

Portuguese Expressions of Duration and its English Counterparts*

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Abstract

This paper focuses on the expression of duration in (European and Brazilian) Portuguese. English is used for comparative purposes, since many of the issues to be discussed have been intently studied for this language. The paper has two main, parallel, goals: (i) a description of the Portuguese subsystem of duration, with an identification of the main structures involved in the expression of this semantic value, and (ii) an attempt to distinguish several conceptually different – though closely related – temporal subdomains within the semantic area under study. This second goal has obviously implications for the grammatical description that go well beyond the analysis of Portuguese. Two distinctions will be explored in some detail: one between strict duration and durative temporal location, which is not assumed by all authors, and another between the duration of telic and atelic eventualities. Other (semantic and/or syntactic) subtypes of strict duration that will be discussed are: argumental vs. adjunct, continuous vs. discontinuous, time-anchored vs. non-time-anchored, and planned vs. non-planned duration.

1. Introduction

1.1. Different concepts of duration – taxonomic issues

Since the extent of the concept of duration is not unanimous in the literature, the taxonomic issue must be addressed prior to identifying expressions of duration. Consider the following English sentences:

- (1) a. John was in the office *for five minutes*.
- b. John solved the puzzle *in five minutes*.

* I thank João Peres for insightful comments on previous versions of this paper and Graham Katz for his judgements on the English sentences.

- (2) a. John has been in the office *for the last two hours*.
 b. John was in the office *from 3 to 5*.

If we assume a wide concept of duration, all the time adjuncts (italicised) in these sentences are durational, since they convey information about the temporal size of the described eventualities: five minutes, in the first two examples, two hours in the last two. This broad notion of duration phrases is widely assumed (cf. e.g. Huddleston and Pullum 2002: 702ff., just to give an example of a recent English grammar). However, at least two other more restricted views on the category of duration phrases have been adopted in the literature:

- (i) one that includes the type of time adjuncts in (1a) and (2), which combine with atelic eventualities, but excludes the type of time adjuncts in (1b), which combine telic events – cf. e.g. Smith (1991);
 (ii) one that includes the type of time adjuncts in (1), which directly assert the duration of eventualities, without locating them in the time axis, but excludes the type of time adjuncts in (2), which can at the same type express the duration of an eventuality and position it in the time axis – cf. e.g. Kamp and Reyle (1993)¹.

The first view is motivated by the observation that substantial linguistic differences (which will be considered in more detail in section 3) set apart the uses of telic and atelic descriptions in the relevant temporal constructions. However, it obscures the fact that important semantic and syntactic properties bring together the time adjuncts in (1a) and (1b), for which reason it will not be adopted here.

As for the second view, it seems linguistically more justifiable. In previous work (cf. Mória 1998, 2000), I have favoured it, showing that a categorisation that places the time adjuncts in (1) in a different class from those in (2) has greater generalisation power and can better explain several distributional facts about comparable phrases in different languages². To be more precise, the categorisation I defend can be summarised as follows:

- (i) time adjuncts like *for five minutes* or *in five minutes*, which directly assert the duration of eventualities, without locating them in the time axis, belong in a class that we can term **(true, or strict) duration adverbials**; formally, they are set apart by the fact that they contain bare predicates of amounts of time as complements of the temporal preposition;

¹ Cf., however, Kamp and Reyle's observations regarding structures like (2a), below.

² If we consider parallel phrases in different languages, we may observe that, e.g. (i) the expression of duration by ambivalent (durational and locational) phrases is not systematic, but rather context-dependent, and (ii) the distribution of temporal connectives is better accounted for if the ambivalent phrases are categorised as location adjuncts (and duration is viewed as inferred rather than asserted) – cf. Mória (1998, 2000).

- (ii) time adjuncts like *for the last two hours* or *from 3 to 5*, which can at the same time express the duration of an eventuality and position it in the time axis, are (members of a subclass of) **temporal locating adverbials**; formally, they are set apart by the fact that they contain time-denoting expressions – rather than *bare* predicates of amounts of time – as complements of the heading temporal connective.

As said, this view is in line with e.g. Kamp and Reyle (1993), where “temporal measurement” (of eventualities) – i.e. duration – is taken to involve the determination of the amount of time a situation lasts (or takes to culminate), irrespective of its position on the time axis. In that work, duration is formally represented by a one-place functor **dur**, which maps eventualities (or intervals, which are not under consideration here) on the amounts of time they last – cf. Kamp and Reyle (1993: 648).

	DRS-conditions associated	Examples
duration of atelic eventualities	[dur (ev) ≥ mt]	<i>John walked <u>for three hours</u>.</i>
	[dur (ev) = mt] (if <i>exact duration</i> is involved)	<i>John has lived in Paris <u>for two years</u>.</i>
duration of telic eventualities (i.e. accomplishments)	[dur (ev) ≤ mt]	<i>John wrote the letter <u>in half an hour</u>.</i>
	[dur (ev) = mt] (if <i>exact duration</i> is involved)	

Table 1. Duration

As for temporal location, still according to Kamp and Reyle (1993), it involves the association of eventualities (described in matrix structures) with a given interval of the time axis, called “location time”. Obviously, the location time may be defined in simpler or more complex ways, depending on the structure of the time adverbial – e.g. by time-denoting phrases that do not include predicates of amounts of time, like *1995, next Summer, the day when the Berlin Wall fell*, or *the period before the war*, by time-denoting phrases that include these predicates in embedded positions, like *the last five minutes*, or *those two hours*, or even by situation-denoting nominal or sentential complements, like *(during) the Second World War* or *(while) Mary cooked the dinner*. The **location relation** may take different forms, among which at least the following ones have to be distinguished (cf. Mória 2000):

	DRS-conditions associated	Examples
durative location	$[t \subseteq ev]$	<i>John played the piano <u>from 3 to 5</u>.</i>
	$[t = loc (ev)]$ (if <i>exact location</i> is involved)	<i>John has been playing the piano <u>since 2 o'clock</u>.</i> <i>John has lived in Paris <u>for the last two years</u>.</i>
mere overlapping location	$[ev \circ t]$	<i>John was ill <u>on Sunday</u>.</i> <i>John was in Paris <u>last weekend</u>.</i>
inclusive location	$[ev \subseteq t]$	<i>John got married <u>in 1995</u>.</i>

Table 2. *Temporal Location*

Now, as we can see, the temporal phrases that are classified here as **durative temporal locating adverbials** are at the center of the mentioned taxonomic disputes in the literature. Bennett and Partee (1978: 30), for instance, considered phrases like these to be ambivalent, forming a sort of mixed class of temporal locating and duration adverbials (which they named “frame adverbials” and “durative adverbials”, respectively). Smith (1991) or Vlach (1993), on the other hand, consider a broad class of “durative adverbials”, which groups together these ambivalent phrases and those that simply express the duration of atelic situations, without locating them. Kamp and Reyle (1993), as said, separate out these phrases – as temporal locating adverbials associated with the condition $[t \subseteq ev]$ – from those that express strict duration – associated with the condition $[dur (ev) = mt]$ ³. However, these authors seem to consider phrases like *for the last two years* – which contain a predicate of amounts of time – as exceptional. In particular, they find it hard to classify them as temporal locating or as duration adverbials, and refer to them as “unresolvably ambivalent” (cf. p. 650). In Mória (1998, 2000), however, I showed (i) that they can be treated as common durative temporal locating adverbials (just like phrases that do not contain predicates of amounts of time, such as *from 3 to 5*), and, furthermore, (ii) that they exhibit the linguistic properties of locating, not of duration adverbials. In that work, I hypothesise that the two categories of temporal phrases – duration and temporal locating – are essentially told apart by the form of complement of the temporal connectives (bare predicates of amounts of time, and time-denoting phrases, respectively), and that **inferentially extracted information** about the duration of the located eventuality is what makes some of these locating adverbials look like

³ Some minor differences are being ignored here: e.g. Kamp and Reyle (1993) use the term “temporal measure adverbials” instead of “duration adverbials”; they always introduce an inexact duration condition, $[dur (ev) \leq mt]$; and they only consider stative discourse referents (s) in the durative location condition (i.e. $[t \subseteq s]$), but, as can be easily observed, activities can also occur in these constructions.

ambivalent phrases, whereas, as far as assertion is concerned, they are merely locating expressions. One argument in favour of this view concerns the effect of negation with sentences exhibiting the so-called ambivalent operators, which shows that, given a true negative sentence, the falsity of a corresponding positive necessarily affects the temporal location predication, but not the duration, which can still apply⁴. Observe that – if the utterance time is at the beginning of 2006 – the first, but not the second, of the following two sequences is a contradiction:

- (3) #Ana hasn't lived in Amsterdam *for the last two years*, but she has lived in Amsterdam *from the beginning of 2004 until the end of 2005*.
[with utterance time at the beginning of 2006]
- (4) Ana hasn't lived in Amsterdam *for the last two years*, but she has lived in Amsterdam *for two years*.

1.2. Asserted vs. inferred duration

If we assume the notion of temporal locating phrase described above, it is clear that the so-called ambivalent adverbials can be analysed as simple locating phrases, the durational information being easily derived from simple (and systematic) inferential patterns.

