

An analysis of the progressive with stative verbs in Brazilian Portuguese*

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Abstract

In this squib, we investigate the occurrence of the progressive with stative verbs in Brazilian Portuguese, as in *João está sabendo geografia* (“João is knowing geography”) and *Maria está vivendo com Pedro* (“Maria is living with Pedro”). We adopt the proposal developed by Cunha (1998, 2004) for European Portuguese, who argues that stative predicates are distinguished by the semantic feature [\pm PHASE], being the progressive used only with [+PHASE] statives. Based on data from Brazilian Portuguese, we develop the hypothesis that the progressive with [+PHASE] statives marks a frontier or a transition of phases of a given state that distinguishes the previous phase of this state from the phase in progress. We adopt Parsons’s (1990) proposal, which deals with the notion of subatomic events in English, in order to formalize the semantic notion of phaseability, originally proposed by Cunha (1998, 2004).

Keywords: stative predicates, progressive, phaseability, subatomic events

Resumo

Neste *squib*, nós investigamos a ocorrência do progressivo com predicados estativos no português do Brasil, tal como exemplificado em *João está sabendo geografia* e em *Maria está vivendo com Pedro*. Segundo Cunha (1998, 2004), em proposta desenvolvida para o português europeu, predicados desse tipo se distinguem pelo traço semântico [\pm FASEÁVEL], sendo o progressivo empregado somente com os estativos faseáveis. Analisando os dados

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do português do Brasil, desenvolvemos a hipótese de que o progressivo, quando combinado com os estativos faseáveis, marca a fronteira ou a transição de fases de um dado estado, o que distingue, com relação ao estado denotado, uma fase anterior de uma fase em curso. Para captar a noção semântica de faseabilidade proposta por Cunha (1998, 2004) em termos formais, recorreremos à proposta de Parsons (1990) para o inglês, que lida com a noção de eventos subatômicos.

Palavras-chave: predicados estativos, progressivo, faseabilidade, eventos subatômicos

1 Introduction

The main aim of this squib is to develop a formal analysis of stative predicates in Brazilian Portuguese (henceforth BP). The important fact about these predicates in BP is that they allow progressive constructions — in contrast to what is found in the literature about statives in general. The analysis is based on the semantic property of phaseability — given by a [+PHASE] feature, as postulated by Cunha (1998, 2004) for stative verbs in European Portuguese —, combined with the notion of subatomic events, as proposed by Parsons (1990). Our proposal to the use of the progressive with stative predicates in BP, however, presents a distinct treatment for the use of the progressive with [+PHASE] stative predicates.¹ Our claim is that a state is still a state, not an activity, as proposed by Cunha (1998, 2004), when combined with the progressive. This hypothesis draws upon Parsons' (1990) semantic proposal of subatomic events.

This squib is divided into four sections. Section 1 provides empirical support to the idea that stative verbs show an internal aspectual structure composed of intervals of time — related to the [+PHASE] feature —, which, by hypothesis, allows the use of the progressive in BP. Section 2 presents the semantic proposal developed by Parsons (1990) for the analysis of stative verbs and the progressive in English. Section 3 presents our proposal regarding the use of the progressive with phaseable stative predicates in BP. Section 4 concludes the squib and presents some issues for future research.

¹The term 'phase' is understood in semantic terms, as proposed by Moens (1987): the Vendlerian aspectual classes (states, activities, accomplishments and achievements) are internally organized in terms of phases within an aspectual network in which transitions can occur from one class to the other. Cunha (1998, 2004) adopts Moens' aspectual network to derive all eventive and stative classes for European Portuguese and claims that some statives combine with the progressive in European Portuguese because they have an inherent and compositional semantic feature described as [+PHASE], that is responsible for encoding internal and distinct intervals of time in respect to eventualities, allowing the transition from a stative input into a process output.

2 Empirical facts about the use of the progressive in BP

Bittencourt (2015) shows that the class of stative verbs in Brazilian Portuguese presents different behavior with the progressive. In the sentences in (1), the stative verb *viver* ‘to live’ can combine with the progressive. The interpretation associated with the progressive sentence in (1a) is that, previously, Maria lived alone or with someone else. In (1b), with the present, nothing can be said about the previous state of Maria (if she had always lived with João or if she is currently living with him):²

- (1) a. A Maria está vivendo com o João.
The Maria be-PRES.3.SG live-GER with the João
‘Maria is living with João.’
- b. A Maria vive com o João.
The Maria live-PRES.3.SG with the João
‘Maria lives with João.’

