel we access this location only through our memory, or through any other cognitive process that implies no presence in there, then its accessibility is *low*—this lack of our ‘presence in there’ does of course not mean that the temporal location in question is unreal.

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

- **My own approach: Low Accessibility** (Pratas 2021)
- ✓ This notion is fortunately not dependent on temporal distance, and this has two welcome effects on what it includes in each camp:
  - (a) in the *low* value, it correctly includes some pasts that are not necessarily remote, as well as other, more unspecific, temporal locations that may seem close to us but which we picture as marked by low accessibility as well, and
  - (b) in the *full* value, it correctly includes some other past situations (for reasons that have been widely studied regarding the ‘current relevance’ involved in the present perfect), as well as the present progressive and the present habitual/generic, and, finally, subsequent situations (in the sense of prospective aspect).

### 3. Caboverdean temporal morphemes

#### 3.4. Possible approaches to *-ba* and *tava*

- **My own approach: Low Accessibility** (Pratas 2021)
- This proposal may raise the question (among others) of whether Caboverdean is a tenseless language after all
    - the answer depends on us considering whether this value marked by *-ba/tava* is Tense or not
    - I am still not sure about this, but I'm inclined to think that it is not Tense, in the sense of Klein (1994), since it doesn't point to a specific ordering between TT and TU – we only know that they do not coincide

## 4. Brief note on Caboverdean temporal meanings of ‘come’ and ‘go’

➤ (this is still under analysis)

These two verbs of motion appear in multiverb constructions, and may be themselves marked by any of the temporal morphemes previously presented. The examples here have them with *ta*, marking a prospective aspect.

The verb ‘come’ with a temporal meaning

(18) Un dia Kabuverdi ta **ben** fika somenti ku língua kriola. (Jaime, LUDViC)  
one day Cabo Verde IRR come stay only with language creole  
Literal: ‘One day Cabo Verde will come to keep only the creole language.’

The verb ‘go’ with a temporal meaning

(19) Kel lá k ta **bá** ser skrita d kriol. (Nicolau, LUDViC)  
PRON that IRR go be writing of creole  
Literal: ‘That is the one that will go to be the writing system of Creole.’

## 4. Brief note on Caboverdean temporal meanings of ‘come’ and ‘go’

- (this is still under analysis)
- The literature on these meanings in other languages indeed uses the expressions “metaphorical extension” and “non-literal motion meanings” (Essegbey 2004, for Sranan), and “metaphorical” (Móia 2017, 2018, for Portuguese); Winford (2000) refers to the existence or not of a “literal sense of movement” in Sranan.
- ✓ In an ongoing study about these, I argue that these verbs basically mean the same in both temporal and spatial contexts: one kind of movement, with exactly the same properties – so, no metaphors, or even grammaticalization of these verbs must be involved.

## 5. Conclusion

- ✓ This is aligned with a trend that has been set up in my recent studies, which consists in finding the common features among distinct uses of Caboverdean temporal morphemes.
- ✓ In other words, I focus on the idea that, for each of them, a unique meaning must be behind such diversity – and that this meaning is much more adequate than to consider ‘primary’ vs ‘secondary’ uses, or ‘literal’ vs ‘fake’/’non-literal’/’metaphorical’ uses.
- ✓ This has been accomplished for
  - (a) all the uses of *ta* in main clauses, which I now call irrealis (one previous labels it received was ‘imperfective’, which left unexplained several contexts where *ta* appears), and
  - (b) all the uses of *-ba* and *tava*, which I now call low access morphemes (the previous label for *-ba* was past, which left unexplained several contexts where they appear, unless we would accept that these were ‘fake pasts’, etc.).
- In the near future, I will try to establish a connection between these personal studies of Caboverdean and the new developments regarding Natural Language Ontology (Fine 2005; Moltmann 2017; Ramchand 2022; and references included therein), trying to uncover which notions are indeed important in natural language, independently of them being or not part of the real world.

- **Thank you!**

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