	Condition expressing <u>asserted</u> temporal location	Condition expressing <u>inferred</u> duration
(non exact) durative location	$[t \subseteq ev]$	$[dur (ev) \geq dur (t)]$
(non exact) inclusive location	$[ev \subseteq t]$	$[dur (ev) \leq dur (t)]$
mere overlapping location	$[ev \circ t]$	—
Exact location	$[t = loc (ev)]$	$[dur (ev) = dur (t)]$

Table 3. Temporal location and inferred duration

Observe the following illustrative examples of inferences about duration drawn from (exact) durative locations:

- (5) John was in the office *from 3 to 5*.
→ John was in the office *for two hours*.

⁴ This argument was given to me by João Peres, and introduced in Mória (2000: 140).

- (6) John has been playing the piano *for the last two hours*.
 → John has been playing the piano *for two hours*.

It must be stressed that inferences about duration may also result from the use of inclusive locating adverbials, although these phrases have not been traditionally associated with duration (or classified as durational), even in texts that take the wide concept of duration alluded to at the beginning of section 1 (e.g. Huddleston and Pullum 2002). Observe the following illustrative examples of inferences about duration drawn from inclusive locations:

- (7) John solved the puzzle during the (five-minute) break.
 → John solved the puzzle *in at most five minutes*.
- (8) John wrote this novel *last August*.
 → John wrote this novel *in at most a month*.

Contrary to the examples above, locating phrases that are compatible with both inclusive and durative scenarios (when combined with descriptions of atelic eventualities), do not license any inferences about the duration of those eventualities. Observe that no inference about duration can be drawn from the following sentences that express mere overlapping location:

- (9) John was ill *on Sunday*.
- (10) John felt dizzy *during the (thirty-minute) talk*.

In sum, we may say that the issue of **asserted** vs. **inferred duration** of eventualities is particularly relevant as regards a clear categorisation of time adjuncts. In general, we may say that inferred duration – as opposed to asserted duration – is pervasive in natural language discourse, since it is regularly associated with temporal locating adjuncts – as expressed in Table 3 – and still, quite often, with discourse structure (in association with the lexical content of propositions) – as in the following example:

- (11) John was in the office today. He arrived at 5 and left at 7.
 → John was in the office *for two hours*.

In this paper, I will essentially deal with strict (i.e. asserted) duration. Within this domain, special attention will be given to the differences between the duration of telic and atelic eventualities. However, before moving to this topic, in section 3, I will briefly consider, in the next section, a major distinction in the domain of duration, which has to do with the grammatical subsystems involved in its representation.

2. Argumental vs. adjunct duration

In Portuguese, just like in English, the (asserted) duration of eventualities can be expressed with essentially two grammatical means: predicate-argument combinations and time adjuncts. For easier reference, the duration conveyed in these two ways will be referred to as **argumental duration** and **adjunct duration**, respectively.

Examples of predicate-argument combinations leading to argumental duration involve predicates like *durar* and *levar*, in Portuguese, and *last* and *take*, in English.

- (12) A reunião geral de accionistas *durou três horas*.
the meeting general of shareholders lasted three hours
 ‘The general meeting of shareholders *lasted three hours*.’
- (13) Os arquitectos *levaram três horas* a estudar este projecto.
the architects took three hours to study this project
 ‘It *took* the architects *three hours* to study this project.’

The subclass of predicates that occur in these constructions – which can be termed **duration predicates** – take (at the minimum) an eventuality-denoting phrase and a predicate of amounts of time as arguments⁵. The predicate itself expresses a duration relation, comparable to the predicate **dur** of Kamp and Reyle (1993).

Adjunct duration is expressed via temporal phrases applied adverbially or adnominally, as in the following two examples, respectively:

- (14) Os arquitectos analisaram o projecto *durante três horas*.
the architects analysed the project for three hours
 ‘The architects analysed the project *for three hours*.’
- (15) a construção da ponte *em apenas um ano*
the construction of-the bridge in just one year
 ‘the construction of the bridge *in just one year*’

⁵ Interestingly, the argument position where predicates of amounts of time occur can often be filled by time-denoting phrases. In these constructions, duration is also obtained by inferential processes:

- (i) A reunião geral de accionistas *durou o Sábado inteiro*.
the meeting general of shareholders lasted the Saturday whole
 ‘The general meeting of shareholders *lasted the whole of Saturday*.’
- (ii) Os arquitectos *levaram todo o mês de Março* a estudar este projecto.
the architects took all the month of March to study this project
 ‘It *took* the architects *the whole month of March* to study this project.’

As we will see later on, the dividing line between argumental and adjunct duration is somewhat hard to draw in Portuguese, since there are temporal phrases that exhibit adjunct properties but involve a verbal predicate, namely duration *haver*-phrases (analysed in section 7.3).

3. Telic vs. atelic duration

As said at the beginning of this text, all the phrases that express the temporal size of an eventuality by directly associating an amount of time to it (via a function like **dur**) will be grouped together here, in the class of duration adjuncts. Hence, this class includes both the phrases that express the duration of atelic events and those that express the duration of telic events, as in the examples (1a) and (1b), repeated below, respectively:

- (16) a. John was in the office *for five minutes*.
 b. John solved the puzzle *in five minutes*.

Although many authors adopt this categorisation (e.g. Kamp and Reyle 1993, or Huddleston and Pullum 2002), some others place the adverbials in (16a) and (16b) in two independent grammatical categories. For instance, Smith (1991) includes phrases of the kind *in five minutes* in (16b) in a class she terms “completive adverbials”, distinct from that of “durative adverbials”, where she includes *for five minutes*. Her class of completive adjuncts appears to be quite heterogeneous, though. On the one hand, it includes phrases that express the duration of telic events, like (16b), or (17) below (which is similar to (16b), but involves a shift from an achievement to an accomplishment by addition of a preparatory phase):

- (17) John reached the top of the mountain *in five minutes*.

On the other hand, it also includes homonymous phrases that locate events in the temporal axis, namely in the interval that follows a temporal perspective point by a given amount of time:

- (18) John will knock on the door *in five minutes*.

This sentence illustrates what the author calls the “ingressive interpretation”: “Adverbials of the interval, completive type are ingressive when they locate instantaneous events. As ingressives, the adverbials indicate an interval at the end of which the event occurs.” (p. 157). It is clear that sentences like (18) do not express any form of duration, but only positioning on the time axis. Thus *in five minutes* in (18) can be classified as a simple temporal locating phrase, according to the definitions assumed in this paper, contrary to its homonyms in (16b) and (17), where duration, or temporal extent, is involved. As we will

see in section 6, the ambiguity between durational and locational *in*-phrases (cf. Huddleston and Pullum 2002: 710) also exists in Brazilian Portuguese, for the parallel *em*-phrases, but not in European Portuguese, which systematically resorts to different connectives to express the two readings (*em*, for duration, and e.g. *dentro de* or *daqui a*, for location).

Even if one does not follow authors like Smith (1991) in placing the temporal phrases in (16a) and (16b) in completely autonomous categories, it must be recognised that there are striking linguistic differences between time adjuncts that express the duration of atelic – or homogeneous – eventualities (i.e. states and activities) and those that express the duration of telic events (i.e. accomplishments). In fact, even intuitively, two different operations seem to be at stake: if atelic eventualities are involved, to express their duration is to say *for how long they lasted*; if telic events are involved, to express their duration is to say *the amount of time it took for them to be completed*, i.e. to reach a culmination (of course, this amount of time coincides with the duration of the preparatory phase of the event, since the culmination is conceived of as punctual). Huddleston and Pullum (2002), for instance, acknowledging the importance of these differences, consider two major subclasses of duration phrases: “bounding” and “non-bounding” (which apply to atelic and telic eventualities, respectively). In this text, I will resort to a hypallage, and use the terms **atelic duration** and **telic duration** to refer to this opposition.

Expressions of atelic duration – whether time adjuncts or predicate-argument combinations – are normally different from expressions of telic duration. I will demonstrate this statement with three different groups of expressions, from Portuguese and English, two involving time adjuncts of duration (A, B), and one involving duration predicates (C). To my knowledge, not all the differences described below have been (clearly) stressed in the literature.

A. Time adjuncts headed by different temporal connectives

One of the most striking (and long-debated) differences between atelic and telic duration is that they are expressed in many languages – Portuguese and English included – by phrases headed by different temporal connectives. This property is the basis for a classical test to distinguish between atelic and telic eventualities (cf. e.g. Dowty 1979). In (European and Brazilian) Portuguese, atelic duration is expressed by phrases headed by the preposition *durante*; furthermore, Brazilian Portuguese uses, very frequently, phrases headed by the preposition *por* as exact synonyms⁶. In English, atelic duration is typically expressed by *for*-phrases.

⁶ As for the use of *por*-adverbials in European Portuguese, cf. fn. 21.

- (19) Xian foi capital da China {*durante / por_{BP}*} *mais de mil anos*.
Xian was capital of the China for more of thousand years
 ‘Xian was the capital of China *for more than one thousand years*.’

Furthermore, it is possible – both in Portuguese and English – to express atelic duration via bare predicates of amounts of time, i.e. phrases with no overt preposition (though the underlying preposition can normally be spelled out):

- (20) A Ana tinha dormido (*durante*) *doze horas*.
the Ana had slept (for) twelve hours
 ‘Ana had slept (*for*) *twelve hours*.’

As for telic duration, it is expressed by time adjuncts headed by the preposition *em* in Portuguese, and the preposition *in* in English. As seen above (cf. (16b) and (17)), the accomplishments whose duration is identified may be either basic or derived by Aktionsart shift.