Contrastively, in (2), the stative predicate *ser redonda* ‘be round’ — an individual-level predicate (i.e., a predicate that denotes a permanent property) — is ungrammatical in the progressive:

- (2) a. A mesa é redonda.
The table be-PRES.3.SG round
‘The table is round.’
- b. *A mesa está sendo redonda.
The table be-PRES.3.SG be-GER round
‘The table is round (lit. the table is being round).’

These facts show that stative predicates are divided into two subclasses that behave differently with respect to the possibility of denoting internal intervals of time by which we can interpret the phases of a given state. Statives like *viver* ‘to live’ denote internal intervals of time, allowing the interpretation of a transition of phases, and due to this property they can license progressive sentences. On the other hand, stative predicates like *ser redonda* ‘to be round’ do not have this property, disallowing the use of progressive.

We also observe distinct behavior within the class of individual-level predicates. For example, even though (3a) is interpreted as an intrinsic property of the subject, it may be rewritten with the progressive, as in (3b). In this case, the interpretation is the same as in (1a). In other words, the simple present denotes the state *per se*, whereas the progressive establishes a frontier between a previous phase of the state *ser esperto* ‘to be clever’ and a

²Gloss: PRES = present; 3 = third person; SG = singular; GER = gerund.

phase in progress. In the previous phase, the boy didn't exhibit cleverness, contrary to the phase in progress in which this cleverness is present within a particular temporal frame and can be verified in several ways (for example in his attitudes):

- (3) a. *Esse menino é esperto.*
This boy be-PRES.3.SG clever
'This boy is clever.'
- b. *Esse menino está sendo esperto.*
This boy be-PRES.3.SG be-GER clever
'This boy is being clever.'

This contrast demonstrates that the use of the progressive with stative verbs is related to the possibility of a state being interpreted as a phase, marking the transition between two phases of this state.³

The interpretation of a state as phaseable depends, in part, on lexical selection. As demonstrated in (2) and (3), the semantic properties of the adjectives distinguish not only states as phaseable or non-phaseable, but also the morphosyntactic organization of the sentence. For example, sentences (4) and (5) can be distinguished by the configuration of the internal argument: in (4), the state *ouvir a palestra* 'to listen to the talk' has a DP *a palestra* 'the talk' as the internal argument, whereas in (5) the state *ouvir Mozart* 'to listen to Mozart' has a bare DP *Mozart* as the internal argument. In consequence, we get distinct entailments with the use of the progressive or the simple present, as demonstrated by the contrast between (4a)-(5a) and (4b)-(5b) below.⁴

- (4) a. *O aluno está ouvindo a palestra.*
The student be-PRES.3.SG listen to-GER the talk
'The student is listening to the talk.'
- b. *O aluno ouve a palestra.*
The student listen to-PRES.3.SG the talk
'The student listens to the talk.'

In the examples above, (4a) does not entail that 'the student listens to the talk'; and (4b) does not entail that 'the student is listening to the talk'.

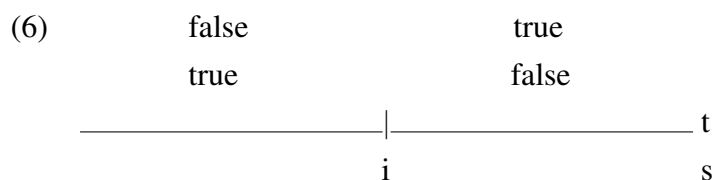
³We understand that the semantic properties of the adjective, in data like (2) and (3), entail a compositional treatment of the syntax of the use of the progressive with stative predicates. This, however, is a research topic which we will leave for future research.

⁴The entailment relations in (4) and (5) generate different results because phaseability is also determined compositionally; thus, all elements of the sentence interact to allow the interpretation of the progressive as a delimiter of two phases within a given state. The syntactic derivational process of how this occurs is not specified here, and it is object of future investigation.

