This paper addresses the temporal and aspectual properties of the so-called Perfective Progressive Periphrasis (PPP) in Brazilian Portuguese (BrP), exemplified below:

- (1) Eu estive trabalha-ndo.
  - I  $be_{1stPersonPerf}$  work-GER.
- (2) Ontem, esteve chove-ndo.

Yesterday, be<sub>3PersonPerf</sub> rain-GER.

This periphrasis, as its name suggests, is composed of the auxiliary verb 'estar' (to be) with perfective morphology ('estive', 'esteve') and a lexical verb in the progressive form ('trabalhando', 'chovendo'), which is associated with the imperfective. It is the combination of a perfective auxiliary with a progressive form that makes the PPP interesting, especially when compared to the Imperfective Progressive Periphrasis (IPP), where the auxiliary verb 'estar' has imperfective morphology, as exemplified below:

- (3) Eu estava trabalha-ndo.
  - I be<sub>1stPersonImperf</sub> work-GER.
- (4) Ontem, estava chove-ndo.

Yesterday, be<sub>3PersonImperf</sub> rain-GER.

Our aim is to derive their semantic differences.

In the first section, we investigate the temporal and aspectual properties of both periphrases. With respect to temporal reference, considering Reichenbach's (1947) framework, both periphrasis are past: they are incompatible with adverbials such as 'amanhã' (tomorrow) and 'no momento em que falo' (as I am speaking), and compatible with 'ontem' (yesterday):

(5) \*Amanhã/ \* Enquanto eu falo/ Ontem, João esteve /estava pesca-ndo. Tomorrow/As I am speaking/Yesterday, John be<sub>3stPersonPerf</sub>/ be<sub>3stPersonImperf</sub> fish-GER.

The analysis of the combination with the Vendlerian aspectual classes (which we will refer to, following Bertinetto (1991), as actionality) shows that the PPP does not combine with achievements, see (6), whereas the IPP asks for an anchoring period of time, (7):

(6) Pedro \*esteve / # estava ganha-ndo a corrida. 1

Pedro be<sub>3stPersonPerf</sub>/ be<sub>3stPersonImperf</sub> win-GER the race.

(7) Ontem, eu estive /# estava corre-ndo.

Yesterday, I be<sub>1stPersonPerf</sub> / be<sub>1stPersonImperf</sub> run-GER.

The PPP can only be used with non-durative events (achievements and semelfactives) when an interpretation of repetition is available. That is why sentence (6) is odd but sentence (8) is good:

(8) João esteve tossi-ndo ontem à tarde.

John be3stPersonPerf cough-GER yesterday at+the afternoon

The IPP imposes no actionality restriction. Both the PPP and the IPP, when combined with accomplishments, characterized as telic and durative, do not entail that the *telos* is reached:

(9) Ontem, João esteve /# estava pinta-ndo o quadro.

Yesterday, John be<sub>3stPersonPerf</sub> / be<sub>3stPersonImperf</sub> paint-GER the picture.

More surprisingly, the PPP does not even imply the achievement of the *telos*, contrary to what the literature claims about the perfective. This may lead one to wonder whether the PPP is really perfective, the topic of the second section. Thus, both PPP and IPP are past, and combine with telic events, but they do not entail that the *telos* is reached. What is then the difference between PPP and IPP?

In the second section, we consider the aspectual opposition between perfective (the event is represented as no longer being the case) and imperfective (the event is represented as

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<sup>&</sup>lt;sup>1</sup> # indicates presupposition failure, as we will see below.

ongoing), following Bertinetto (2007). We conclude that the PPP in BrP is perfective. Squartini (1998) concludes the same with respect the PPP in Spanish. There are at least three tests for perfectivity: (i) interruption of the event – imperfectives when combined with 'when' clauses result in an interpretation in which the event introduced by the 'when' clause occurs within the interval of the imperfective event, but that is not the case with perfective events; (ii) perfectives can naturally combine with closed time intervals, such as 'o dia todo' (the whole day), but not imperfectives; (iii) temporal progression/succession of events – usually, concatenated perfective events are interpreted in the order of their appearance, whereas imperfective events do not usually impose any temporal ordering. Test (iii) is not applicable to the periphrasis; the reason is explored in the conclusion. Tests (i) and (ii), however, show that the PPP is perfective:

(10) Ontem, João estava pintando o quadro quando Pedro chegou.

Yesterday, John be<sub>3stPersonImperf</sub> painting the picture when Pedro arrived.

(11) Ontem, João esteve pintando o quadro quando Pedro chegou.

Yesterday, John be<sub>3stPersonPerf</sub> painting the picture when Pedro arrived

(12) ? Ontem, João estava trabalhando o dia todo.

Yesterday, John be<sub>3stPersonImperf</sub> working the day whole (the whole day).

(13) Ontem, João esteve trabalhando o dia todo.

Yesterday, John be<sub>3stPersonPerf</sub> working the day whole (the whole day).

Only the IPP allows an "interruption" interpretation; with (11), the painting precedes Pedro's arrival, whereas in (10), the painting is ongoing when Pedro arrives. (12) is odd because 'o dia todo' introduces a closed time interval incompatible with the imperfective; (13) is fine because perfectives combine with closed time intervals. Thus, the PPP is perfective, and IPP is imperfective.

We conclude with a semantic proposal for the imperfective and the perfective morphemes which accounts for the data presented so far. The perfective introduces a closed period of time, thus the event is conceived as no longer being the case. The progressive form in the PPP introduces duration, and the event is either ongoing within the closed interval, as in (11), or is a repetition. The combination with achievements is odd, as shown in (6), because the progressive imposes duration, since achievements are punctual, the only alternative is iteration, easily achieved with semelfactives as in (7). The imperfective does not impose any actionality constraints, but it presupposes an anchoring event, as shown by (7). The anchoring event is included in the time interval of the event introduced by the main verb; the event is then conceived as ongoing, since there is no closed end point. Finally, when combined with telic events the PPP does not entail the achievement of the *telos*, because the perfective only introduces a closed time interval, without conveying any information about the *telos*. The progressive form in the PPP cancels any implication that the event has achieved its *telos* and so blocks temporal succession of events, affecting test (iii) for im/perfectivity.

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