- (21) A Ana escreveu a tese *em seis meses*.
the Ana wrote the thesis in six months
 ‘Ana wrote her thesis *in six months*.’

Neither in Portuguese nor in English can bare predicates of amounts of time express telic duration. Therefore, if a description of an accomplishment is combined with a bare predicate of amounts of time, the only interpretation available is one involving an Aktionsart shift (e.g. from accomplishment to activity by stripping off the culmination). Apparently, this interpretation seems easier to obtain in Portuguese than in English in examples like the following:

- (22) A Ana leu este livro *seis meses* (e nunca o acabou).
the Ana read this book six months (and never it finished)
 ‘??Ana read this book *six months* (and never finished it).’

B. Different durational adverbs and adjectives

The duration of eventualities may be expressed by (vague) adverbial phrases, if they are described by sentential means, or by (vague) adjectival phrases, if they are described by nominal phrases:

- (23) Os operários reconstruíram a ponte *muito rapidamente*.
the workers rebuild the bridge very quickly
 ‘The workers rebuilt the bridge *very quickly*.’
- (24) a *rápida* reconstrução da ponte
the quick reconstruction of the bridge
 ‘the *quick* reconstruction of the bridge’

- (25) O rei esteve *brevemente* exilado num país vizinho.
the king was briefly exiled in-a country neighbouring
 ‘The king was *briefly* exiled in a neighbouring country.’
- (26) o *curto* exílio do rei
the short exile of the king
 ‘the *short* exile of the king’

The adverbs and adjectives in these phrases seem to be sensitive to the (a)telicity of the described eventualities. In order to express the duration of telic events, Portuguese resorts typically to adjectives like *rápido* (‘quick’) and *lento* or *demorado* (‘slow’), and to their derived adverbs (*rapidamente* / *lentamente* / *demoradamente*), as exemplified in (23) and (24); in order to express the duration of atelic situations, Portuguese resorts typically to adjectives like *breve* or *curto* (‘brief’, ‘short’) and *longo* or *prolongado* (‘long’), and to some of their derived adverbs (*brevemente* / *longamente* / *prolongadamente*), as illustrated in (25) and (26)⁷. Note that if the duration phrases in (23)-(24) are substituted by the corresponding ones in (25)-(26), or vice-versa, ungrammaticality arises. These are, therefore, typical examples that illustrate the selectional restrictions at stake (which does not necessarily mean that every (a)telic expression behaves with the same regularity⁸).

C. Different duration predicates

In Portuguese, as well as in English, different aspectual complements are often selected by different duration predicates. If we consider atelic situations expressed by nominal phrases (not by sentences), the typical duration predicate used in Portuguese is *durar*, a close counterpart of the English verb *last*⁹.

- (27) O trabalho de pesquisa sobre esta doença *durou um ano*.
the work of research on this disease lasted one year
 ‘The research work on this disease *lasted one year*.’

⁷ Some of the durational adjectives and adverbs mentioned here are ambiguous, allowing also locational readings, according to which the relevant events are said to happen shortly or long after some contextually salient interval. Some – like *rapidamente* – may also have a manner reading (as in *ele trabalhava rapidamente*, ‘he was working quickly’). I will ignore these ambiguities here.

⁸ Some eventuality-denoting expressions seem to combine well with both types of durational phrases, e.g. *uma viagem rápida / curta*, ‘a short trip’. I will not address this possibly complex issue here.

⁹ To my knowledge, the role of these predicates – *last* / *durar* – in telling apart telic and atelic descriptions has not been clearly highlighted. The fact that *durar* cannot combine with telic descriptions was mentioned to me by João Peres (p.c.) – cf. examples like (30) below.

Note that, although these verbs do not take directly sentences as arguments, it is marginally possible to combine them with atelic sentences, if they occur embedded, as the complement of nouns like *situação* ('situation'). The resulting sentences may sound unnatural to some extent, but not utterly ungrammatical:

- (28) ?*A situação de a Ana estudar Arquitectura durou um ano.*
the situation of the Ana study Architecture lasted one year
 'The situation of Ana studying Architecture lasted one year.'

When sentential atelic arguments are involved, English uses typically the verb *spend* (cf. e.g. Dowty 1979, and Huddleston and Pullum 2002), and Portuguese the verb *passar*¹⁰:

- (29) *A Ana passou um ano a estudar Arquitectura.*
the Ana passed one year PREP_a study Architecture
 'Ana spent one year studying Architecture.'

Note that the verbs *durar* and *last* cannot combine with telic descriptions:

- (30) **A construção desta ponte pelos Japoneses durou um ano.*
the construction of this bridge by the Japanese lasted one year
 '*The construction of this bridge by the Japanese lasted one year.'
- (31) **A situação de os Japoneses construírem esta ponte durou um ano.*
the situation of the Japanese build this bridge lasted one year
 '*The situation of the Japanese building this bridge lasted one year.'

The selectional properties of duration predicates with respect to telic descriptions have been comparatively more emphasised in the literature: English resorts typically to the verb *take* (cf. Dowty 1979); Portuguese uses at least two verbs with similar restrictions – *levar* and *demorar*¹¹; all these verbs can take nominal or sentential eventuality-denoting arguments.

¹⁰ The Portuguese verb *passar* often occurs with time-denoting phrases instead of predicates of amounts of time as arguments (whence expressing duration by inference rather than assertion) – cf. fn. 5.

¹¹ Another verb with similar behaviour, but possibly not as common, is *gastar*. It combines with telic descriptions, and is felt as a bit awkward with atelic descriptions:

- (i) *Gastei duas horas {a / para} resolver o quebra-cabeças.*
[I] spent two hours to solve the puzzle
- (ii) ?*Gastei duas horas a trabalhar.*
[I] spent two hours to work

(32) A construção da ponte {*levou / demorou*} *um ano*.
the construction of-the bridge took one year
 ‘The construction of the bridge *took one year*.’

(33) Eles {*levaram / demoraram*} *um ano* para construir a ponte.
they took one year to build the bridge
 ‘It took them *one year* to build the bridge.’

The preposition that heads the sentential complement of these two Portuguese verbs is typically *para*, although *a* can also be used:

(34) Eles {*levaram / demoraram*} *um ano* a construir a ponte.

In other constructions, however, as we will see below, the preposition *para* selects telic complements whereas *a* selects atelic complements (cf. (44)-(45)).

In accordance with the distinctions noted above, expressions that are ambiguous between an atelic and a telic reading are unambiguous when combined with the predicates at stake. Observe the following example:

(35) A ocupação da ilha pelas tropas {*durou / demorou*} *um ano*.
the occupation of-the island by-the troops {lasted / took} one year
 ‘The occupation of the island by the troops {*lasted / took*} *one year*.’

The NP *a ocupação da ilha pelas tropas* (‘the occupation of the island by the troops’) is ambiguous between an atelic reading – the state of the troops being in the island – and a telic reading – the accomplishment of the troops completing the occupation of the island. With *durar* (‘last’) only the first interpretation is available; with *demorar* (‘take’) – just like with *levar* – it is the other way round¹².

¹² The combination with duration predicates like *durar* or *demorar* may be specially interesting as a possible test for (a)telicity of nominal expressions:

(i) O sismo {*durou / ?demorou / *levou*} vinte segundos.
 the earthquake {lasted / took / took} twenty seconds
 ‘The earthquake {lasted / *took} twenty seconds.’

In fact, eventuality-denoting nominal phrases are sometimes hard to classify as atelic or telic. This is particularly the case with those that – unlike *a presença de tropas na ilha* (‘the presence of troops in the island’) or *a construção da ponte* (‘the construction of the bridge’) – do not combine with duration adjuncts headed by *durante* or *em*, but rather with duration adjuncts headed by *de* (‘of’):

(ii) um sismo de vinte segundos
 an earthquake of twenty seconds
 ‘a *twenty-second* earthquake’

However, it must be noted that some nouns – like e.g. *viagem* (‘trip’) – seem to accept the combination with all types of verbs without a sharp difference in

Up to now we have observed several differences in the ways of expressing telic and atelic duration. To these differences between telic and atelic duration, we can add some more, which have to do with specific properties of homogeneous (i.e. atelic) eventualities, viz.: (i) they are additive, i.e. can be summed up to yield eventualities of the same type (cf. e.g. Bach 1981, 1986) – e.g. two states of Ana being in the office for x and y time can be summed up to yield a state of Ana being in the office that lasts for $x+y$ time; (ii) the same continuous eventuality has different durations at different time intervals – e.g. if the state of Ana being in the office has duration x at the interval t , and is not interrupted, it has duration $x+y$ at the interval that follows t by y time. These properties do not apply to heterogeneous events. This results in linguistic differences such as those highlighted below.

D. Use of imperfective time-anchored duration phrases

As we will see in more detail in section 7.3 below, in order to express the duration that an eventuality has reached at a given (anchor) point in time, Portuguese uses specific duration phrases, namely phrases headed by a form of the verb *haver* (typically *há*). The closest English counterparts of these phrases are common duration *for*-adverbials in combination with an adverb that identifies the anchor point (e.g. *now* or *then*).

- (36) O museu está encerrado *há dois meses*.
the museum is closed there-is two months
 ‘The museum has been closed *for two months now*.’