- (5) a. O aluno está ouvindo Mozart.
The student be-PRES.3.SG listen to-GER Mozart
'The student is listening to Mozart.'
- b. O aluno ouve Mozart.
The student listen to-PRES.3.SG Mozart
'The student listens to Mozart.'

In the examples above, (5a) entails that 'the student listens to Mozart'; and (4b) entails that 'the student is listening to Mozart'.

We, therefore, conclude that the progressive occurs, in BP, with phaseable stative verbs, being ungrammatical with non-phaseable statives. The notion of phaseability is taken from Cunha's (1998, 2004) work on stative verbs in European Portuguese, who defines phaseable statives as verbs that can be interpreted as eventualities divided internally in distinct intervals of time. This property allows them to behave like activities. Thusly, we propose that the occurrence of the progressive construction with stative verbs delimits a frontier between a previous phase and a phase in progress with respect to the state denoted by the verb. Additionally, we also conclude that other lexical and morphosyntactic factors in the structure of the sentence may contribute towards phaseability interpretation. Our hypothesis is that, when the progressive occurs, the interpretation is the transition between two phases of a state, which is schematically represented as follows:



The diagram in (6) shows that a state *s*, despite being homogeneous in all intervals of time *t*, may be true or false until a certain instant *i*. A transition of phase, then, occurs, the state becoming false or true from that instant on. For instance, for (7a), the state *viver com João* 'to live with João' is false until instant *i*, when it becomes true. On the other hand, in (7b), the state is true before *i* and becomes false after *i*:

- (7) a. Maria está vivendo com o João (ela não vivia com ele antes)
'Maria is living with João (she did not live with him before)'
- b. Maria não está mais vivendo com o João (ela vivia com ele antes)
'Maria is no longer living with João (she lived with him before)'

Departing from the idea that the preceding and in progress phases of a given phaseable stative predicate constitute subparts of the same state, we explore, in the next section, Parsons' (1990) semantic proposal of subatomic events for the analysis of English data.

3 Subatomic events: a semantic proposal (Parsons, 1990)

Parsons (1990) investigates the hypothesis that the semantics of simple sentences in English demands logical forms that are more complex than what has been normally assumed in the description of natural languages. The author argues that a sentence like (8) is interpreted as in (8a), which has the logical form in (8b):⁵

- (8) Caesar died.
- a. For some event *e*,
e is a dying, *and*
the object of *e* is Caesar, *and e* culminates before now.
- b. $(\exists e)$ [Dying (*e*) & Object (*e*, Caesar) & Culminate (*e*, before now)]
- | | | | |
|--------------|---|---------|-------|
| ↑ | ↑ | ↑ | ↑ |
| default verb | | subject | tense |

(PARSONS, 1990, p. 6)

The complexity of this logical form is that it is dominated by existential quantification of events, which is not explicitly encoded in the structure of the sentence. Consequently, Parsons (1990) calls it “underlying” quantification (identified in (8b) as default) of events (and states) and considers this quantification omnipresent in natural languages. The other three elements, subject, verb, and tense, form separate sets that restrict the event of Caesar becoming dead.

Parsons (1990) considers that, logically, the formulas are divided in two types: atomic, from which all other forms are generated; and non-atomic, which are generated from the atomic ones, by means of universal quantification (\forall) or existential quantification (\exists), or by means of combination with connectives or addition of operators. The atomic formulas are traditionally associated with sentences of the type ‘x is tall’ or ‘x stabbed y.’ The literature about this theme is filled with discussion about how these formulas combine with other elements, such as quantifiers (*every*), operators (*necessarily*), connectives (*and, or, no*), and embedded clauses with the complementizer *that* to generate sentences. Parsons intends to develop a semantic theory which examines if the sentences are true or false under certain circumstances, describing the relations between the words of a language and things of the world, departing from the assumption that underlying events exist. For instance, the author points in this direction by examining the logic of modifiers, illustrated in sentences such as (9a-d):

- (9) a. Brutus stabbed Caesar in the back with a knife.
b. Brutus stabbed Caesar in the back.

⁵Here and throughout the paper, ‘ \exists ’: existential quantifier; ‘t’: time; ‘<’: anterior; ‘=’: concomitant; ‘&’: logical conjunction; ‘s’: state; ‘e’: event; ‘i’: instant.