- (37) a presença de tropas nesta ilha *há dois meses*
the presence of troops in-this island there-is two months
 ‘the presence of troops in this island *for two months now*’

The described eventualities – which can be expressed either by sentential or by nominal means, as in (36) and (37), respectively – are imperfective, in the sense that they are assumed to hold at the anchor point (and, in principle, beyond it). Only descriptions of atelic eventualities occur in these constructions with durational *haver*¹³, and there seems to be no parallel structure (in Portuguese) to express telic duration.

E. Use of temporal measure quantifiers

Consider the following sentences:

meaning. This seems to indicate that the issue of the Aktionsart values of NPs is rather complex and needs further investigation. I will not try to pursue it here.

¹³ Some *haver*-phrases can combine with telic descriptions, but they are of a different type (non durational), as we will see in section 7.3.

- (38) *Após três meses de treino diário*, o atleta sentia-se em forma.
after three months of training daily, the athlete felt in shape
 ‘After three months of daily training, the athlete felt in good shape.’
- (39) *Três meses de disputas legais* deixaram-no exausto.
three months of disputes legal left him exhausted
 ‘Three months of legal wrangling left him exhausted.’

The italicised NPs contain a predicate of amounts of time – *three months* – which can be classified as a **temporal measure quantifier** since it has a quantifying function similar to expressions like *three meters*, *three litres*, or *three tons* when applied to massive nouns (on this notion of measure quantification, cf. Peres 1992). Though these expressions are not time adjuncts of duration in the same sense that *for*-phrases are, they exhibit notorious similarities with those adjuncts. Compare, for instance, (38) above with the following equivalent sentence:

- (40) *Após treinar diariamente durante três meses*, o atleta sentia-se em forma.
after train daily for three months, the athlete felt in shape
 ‘After training daily for three months, the athlete felt in good shape.’

In the structures (38) and (39) above, the temporal quantifier applies to nominal or nominalised expressions – *treino diário* / *daily training*, *disputas legais* / *legal wrangling* – which represent atelic eventualities¹⁴. If telic events are involved in these structures, coercion into atelic events seems to occur systematically:

- (41) *Após três meses de construção*, a ponte estava quase pronta.
after three months of construction, the bridge was almost ready
 ‘After three months of construction, the bridge was almost ready.’

There are also structures similar to these, but with quantification over sentential (rather than nominal or nominalised) constituents. In Modern European Portuguese, they involve an infinitive form preceded by the

¹⁴ Eventuality-denoting nominal phrases that do not combine with duration adjuncts headed by *durante* or *em*, but combine with the verb *durar* (cf. fn. 12), can also occur in these constructions (though Portuguese seems to accept a wider range of phrases than English here):

- (i) *três anos de guerra* (‘three years of war’), *duas horas de incêndio* (‘two hours of fire’), *dez anos de uma carreira cheia de sucessos* (‘ten years of a carrier full of successes’)

preposition *a*; in Brazilian Portuguese, a verbal *-ndo* form (“gerúndio”); in English, a verbal *-ing* form (not preceded by *of*)¹⁵:

- (42) *Após três meses a treinar diariamente*, o atleta sentia-se em forma.
after three months PREP_a train daily, the athlete felt in shape
 ‘After *three months training daily*, the athlete felt in good shape.’

The use of telic descriptions in these contexts similarly triggers an aspectual shift; English seems to prefer the use of nominalised *of*-sequences here:

- (43) *Após três semanas a ler «Guerra e Paz»*, desisti.
after three weeks PREP_a read «War and Peace», [I] gave-up
 ‘After *three weeks of reading «War and Peace»*, I gave up.’

This construction with atelic descriptions must not be confused with a superficially similar one where (unshifted) telic descriptions occur. In Portuguese, the construction at stake may differ only in the preposition used – *para* instead of *a*; a close English counterpart involves the preposition *to*. Compare:

- (44) *Três semanas a ler este livro* é muito.
three weeks PREP_a read this book is much
 ‘*Three weeks (of) reading this book* is a long time.’

- (45) *Três semanas para ler este livro* é muito.
three weeks to read this book is much
 ‘*Three weeks to read this book* is a long time.’

F. Different behaviour in combination with frame adverbials

Expressions involving atelic and telic duration are associated with different inferential patterns in constructions with adverbials that identify time intervals (cf. Mória 2000, for more details). Consider the following examples, where *fifty* is to be interpreted in both examples as an exact cardinal quantifier (i.e. as equivalent to *exactly fifty*):

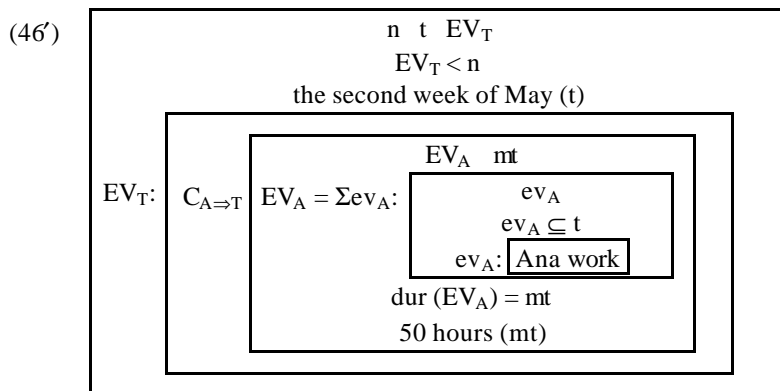
- (46) A Ana trabalhou durante cinquenta horas *na segunda semana de Maio*.
the Ana worked for fifty hours in-the second week of May
 ‘Ana worked for fifty hours *in the second week of May*.’
 -/→

¹⁵ For the sake of simplicity, I will only give examples of European Portuguese below. The Brazilian Portuguese counterparts are obtained by substituting the «gerúndio» (e.g. *estudando*) for the combination of the preposition *a* and the infinitive (e.g. *a estudar*).

A Ana trabalhou durante cinquenta horas *em Maio*.
the Ana worked for fifty hours in May
 ‘Ana worked for fifty hours *in May*.’

- (47) A Ana leu este livro em cinquenta horas *na segunda semana de Maio*.
the Ana read this book in fifty hours in-the second week of May
 ‘Ana read this book in fifty hours *in the second week of May*.’
 →
 A Ana leu este livro em cinquenta horas *em Maio*.
the Ana read this book in fifty hours in May
 ‘Ana read this book in fifty hours *in May*.’

As we can see, the duration of atelic situations may be dependent on a time interval in a way that the duration of telic situations is not. In the most natural interpretation of (46), with an atelic situation (expressed by *Ana worked*), the mentioned amount of time – fifty hours – is the duration of the sum of all (possibly discontinuous) subsituations of the type mentioned that happened within the temporal frame (expressed by *the second week of May*). In other words, there is a maximality requirement, involving everything relevant that happened within the entire time interval. Therefore, if the temporal frame is enlarged, the description in the matrix clause may no longer be quantificationally accurate (since more subsituations of the relevant type may have to be taken into account). Observe the following schematic DRS-representation, where $C_{A \Rightarrow T}$ symbolises the typical shift of atelic into telic associated with the use of duration *for*-phrases (cf. e.g. Bach 1981, Nerbonne 1983, Moens 1987, Mittwoch 1988, Swart 1998), *ev* and *EV* stand for atomic and non-atomic eventualities, respectively, and the subscripts *T* and *A* stand for telic and atelic, respectively:



Telic situations, which are not homogeneous, have a different behaviour in parallel constructions – cf. (47). In these structures, the mentioned time

interval serves merely to locate the described eventuality, which is defined independently of the temporal frame, and taken as atomic (despite the fact that it may involve discontinuity – cf. section 4). Thus, the transitivity of the inclusive location relation guarantees that, even when the frame is enlarged, truth is preserved.

$$(47') \quad \begin{array}{c} n \ t \ ev_T \\ ev_T < n \\ \text{the second week of May (t)} \\ ev_T \subseteq t \\ ev_T: \boxed{\text{Ana read this book}} \\ dur(ev_T) = mt \\ 50 \text{ hours (mt)} \end{array}$$

In sections 6 and 7, I will return to telic and atelic duration. With respect to the former, the main issue will be the distinction between telic duration phrases and several homonymous phrases that belong in different semantic classes. With respect to the latter, the main issue will be the distinction between three subtypes of atelic duration, marked in Portuguese (though not in English) by different temporal phrases. Before proceeding to this analysis, though, two side issues will be addressed briefly in the next two sections: the relationship between duration and (dis)continuity of eventualities, in section 4; the relationship between duration and time-anchoring of eventualities, in section 5.

4. Duration and (dis)continuity

Telic duration may present different degrees of exactness. Consider the following sentence:

- (48) A Ana corrigiu os testes *em dez horas*.
the Ana corrected the tests in ten hours
 ‘Ana graded the tests *in ten hours*.’¹⁶

When uttering this sentence, the speaker may have in mind two significantly different types of (durational) information: (i) if he focus on the boundaries of the event, ten hours is the time elapsed between the beginning and the end of the accomplishment (all interruptions ignored) – imagine Ana started grading

¹⁶ In Mória (2000: 328, fn. 299), I termed these two forms of duration **loose** and **strict duration**, respectively. The definitions given there, using the language of DRT were:

- (i) **loose-dur** (e) =_{def} **dur** (t), such that [beg (t) = beg (e)] and [end (t) = end (e)]
 (ii) **strict-dur** (e) =_{def} **dur** (S), such that [S = Σ s: [s \in preparatory phase (e)]]

the tests at 8 a.m and finished at 6 p.m.; (ii) if he focus on the sum of possibly discontinuous subparts of the event, ten hours is the duration of all these subparts (ignoring, for each subpart, pragmatically irrelevant interruptions) – imagine that Ana graded the tests in three different days and timed it: 3,5 + 2 + 4,5 hours. I will term these two forms of duration **continuous duration** and **discontinuous duration**, again using a hypallage. As we can see, neither in Portuguese nor in English are these differences linguistically marked via different temporal connectives, rather they seem to be contextually determined (and dependent essentially on pragmatic facts).

Atelic duration is also compatible with both continuity and discontinuity:

- (49) A Ana esteve no escritório *durante dez horas*.
the Ana was in the office for ten hours
 ‘Ana was in the office *for ten hours*.’

In the reading that involves **continuous duration**, a single state (of a given temporal extent) is described. In the reading that involves **discontinuous duration**, reference is made to a sum of possibly discontinuous subsituations of the relevant type (Ana being in the office, here). The first reading may be coerced by modifying the predicate of amount of times with the adjective *seguidas* – *quinze horas seguidas*, ‘fifteen hours in a row’. Curiously, no parallel simple form of coercion seems to exist for structures with telic duration, where predicates of amounts of time cannot combine with the adjective *seguidas*:

- (50) *A Ana corrigiu os testes *em dez horas seguidas*.
the Ana corrected the tests in ten hours followed
 ‘*Ana graded the tests *in ten hours in a row*.’

Note, moreover, the differences between continuous and discontinuous atelic duration that result from adding an adverbial that identifies a time interval:

- (51) Este fim-de-semana, a Ana esteve no escritório *durante dez horas*.
this weekend, the Ana was in the office for ten hours
 ‘This weekend, Ana was in the office *for ten hours*.’

In the reading that involves continuous duration, and therefore a single state, the adverbial *este fim-de-semana* (‘this weekend’) merely provides a frame for inclusive location – a state with the mentioned duration happened anywhere within the relevant weekend (cf. DRS in (47’)). In this case, truth-preservation is guaranteed, even if the temporal frame is widened. In the reading that involves discontinuous duration, and therefore a sum of possibly discontinuous states, the preferred reading is probably the one where the homonymous adverbial *este fim-de-semana* provides a frame for abstraction

over subeventualities – i.e. the sum of all (sub)states of Ana being in the office that happened within the frame has the described duration (cf. DRS in (46')). As seen above, in this **temporally bounded quantification reading**, enlargement of the frame does not guarantee truth-preservation.

5. Duration and time-anchoring

As said before, simple asserted duration can be associated with a binary functor relating eventualities and predicates of amounts of time (**dur** in Kamp and Reyle 1993). In other words, duration does not involve – just by itself – any form of temporal location. However, it may be the case that the initial or ending point of the eventuality whose duration is specified coincides with a given, or known, time interval (e.g. a temporal perspective point, like the utterance time). In those circumstances, the eventuality is temporally anchored, and – again by hypallage –, we may speak of **time-anchored duration** to refer to such situations.

Some cases of time-anchored duration have been studied by Hitzeman (1993, 1997). The author distinguishes “p(osition)-definite” and “non-p(osition)-definite” readings of sentences involving duration phrases like *for an hour* and *in an hour*. Let us consider each case separately.

(52) Martha will be in her office *for an hour*. (Hitzeman 1997: 89)

According to Hitzeman (1997: 89), in the p-definite reading, *for an hour* is interpreted as “for the hour immediately following the utterance time”; this is, according to her, the only reading that we obtain in English, if the adverbial is in sentence-initial position. The non-p-definite reading is the one simply involving the duration of some future eventuality of Mary being in her office. These two readings are coincident with what I term here “time-anchored” and “simple” duration, respectively. In Portuguese, a similar situation can occur in sentences with *durante*-phrases:

(53) A Marta vai estar no escritório *durante uma hora*.
the Marta goes be in-the office for one hour

This sentence is ambiguous in a way similar to (52): the time adjunct in sentence-initial position strongly favours the time anchored duration; furthermore, this reading can be made explicit by changing the form of the time adjunct to *durante mais uma hora* (comparable to English for *yet another hour*).

Let us now consider the case with telic events.

(54) Smith & Co. will build a bridge *in ten weeks*. (Hitzeman 1997: 90)

When *in ten weeks* is taken as a duration phrase, this sentence has an ambiguity parallel to the one in (52): it can mean that the construction will take ten weeks and will start at some indefinite point in the future – non p-definite reading, or simple duration reading – or that it will take the same amount of time and will start (immediately after) the utterance time. This second reading is what I term time-anchored reading, but, curiously, it is not what Hitzeman (1997) calls a p-definite reading (in fact, the author does not mention this reading of the sentence at all). What she terms – misleadingly, in my opinion – p-definite reading, is a reading that has nothing to do with duration: the construction of the bridge will take place (or start) ten weeks after the utterance time. As we can see, in this reading, *in ten weeks* is a temporal locating phrase, that involves reference to the interval that follows the utterance time by the specified amount of time, i.e. it is a different time adjunct that English, by coincidence, expresses with homonyms; European Portuguese, as said already, would use different adverbials: *em dez semanas*, for duration (time-anchored or not), and *dentro de dez semanas* or *daqui a dez semanas*, for location:

- (55) A Smith & Co. vai construir a ponte *em dez semanas*.
the Smith & Co. goes build the bridge in ten weeks
 [time-anchored or simple duration]
- (56) A Smith & Co. vai construir a ponte *daqui a dez semanas*.
the Smith & Co. goes build the bridge from-here to ten weeks
 [temporal location]

In sum, time adjuncts of duration – both telic and atelic – seem generally compatible with scenarios of temporal anchoring and scenarios of temporal autonomy. The two interpretations seem to be essentially context-dependent, and do not imply different time adjuncts (or temporal connectives). This situation is similar to the one observed in section 4, where we noted that the opposition between continuous and discontinuous duration is also essentially dependent on the context and not on the use of different connectives.

There is an interesting fact about Portuguese, though, with respect to time-anchored duration. Contrary to English, Portuguese – just like other Romance languages, for that matter – can use specific markers for time-anchored duration, but only in the case of atelic eventualities viewed both imperfectively and retrospectively. We will return to this issue in section 7.3.

6. Telic duration phrases and their homonyms

As said, adjuncts of telic duration are typically formed by the temporal prepositions *em* (Portuguese) and *in* (English) plus a bare predicate of

amounts of time, as complement. These time adjuncts are exemplified in (16b), (17), and (21) above, as well as in the sentences below:

- (57) A Ana escreveu o soneto *em cinco minutos*.
the Ana wrote the sonnet in five minutes
 ‘Ana wrote the sonnet *in five minutes*.’
- (58) A Ana chegou ao cimo do Evereste *em cinco dias e meio*.
the Ana arrived at-the top of-the Everest in five days and half
 ‘Ana reached the top of the Everest *in five days and a half*.’

The temporal prepositions characteristic of telic duration – *em* and *in* – are highly ambiguous. Even when they take bare predicates of amounts of time as complements – like in *em cinco minutos* / *in five minutes*, or *em duas horas* / *in two hours*, it is not always the case that they express duration. Hence, some classification mix-up, or confusion, is liable to occur¹⁷. I will address this issue now.

In my opinion, at least three categories of *em* / *in* X-TIME (where X-TIME stands for a bare predicate of amounts of time) have to be considered.

- i. the **telic duration phrase**, which has been analysed throughout this paper, and is exemplified in (57)-(58) above
- ii. the **prospective temporal locating phrase**, exemplified in the following sentence: (cf. “locational” *in* in Huddleston and Pullum 2002: 710; “ingressive” *in* in Smith 1991: 157)

- (59) A palestra começa *em cinco minutos*. [BP]
the talk starts in five minutes
 ‘The talk will start *in five minutes*.’

In this sentence, the beginning of the talk (an achievement, i.e. a punctual, durationless event) is said to take place at an interval that follows the utterance time by the specified amount of time (five minutes). In other words, no duration is involved. In English, the homonymy is systematic. In Portuguese, however, these two cases are often distinguished lexically. First, note that the ambiguity is only possible in Brazilian Portuguese. European

¹⁷ The fact that durational and locational *in* have not been clearly distinguished in the literature is evident in many texts. Take for instance, the classical test to distinguish accomplishments from achievements in Dowty (1979: 59): “If *f* is an accomplishment verb, then *x f ed in y time* entails *x was f ing during y time*. If *f* is an achievement verb, then *x f ed in y time* does not entail *x was f ing during y time*.” Clearly, two lexical instances of the preposition *in* are at stake here – *in*₁ (durational) in the first complex sentence, and *in*₂ (locational) in the second one. It seems a mere coincidence that English expresses the two values at stake with the same preposition. Another example of mixing of the two homonyms was given above, concerning the p- and non-p-definite readings of Hitzeman (1997).

Portuguese does not use *em*-phrases as prospective locating phrases: if the perspective point is the utterance time, it resorts to phrases like *daqui a cinco minutos* or *dentro de cinco minutos*, which BP also uses (at more or less free variance with *em cinco minutos*); these forms correspond roughly to an English structure like *five minutes from now* (though this form does not seem as common as *in five minutes*)¹⁸.