- c. Brutus stabbed Caesar with a knife.
- d. Brutus stabbed Caesar.

[PARSONS, 1990, p. 13]

These sentences show that a semantic theory needs to explain why sentence (9a) entails the conjunction of (9b) and (9c), but not the opposite, and why both (9b) and (9c) alone entail (9d). The author's proposal is that the explanation is due to the concept of subatomic events.

In the following subsections, we briefly present Parson's proposal (1990), taking into consideration, primarily, states and, then, the progressive.

3.1 The ontology of events and the representation of stative verbs in logical forms

Parsons (1990) assumes that there are, in the world, events (which are divided into accomplishments and achievements), processes and states. For a small set of linguistic phenomena, this distinction is crucial — specifically the distinction between events and states.

The two technical notions that the author posits to distinguish events from states are, respectively, culmination and holding. Parsons utilizes the notation 'Cul (e,t)' to make reference to an event *e* which culminates on a time *t*, and the notation 'Hold (e,t)' to make reference to a state *s* which holds at time *t*. Therefore, the logical form of a stative sentence like (10), interpreted as in (10a), is the one represented in (10b).

(10) Mary knows Fred.

- a. There is a knowing that
has Mary as its subject, and
has Fred as its object, and holds now.
- b. $(\exists e)$ [Knowing (e) & Subject (e, Mary) & Object (e, Fred) & Hold (e, now)]

(PARSONS, 1990, p. 25)

Therefore, the difference between sentences (8) and (10) is captured by the eventuality investigation at the subatomic level. As such, the eventuality in (8) culminates and the eventuality in (10) holds. Stative verbs possess the property to hold but never culminate.

According to Parsons (1990), there may be events in which a culmination does not occur. He exemplifies this with the following situation: if Maria starts to build a cabinet but does not finish building it, then, there is an event which is to build, which never culminates, having Mary as subject and the cabinet as an unfinished object. This view, according to the author, is important for the analysis of the progressive, as we will see in the next subsection.

3.2 The progressive in English

According to Parsons (1990), for a relatively complete analysis of the most simple sentences in English, the system of subatomic events must be combined with in a theory of tense (present, past and future), aspect (which includes the progressive) and temporal modifiers (adverbial expressions of temporal value, such as at midnight, yesterday, etc). In this approach, it is presupposed that ordinary formulas of predicate logic must be attributed truth-values relative to moments of time, in such way that a formula without any operator of tense is evaluated relatively to the present. For example, the representation ‘Intelligent (Mary)’ expresses ‘Mary is intelligent’. In the case the sentence is in the past or in the future tense, it must be preceded by the PAST or FUT operators, respectively.

One of the objectives of Parsons’ (1990) proposal is to formulate an adequate description of the semantics of the progressive in English, in other words, a contrastive semantics between ‘Agatha is making a cake’ and ‘Agatha makes a cake’. The author’s proposal is that, for eventive sentences, the non-progressive form of the verb demands that the underlying event culminates, while the progressive form demands that the underlying event holds. In other words, semantically, to use an eventive verb in the progressive form implies that the verb is treated as a state. Consequently, the truth-value of the sentence requires that the event holds and not culminates. Thus, a sentence with a non-progressive verb, as in (11a), has its logical form as in (11b) — with ‘Cul’ —, but a sentence with a progressive verb, like (12a), has its logical form as in (12b) — with ‘Hold’.

- (11) a. Agatha crossed the street.
 b. $(\exists t) [t < \text{now} \ \& \ (\exists e) [\text{crossing} (e) \ \& \ \text{Subject} (e, \text{Agatha}) \ \& \ \text{Object} (e, \text{the street}) \ \& \ \text{Cul} (e, t)]]$
- (12) a. Agatha was crossing the street.
 b. $(\exists t) [t < \text{now} \ \& \ (\exists e) [\text{crossing} (e) \ \& \ \text{Subject} (e, \text{Agatha}) \ \& \ \text{Object} (e, \text{the street}) \ \& \ \text{Hold} (e, t)]]$

Parsons (1990) assumes that an event like *cross* is true for all of the instants of *crossing*, regardless of the event’s culmination. Thus, if John crosses the street and gets to the other side, then he will be the subject of an “event of crossing” which culminates. However, if he arrives only halfway and is hit by a truck, he is the subject of an “event of crossing” which did not culminate. Therefore, according to the author, it is plausible to think that, for each event in progress, there is an associated state — the ‘in-progress’ state of an event, which lasts throughout the duration of the event.