- (60) A palestra começa {*daqui a / dentro de*} *cinco minutos*.
the talk starts {from-here to / inside of} five minutes

If the perspective point is not the utterance time, but e.g. some contextually salient time in the past, the phrases may have a slightly different form, or be completely different – e.g. *daí a cinco minutos* is used instead of *daqui a cinco minutos* (corresponding roughly to an English structure like *five minutes from then*)¹⁹; *dentro de* is normally not used when the perspective point is not the utterance time; conversely, phrases like *passado(s) cinco minutos* or *cinco minutos depois*, which are very common in these contexts, are not used when the perspective point is the utterance time (the most common English counterpart of these phrases is *five minutes later*).

- (61) O orador entrou na sala. A palestra começou {*daí a cinco minutos / passado cinco minutos / cinco minutos depois*}.
the speaker entered in-the room. the talk started {from-there to five minutes / passed five minutes / five minutes after
 ‘The speaker entered the room. The talk started *five minutes later*.’

Ambiguity between the durational and locational *em*-phrases may arise in Brazilian Portuguese, especially when combined with descriptions of achievements (cf. examples in Mória and Alves 2004). Furthermore, we note that it is not always easy to distinguish the two possible meanings: a simple prospective location of the achievement or the duration of the preparatory phase of that achievement (which has undergone an Aktionsart shift to an accomplishment). I will not explore this issue here.

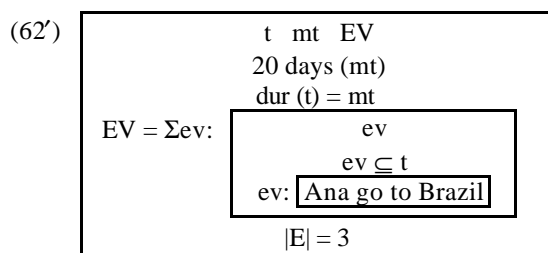
iii. the quantification-bounding phrase, exemplified in the following sentence:

- (62) A Ana foi ao Brasil três vezes *em vinte dias*.
the Ana went to-the Brazil three times in twenty days
 ‘Ana went to Brazil three times *in twenty days*.’

¹⁸ Cf. the following examples from the BNC: “Ten minutes from now he would be climbing the stairs in the dark.” (BIX 1694); “You get scratching those heads and I’ll give you the answer in three minutes from now.” (HEW 187).

¹⁹ “Oh what I’ll do when I’m ready I’ll give you a bell which means it’ll be what ten, fifteen minutes from then to picking you up (...)” (KCY 1441).

In my opinion, the italicised phrase in this sentence does not express duration or location (in the usual sense of these terms, at least). Rather, it provides a temporal frame for circumscribing quantification, much in the same line as temporal adverbials in (46') above (cf. Mória 2006), with the difference that the frame here is an unspecified interval of the mentioned duration, rather than a definite stretch of the time axis. The meaning of (62) can be roughly paraphrased as follows: there is an interval of time [t] of a given extent [mt] – twenty days – such that the sum of all events [E] of the described type [ev] – Ana going to Brazil – contained in it has cardinal three. In the language of DRT:



Note that, contrary to most duration phrases, these bounding adverbials readily occur in sentence-initial position:

- (63) *Em vinte dias*, a Ana foi ao Brasil três vezes.
in twenty days, the Ana went to-the Brazil three times
 ‘*In twenty days*, Ana went to Brazil three times.’

Note also that they are equivalent to phrases headed by other connectives (which may occur either in sentence-initial or in sentence-final position), viz. *no espaço de*, in Portuguese, and *over*²⁰, in English, or phrases with indefinite time-denoting phrases like *um período de vinte dias* / *a period of twenty days*:

- (64) A Ana foi ao Brasil três vezes {no espaço de vinte dias / num período de vinte dias}.
the Ana went to-the Brazil three times {*in-the space of twenty days* / *in-a period of twenty days*}
 ‘Ana went to Brazil three times *in/over a period of twenty days*.’

²⁰ Cf. the following examples from the BNC corpus: “Although the house, originally a simple hall house, has been extended and altered at least five times over nearly 600 years, it still has an overall integrity (...).” (B03 3011); “Ian Wyllie, who studied cuckoos extensively in Cambridgeshire reed-beds, saw it just three times over a period of six years after thousands of hours of observation.” (CJ3 84).

Finally, note that the quantification at stake need not be direct quantification over events, expressed by quantifiers like *n vezes / n times*. It may as well be indirect quantification over events, expressed by e.g. NPs with nominal cardinal quantifiers and distributive readings, or exhaustive enumeration of events, expressed via conjunction (cf. Mória 2000, 2001a for a more complete list of contexts where temporal circumscription of event-quantification emerges):

- (65) *Em vinte dias, a Ana fez três viagens ao Brasil.*
in twenty days, the Ana made three trips to-the Brazil
 ‘In twenty days, Ana made three trips to Brazil.’
- (66) *Em vinte dias, a Ana visitou o Brasil, o México, o Belize e Cuba.*
in twenty days, the Ana visited the Brazil, the Mexico, the Belize and Cuba
 ‘In twenty days, Ana has visited Brazil, Mexico, Belize and Cuba.’

7. Atelic duration

7.1. Subtypes of atelic duration – simple, time-anchored and planned

The three Portuguese sentences below express (atelic) duration. They are roughly parallel to English sentences with the same temporal preposition – *for* – but involve, in Portuguese, three different temporal connectives:

- (67) *A Ana esteve no escritório durante duas horas.*
the Ana was in-the office for two hours
 ‘Ana was at the office *for two hours*.’
- (68) *A Ana está no escritório há duas horas.*
the Ana is in-the office there-is two hours
 ‘Ana has been in the office *for two hours now*.’
- (69) *A Ana saiu por duas horas (mas só regressou ao fim de três).*
the Ana left for two hours (but only returned at-the end of three)
 ‘Ana left *for two hours* (but only returned three hours later).’

These sentences illustrate three different subsystems of asserted duration of atelic eventualities via temporal adjuncts, which are typically marked in Portuguese (especially in European Portuguese), contrary to what happens in English, by different temporal connectives: **simple duration**, **time-anchored duration** and **planned duration**. In simple words, they might be distinguished as follows:

- i. **simple duration** is independent of the position of the described eventualities in the time axis (i.e. non-time-anchored) and does not have an intensional component;
- ii. **time-anchored duration** expresses for how long an eventuality has been going on at a given (anchor) point in time (or, alternatively, for how long it will last from a given anchor point in time onwards);
- iii. **planned duration** has an intensional component (as opposed to the simple and the time-anchored duration, which are extensional); it expresses the anticipated duration of the consequent state of a given (telic) eventuality; the actual duration of that state may or may not coincide with it.

7.2. *Simple (atelic) duration*

Simple duration is defined negatively, as non-time-anchored and non-planned (or extensional). As said in section 3, it is expressed by *durante*-phrases in (European and Brazilian) Portuguese, by synonym *por*-phrases in Brazilian Portuguese²¹, and by *for*-phrases in English; furthermore, it is possible – both in Portuguese and English – to express it via bare predicates of amounts of time (with no overt preposition):

- (70) A princesa dormiu ({durante / por_{BP}}) cem anos.
the princess slept (for) hundred years
 ‘The princess slept (for) one hundred years.’

It must be stressed that the Portuguese preposition *durante* has a locational homonym. This homonym takes time-denoting phrases, rather than bare predicates of amounts of times as complements: *durante o ano de 1995* (‘during 1995’), *durante o período das eleições* (‘during the election period’), *durante os últimos três anos* (‘for the last three years’). In some cases, locational *durante*-phrases express – exclusively or preferably – a durative reading, allowing inferences about the duration of the located events (according to Table 3, in section 1.2); this is namely the case when they are combined with: (i) universally quantified NPs with eventuality-denoting predicates (e.g. *toda a palestra*, ‘the whole talk’); (ii) time-denoting phrases that contain deictic adjectives combined with predicates of amounts of time (e.g. *as últimas três semanas*, ‘the last three weeks’). Curiously, in this type of durative contexts, English often (or preferably) resorts to the preposition *for* (which I take to be a locational and not a durational connective here)²².

²¹ Modern European Portuguese does not normally use *por*-phrases to express simple atelic duration (unless in some restricted cases, e.g. those expressing very short duration like *só a vi por uns segundos* [‘I only saw her for a second’]). However, there are many instances of this use in classical Portuguese writers. For a more thorough analysis of these facts, cf. Mória (2001b).

²² English *during*-phrases are also compatible with durative readings – cf. the following examples from the BNC: “Where were the two girls during the last

- (71) A Ana esteve em pé *durante toda a palestra (de trinta minutos)*.
 [(only) durative reading]
the Ana was in foot for all the talk (of thirty minutes)
 ‘Ana stood *for the whole (thirty-minute) talk.*’
- (72) A Ana esteve em Paris *durante as últimas três semanas*.
 [(possibly preferred) durative reading]
the Ana was in Paris for the last three weeks
 ‘Ana has been in Paris *for the last three weeks.*’

However, *durante* may also express inclusiveness of telic events (punctual or not) – as in (73) –, or mere overlapping of atelic eventualities – as in (74). In these uses, it is the counterpart of English *during*-phrases (not of *for*-phrases). Hence, the possibility of inferences about duration with *durante* is merely contextual.

- (73) A Ana adormeceu *durante a palestra (de trinta minutos)*.
the Ana fell-asleep during the talk (of thirty minutes)
 ‘Ana fell asleep *during the (thirty-minute) talk.*’
- (74) A Ana esteve em Paris *durante o fim-de-semana*.
the Ana was in Paris during the weekend
 ‘Ana was in Paris *during the weekend.*’

7.3. Time -anchored duration

As discussed in section 5, duration is in principle independent of positioning in the time axis. However, it is often the case that the beginning or end of the eventualities whose duration is expressed is time-anchored. In this section, I will only consider the case of atelic anchored eventualities:

- (75) Estou aqui *há dez minutos*.
 [I] *am here there-is ten minutes*
 ‘I’ve been here *for ten minutes (now).*’
- (76) Vou ficar aqui (*durante*) *mais dez minutos*.
go stay here (for) more ten minutes
 ‘I’ll be here (*for*) *ten minutes more.*’

fortnight of their lives?’ (CA6 85); “During the whole time they were there, they were not bothered by aircraft.” (AR8 1583); “During the whole of Christmas Day Ruth lay on her back in bed.” (CB5 195); “Since the overall size of the labour force was similar during the whole period, the conclusion seems inescapable that (...)” (FR4 1175).

In these sentences, the described atelic situations are viewed imperfectively, as holding at the utterance time, but in the first case the duration is **retrospective** – in the sense that the situation is said to have reached the mentioned duration at the utterance time – and in the second case it is **prospective** – in the sense that the situation is said to last for the mentioned amount of time starting from the utterance time. In Portuguese, there is a clear asymmetry between retrospective and prospective (imperfective atelic) duration. The second case, which I will ignore from now on, does not resort to any special form of temporal connectives; rather, it uses the same expressions as simple duration: typically *durante*-phrases²³. As for the first case, it is linguistically more interesting in Portuguese, inasmuch as it has specific markers. If one wants to express for how long an atelic situation has been going on at a given point in time, one of two constructions is normally used in Portuguese:

- (i) a predicate-argument combination with the duration predicate *fazer* – one argument describing the measured eventuality, a second one the amount of time corresponding to its duration and a third one the temporal anchor, as in the following examples:

(77) *Faz amanhã dois anos que a Ana está em Paris*²⁴.
makes tomorrow two years that the Ana is in Paris
 ‘Tomorrow, Ana will have been in Paris for two years.’

(78) *Fez ontem dois anos que a Ana está em Paris.*
made yesterday two years that the Ana is in Paris
 ‘Yesterday, Ana had been in Paris for two years.’

Often, the anchor point is not explicit, and coincides with a temporal perspective point (identified by the tense of the main clause, which coincides with the tense of the verb *fazer*).

(79) *Faz (agora) dois anos que a Ana está em Paris.*
makes (now) two years that the Ana is in Paris
 ‘Ana has been in Paris for two years now.’

(80) *Fazia (então) dois anos que a Ana estava em Paris.*
makes (then) two years that the Ana is in Paris
 ‘Ana had been in Paris for two years then.’

²³ Nevertheless, the use of quantifying expressions like *mais* (‘more, yet another’) – cf. (76) – may induce a time-anchored reading.

²⁴ In an alternative syntactic construction, the sentential argument occurs in sentence-final position without any complementiser:

(i) *A Ana está em Paris faz amanhã dois anos.* [equivalent to (77)]
the Ana is in Paris makes tomorrow two years

(ii) a very similar construction with the verb *haver*²⁵, that has the following specificity: the anchor point is never explicit, and necessarily coincides with a temporal perspective point (identified typically by the tense of the main clause), i.e. there are *haver*-constructions parallel to (79)-(80) but not to (77)-(78)

(81) Há dois anos que a Ana está em Paris²⁶. [equivalent to (79)]
there-is two years that the Ana is in Paris
 ‘Ana has been in Paris for two years now.’

(82) Havia dois anos que a Ana estava em Paris. [equivalent to (80)]
there-was two years that the Ana was in Paris
 ‘Ana had been in Paris for two years then.’

Note that, in these sentences, the tense of the verb *haver* coincides with that of the main clause (just like in the constructions with *fazer*); however, the formally present form *há* may occur in any context, even with non-present perspective points:

(83) Há dois anos que a Ana estava em Paris. [equivalent to (80)-(82)]
there-is two years that the Ana was in Paris
 ‘Ana had been in Paris for two years then.’

This fact seems to indicate that the form *haver* is losing its verbal character in this construction²⁷, the whole phrase it heads possibly being reanalysed as a time adjunct of duration²⁸.

It must be noted that the Portuguese sentences with *haver*, like (81)-(82), are not ambiguous, whereas their English counterparts – as has often been noted – are ambiguous if the anchor-point is not made explicit via adverbs like *now* or *then*. Thus, a sentence like *Ana has been in Paris for two years* may indicate that the situation occurred somewhere in the past (non-anchored duration) or that it reached the mentioned duration at the utterance time

²⁵ Brazilian Portuguese can also use the verb *ter* (‘to have’) in analogous constructions.

²⁶ In an alternative – very frequent – syntactic construction, the sentential argument occurs in sentence-final position without any complementiser (cf. fn. 24):

(i) A Ana está em Paris há dois anos.
the Ana is in Paris there-is two years

²⁷ Some verbal characteristics still remain, e.g. the possibility of combining *haver* with adverbs like *já* (‘already’) or *ainda não* (‘not yet’).

²⁸ If so, a functor slightly different from Kamp and Reyle’s **dur** would have to be introduced in order to represent these time adjuncts of duration – say, a functor **A-dur** relating an eventuality (ev), an amount of time (mt) and a time-interval that acts as an anchor point (t); the DRS-conditions associated with this form of duration would have to be something like: [A-dur (e, t) = mt].

(anchored duration) – cf. e.g. Richards (1982), Heny (1982), Mittwoch (1988), Kamp and Reyle (1993). In Portuguese, the duration connective *haver* would be used to express the anchored (imperfective) duration – *a Ana está em Paris há dois anos* –, whereas the duration connective *durante* would be used to express non-anchored (perfective) duration – *a Ana esteve em Paris durante dois anos*.

On the other hand, it is a curious fact that the Portuguese constructions with *haver* – just like, for that matter, those with *fazer* – are ambiguous, inasmuch as they may also be used to express temporal location, instead of duration²⁹. This occurs notoriously when telic durationless events are involved:

(84) O bebé nasceu há dois meses (atrás).
the baby was-born there-is two months (behind)
 ‘The baby was born two months ago.’

(85) Faz amanhã dois meses que o bebé nasceu.
makes tomorrow two months that the baby was-born
 ‘The baby was born two months ago tomorrow.’

Observe that the English counterparts of these sentences involve totally different temporal expressions, namely constructions with *ago* (instead of constructions with *for*). In fact, the temporal locating phrases with *haver* and *ago* are the retrospective counterparts of the prospective phrases discussed in section 6: phrases with e.g. *dentro de* or *daí/daqui a*, in Portuguese, *em* in Brazilian Portuguese, and *in*, in English (cf. (59)-(60)).

There are many linguistic clues that tell apart the two uses of these temporal expressions with *haver* and *fazer* (including Aktionsart and tense differences)³⁰, but I will not consider them here for space reasons (cf. Mória 1999, Mória and Alves 2004). I will focus on one difference, though, that involves only *haver*-phrases. In the locational reading, these phrases are compatible with a postpositional redundant element *atrás* (literally ‘behind’)³¹

²⁹ They can also behave as temporal quantification adverbs (in the sense of Kamp and Reyle 1993) in structures parallel to (81)-(82), or (i) in fn. 26; the relevant structures differ from those presented here in that quantified (discontinuous) intervals or events are used in the complement of *haver*: *a Ana não vai ao ginásio há três fins-de-semana* (‘Ana hasn’t been to the gym for three weekends now’), *o Paulo não marca um golo há três jogos* (‘Paulo hasn’t scored a goal for three matches now’) – cf. Mória (2003).

³⁰ In some cases, that I will not consider here, sentence ambiguity may arise (cf. Mória 1999).

³¹ With past and future anchor points, no postpositional element is used in standard Portuguese:

(i) O bebé tinha nascido há dois anos (*atrás).
the baby had been-born there-is two years behind

– cf. (84); in the duration reading this element may not occur. Thus, if this element is present, no ambiguity is possible. Now, it is interesting to note, that this difference is being capitalised – especially in Brazilian Portuguese – in such a way that the ambiguity of *haver*-phrases disappears. In fact, it is very frequent in BP to use a construction with only the postpositional element *atrás* and no form of the verb *haver*; these simple *há*-constructions are regarded as marginal or even ungrammatical by many EP speakers:

- (86) O bebé nasceu dois anos atrás.
the baby was-born two years behind
 ‘The baby was born two years ago.’

Curiously, this construction, with a simple postpositional element, is superficially very similar to the English construction with *ago*. In Brazilian Portuguese, this construction is significantly more frequent than the construction with *haver* in some contexts, viz. when the whole phrase occurs as the complement of a preposition:

- (87) O problema data de (*há*) dois anos atrás.
the problem dates to (there-is) two years behind
 ‘The problem dates back to two years ago.’
- (88) A Ana morou em Paris até (*há*) dois anos atrás.
the Ana lived in Paris until (there-is) two years behind
 ‘Ana lived in Paris until two years ago.’

Furthermore, in constructions where the upper bound of a location time coincides with a temporal perspective point – e.g. constructions with *desde* (‘since’) and *de... para cá* (‘from... until now’) – these time adjuncts may surface, in Brazilian Portuguese, without *haver* and without *atrás*, i.e. they may surface as bare predicates of amounts of time.