This subatomic event analysis conjugates the adequate logical relations, has a plausible intuitive motivation, and rests on a robust semantic approach capable of explaining a great

variety of linguistic phenomena. In light of this discussion, we will seek to apply this proposal to the use of the progressive with phase stative verbs in Brazilian Portuguese.

4 Analysis of the use of the progressive with phase stative predicates in BP

In this section, we develop our analysis of the progressive with phase stative predicates in Brazilian Portuguese, based on the proposal of subatomic events (Parsons, 1990). We fundamentally consider Parsons' observation that the use of the progressive with eventive verbs has the effect of semantically changing an event into a state, focusing on a stative portion of this event, in a certain interval of time before its culmination (assuming that the culmination does not happen).

Based on this observation and on the fact that only phase stative verbs admit the progressive and, in this case, the progressive expresses the transition between two phases of a given state, we propose that the progressive, when used with phase stative verbs, focuses on the moment in which this transition of phases occurs.

In this sense, the notion of phaseability, stated by Cunha (2004) as the relevant property to distinguish stative verbs that do or do not admit the use of the progressive, can be formalized semantically by means of the notion of subatomic events. This is appropriately represented by the presumption that the truth-value of the state denoted by the predicate is distinct from that which is presented by the progressive. Hence, for a sentence as (13a), there is the presumption that the state *saber a matéria da prova* 'to know the subject of the exam' was false prior to an instant *i* until the point in which it became true. This can be stated by the formula in (13b), in which the first part denotes the inexistence of a state at a previous time (instant *t*) and the second part denotes that the state begins to exist (instant *t'*).

- (13) a. João está sabendo a matéria da prova.
 John be-PRES.3.SG know-GER the subject of.the exam
 'John is knowing the subject of the exam.'
- b. $(\exists t) [t < \text{now} \ \& \ (\nexists s) [\text{know} (s) \ \& \ \text{Subject} (s, \text{John}) \ \& \ \text{Object} (s, \text{the subject of the exam}) \ \& \ \text{Hold} (s, t)]] \ \& \ (\exists t') [t' = \text{now} \ \& \ (\exists s) [\text{know} (s) \ \& \ \text{Subject} (s, \text{John}) \ \& \ \text{Object} (s, \text{the subject of the exam}) \ \& \ \text{Hold} (s, t')]]$

We consider that this analysis is valid for stative verbs whose interpretation is that of a transition between two phases of a given state.

5 Conclusion

In this squib, we proposed an analysis of the use of the progressive with phase stative predicates in Brazilian Portuguese, within the context of formal approaches to the theory of grammar. We

used formal notation, based on the proposal of subatomic events by Parsons (1990), for the semantic property of phaseability, as defined by Cunha (1998, 2004).

As we have presented, Cunha (1998, 2004) posits, for European Portuguese, that the class of stative verbs is subdivided in [+PHASE] and [-PHASE] statives. We adopt this aspect of Cunha's analysis, but not his understanding that a phaseable stative verb is temporarily changed into a process. Our understanding is that a state is still a state when combined with the progressive (Parsons, 1990; Gonçalves, 2004). Instead, we defend the hypothesis that the progressive functions as a frontier or transition of phases of a given state, distinguishing a new phase in relation to a previous one.

Our hypothesis was built upon the interpretation of entailment relations between the progressive and the simple present for different kind of stative verbs (specifically the contrast with individual-level predicates). The tests suggested that phase stative predicates do not constitute a homogeneous class. Additionally, Parsons's (1990) proposal of subatomic events allowed us to analyze the semantic property of phaseability in formal terms.

The relation between stative verbs and the progressive is a complex problem that will continue to attract researchers. This work intends to contribute to a new look on phaseable stative predicates, which appear as a heterogeneous class in terms of the semantic interpretation of the progressive. The syntactic properties derived from this fact must receive a compositional analysis, thus increasing interest for future research.

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