- (89) A Ana mora em Paris desde (*há*) dois anos (*atrás*).
the Ana lives in Paris since (there-is) two years (behind)
 ‘Ana has been living in Paris for two years.’

Curiously, these constructions have superficial parallels in French – *depuis deux ans* – and German – *seit zwei Jahren*. For a more thorough analysis of

With non-present temporal perspective points, the construction with *haver* is equivalent to the construction with a combination of a predicate of amounts of time and the element *antes* (followed by a null or pronominal anaphor):

- (ii) O bebé tinha nascido dois anos antes (disso).
the baby had been-born two years before (of-that)
 ‘The baby had been born two years before.’

these variants of the locational constructions with *haver*, cf. Mória and Alves (2004).

7.4. *Planned duration (of consequent states)*

It has often been noted in the literature about English that *for*-phrases can refer to the **duration of consequent states** of telic – typically punctual – events represented in main clauses³² (cf. e.g. Binnick 1969; McCawley 1971, 1974; Dowty 1979; Mittwoch 1980; Moens and Steedman 1988; Parsons 1990; Hitzeman 1993). Observe the following examples:

(90) The sheriff of Nottingham jailed Robin Hood for four years.
(Binnick 1969)

(91) I borrowed the book for a week.
(Huddleston and Pullum 2002: 705)

(92) I sent him out for half an hour. (*ibid.*)

Moreover, it has been pointed out that, in many cases, these *for*-phrases do not necessarily indicate the **actual duration** of the described eventualities; rather, they refer to an **intended or planned duration** (on the part of some Agent), whence the non-contradictory character of sentences like the following:

(93) The sheriff of Nottingham jailed Robin Hood for four years,
but he stayed in jail only three days. (cf. Hitzeman 1993: 17)

It has also been pointed out that intention does not seem to be a necessary component of English *for*-constructions that express the duration of consequent states: as Hitzeman (1993) notes, there are felicitous uses of this type of *for*-phrases which do not involve any intention or purpose whatsoever, like:

(94) The hiker lost his way for several hours. (Hitzeman 1993: 15)

³² Not all telic events allow this combination though (cf. Hitzeman 1993, Mória 2000). Hitzeman (1993), inspired by Pustejovsky (1991), proposes to deal with contrasts involving the (un)capacity of *for*-phrases to combine with different telic eventualities by resorting to a different (basic) Aktionsart classification of the eventuality-descriptions involved: “To explain the ability of the *for*-phrase to describe the duration of the result state in [*the sheriff of Nottingham jailed Robin Hood for four years*, and not in **Smith & Co. built a bridge for 10 weeks*] (...), I propose that these eventualities are members of different aspectual classes” (p. 23); “I propose that eventualities be separated into classes based on the type of interaction they may felicitously have with a *for*- or *until*-phrase” (p. 108).

Accordingly, sentences like (90) can be taken as ambiguous, allowing both an intentional and a non-intentional interpretation: “Although there is a reading [of the sentence *the sheriff of Nottingham jailed Robin Hood for four years*] in which the *for*-phrase describes the intended duration of the result state, it is important to note that there is another reading which does not involve intention” (Hitzeman 1993: 18).

It is of interest to note that the difference between actual and planned duration may have a lexical expression in Portuguese (more evidently so in modern European Portuguese than in Brazilian Portuguese, as will be stressed below). In fact, modern EP uses preferably *durante*-phrases to express actual duration and *por*-phrases to express planned duration. The use of *por*-phrases to express actual duration – whether of consequent states or not – is uncommon in modern EP (except for some limited contexts³³), though it is very common in BP. On the other hand, *durante*-phrases are seldom used to express planned duration (in both Portuguese varieties), though they might be used without utter ungrammaticality arising:

- (95) A Ana saiu {por /^{??}durante} uma hora mas só voltou ao fim de três.
the Ana left for an hour but only returned at-the end of three
 ‘Ana left for an hour but returned only three hours later.’

It is also interesting to note that the type of Aktionsart shift that affects punctual events in these duration constructions (viz. its association with a result state and hence its atelicisation, so to speak), can also affect some temporal locating durative phrases, in particular English phrases with *until* and Portuguese phrases with *até* (cf. Mittwoch 1980, Mória 2000). In this case, however, the planned reading seems obligatory, rather than optional (according to e.g. Mittwoch 1980). Consider the following sentence:

- (96) Ele emprestou-me o livro até segunda-feira.
he lent-me the book until Monday
 ‘He lent me the book until Monday.’ (Mittwoch 1980: 220)

Até- and *until*-adverbials define a location time that stretches between the time nailed down by their complement (the mentioned Monday, here) and some contextually determined point in its past. The sentence means that the lending took place at a given point before the mentioned Monday (this point marking the beginning of the location time), and its consequent state – the speaker being in possession of the book – *is intended to hold until that Monday*. That intention is an essential component of this construction is once more demonstrated by the non-contradictory character of sequences like the following (as stressed by Mittwoch 1980):

³³ Cf. fn. 21.

- (97) Ele emprestou-me o livro até segunda-feira, mas eu devolvi-lho no domingo.
he lent-me the book until Monday, but I returned-it-to-him on-the Sunday
 ‘He lent me the book until Monday, but I gave it back on Sunday.’

Note that, under this analysis, the use of English *until*, which is normally incompatible with non-durative readings, is not exceptional in (96).

8. Conclusion

In this paper, a global view on the expression of duration in Portuguese was presented, and a comparison with English was outlined. The first issue to be addressed was the need to distinguish between **asserted duration** and **inferred duration**, given that inferences about duration are pervasive in natural language discourse, be it in association with certain temporal locating expressions, or with discourse mechanisms – cf. section 1.2.

In the domain of asserted duration, several distinctions were underlined. Those that are linguistically more prominent in the two languages under consideration are schematised in Table 4 below. One of the most important distinctions is certainly that between the **duration of telic and atelic eventualities**, which is remarkably similar in Portuguese and English – cf. section 3. As for the different **subtypes of atelic duration** – simple, time-anchored and planned – it was observed that Portuguese uses a wider variety of linguistic resources (in terms of duration adjuncts or duration predicates) than English. Consequently, some ambiguities that arise in English – like the well-known case of sentences like *John has lived in Amsterdam for three years* – do not emerge in Portuguese.

It was also observed that **homonymy** is widespread in the area of durational expressions, which, on the one hand, may give rise to ambiguities, and, on the other hand, may result in disputes about categorisation. In particular, it was noted that the temporal connectives *durante*, *haver* and *em*, in Portuguese, and *for* and *in* in English, have locational and durational variants, and, furthermore, that predicates of amounts of times headed by e.g. *em* or *in* may serve as temporal bounders for quantification over events, in a construction that is not exactly “locational” or “durational” in the common sense of these words. Also, it was noted that atelic duration has common characteristics with temporal measure quantification over atelic eventualities – cf. topic E, in section 3. In general, this exposition showed that different semantic domains, like temporal location, temporal circumscription of quantification and temporal measure quantification, are intimately intertwined with duration.

type of asserted duration			Portuguese expressions [examples]	English expressions [examples]
atelic	simple	argumental	<ul style="list-style-type: none"> • <i>durar</i> PAT³⁴ [(12), (27) (28), (35)] • <i>passar</i> PAT [(29)] 	<ul style="list-style-type: none"> • <i>last</i> PAT [(12), (27) (28), (35)] • <i>spend</i> PAT [(29)]
		adjunct	<ul style="list-style-type: none"> • <i>durante</i> PAT [(14), (19), (20), (49), (70)] • <i>por</i> PAT [(19), (70)] • PAT [(20), (70)] • <i>brevemente</i> [(25)] • <i>breve, curto</i> [(26)] 	<ul style="list-style-type: none"> • <i>for</i> PAT [(14), (19), (20), (49), (70)] • PAT [(20), (70)] • <i>briefly</i> [(25)] • <i>brief, short</i> [(26)]
	time- -anchored (retrospec- -tive)	argumental	• <i>fazer</i> PAT [(77), (78), (79), (80)]	
		adjunct / argumental	• <i>haver</i> PAT [(36), (37), (75), (81), (82), (83)]	
		adjunct		<ul style="list-style-type: none"> • <i>for</i> PAT [(36), (37), (75); (76); (77), (78), (79), (80), (81), (82), (83)]
	time- -anchored (prospec- -tive)	adjunct	• <i>durante</i> PAT [(76)]	• <i>for</i> PAT [(76)]
planned	adjunct	• <i>por</i> PAT [(95)]	• <i>for</i> PAT [(90), (91), (92), (93), (95)]	
telic	argumental	<ul style="list-style-type: none"> • <i>demorar</i> PAT [(32), (38), (34), (35)] • <i>levar</i> PAT [(13), (32), (38), (34)] 	• <i>take</i> PAT [(13), (32), (38), (35)]	
	adjunct	<ul style="list-style-type: none"> • <i>em</i> PAT [(15), (21), (48), (57), (58)] • <i>rapidamente</i> [(23)] • <i>rápido</i> [(24)] 	<ul style="list-style-type: none"> • <i>in</i> PAT [(15), (16b), (17), (21), (48), (57), (58)] • <i>quickly</i> [(23)] • <i>quick</i> [(24)] 	

Table 4. Some outstanding types of asserted duration

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³⁴ PAT stands here for “(bare) predicate of amount of time”.

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