

**verbs
movement
and
prepositions**

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Stative and eventive alternations with some spatial verbs

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Abstract

This chapter addresses the alternation between eventive and stative readings of predications projected by some verbs of motion in European Portuguese. We propose that these predications correspond to non-phase individual level predicates in their stative reading and this is justified with a set of well-established linguistic tests presented in the literature. We also analyse some linguistic factors underlying the stative/eventive alternation exhibited by these verbs, namely the tense used in the predication and some lexical properties of the Figure argument. We further assume that the relationship between the Figure argument and the path projected by this kind of verbs plays an essential role in their final interpretation. We argue that both stative and eventive readings arise as a result of aspectual composition and that these spatial verbs are lexically underspecified regarding the state/event distinction.

Keywords

Verbs of motion, aspect, stative/eventive alternation, verb tense, Figure

1 - Introduction

Verbs of motion have been a topic of research in different linguistic perspectives, since they raise an array of conceptual and theoretical problems. From

an aspectual point of view, one of their most intriguing properties is their ability to easily integrate predications belonging to different aspectual classes. For instance, Dowty (1979) points out that at least some of these verbs can be classified as state, accomplishment or activity verbs. Take, for instance, the verb ‘run’. In Dowty’s terms, this verb can be a “pseudo-motional locative” stative verb, an “intransitive” activity verb or a “pseudo-transitive motion verb with extent NP” that corresponds to an accomplishment (Dowty 1979:66-69). In fact, when we take into account the different criteria that allow us to identify, for instance, stative predications, we perceive that, in appropriate conditions, a significant number of verbs of motion, apart from their eventive reading, pattern with true lexical states.

In the last decades, attention has been paid to the accomplishment/activity alternation with these and other types of verbs (and there is extensive literature on this subject). The alternation between eventive and stative readings has also been observed and discussed by several authors (cf. e.g. Jackendoff 1990; Matsumoto 1996; Iwata 1996; Talmy 1996; 2000; Gawron 2007; 2009; Morimoto 2013), although only a few specifically address the aspectual issues.

This paper is concerned with the stative/eventive alternation of predications with verbs of motion in European Portuguese (EP). In particular, we are interested in determining the aspectual profile of predications with stative readings and scrutinizing the linguistic conditions that promote each reading. To do so, in the second section, we test examples in EP to evaluate and confirm the stative behaviour of some motion-like predications and, in the third section, we investigate some conditions underlying the stative and eventive readings, focusing on conditions related to the tense used in the sentence and to some lexical properties of the Figure argument.

2 - The aspectual profile of predications with verbs of motion

2.1 - Event and state readings

In European Portuguese, the behaviour of verbs of motion fits perfectly the several tests proposed by Cunha (2004/2007) for the identification of state predicates. In the current section, we will address this problem, showing how the same verb of motion can, in appropriate circumstances, express either events or states.

First, like other states, stative constructions involving verbs of motion embedded in temporal *when*-clauses give rise to semantic anomaly or, when they are interpretable, they establish an overlapping relation with the situation in the main clause. Compare (1), with a lexical state, with (2), with a verb of motion.

- (1) * *Quando o Filipe foi alto, os pais inscreveram-no numa equipa de basquetebol.*
 When the Filipe be-PST.3SG tall, the parents register-PST.3PL-him in-a team of basketball
 ‘When Filipe was tall, their parents registered him in a basketball team.’
- (2) * *Quando a ponte atravessou o rio, o Presidente da Câmara construiu uma nova cidade.*
 When the bridge cross-PST.3SG the river, the president of-the-court build-PST.3SG a new town
 ‘When the bridge crossed the river, the Mayor installed a new town.’

These examples contrast with the eventive reading of verbs of motion, illustrated in (3), in which a sequential temporal relation between the two events is obtained (i.e., the crossing of the river by the boat precedes the visit by the tourists).

- (3) *Quando o barco atravessou o rio, os turistas visitaram a cidade.*
 When the boat cross-PST.3SG the river, the tourists visit-PST.3SG the town
 ‘When the boat crossed the river, the tourists visited the town.’

Another semantic property shared by lexical states and stative constructions with verbs of motion is related to their inability to co-occur with aspectual operators such as *parar de* (‘to stop’) or *acabar de* (‘to finish’), as shown in (4) and (5).

- (4) * *O Filipe parou / acabou de ser alto.*
 The Filipe stop-PST.3SG / finish-PST.3SG of be-INF tall
 ‘Filipe stopped / finished being tall.’
- (5) * *A escadaria acabou de subir até ao cimo do monte.*
 The staircase finish-PST.3SG of climb-INF up to-the top of-the hill
 ‘The staircase has just climbed to the top of the hill.’

As expected, in their eventive interpretations, verbs of motion are perfectly compatible with the aspectualizers *parar de* (‘to stop’) and *acabar de* (‘to finish’), as (6) demonstrates.

- (6) *O alpinista acabou de subir a montanha.*
The climber finish-PST.3SG of climb-INF the mountain
'The climber has just climbed the mountain.'

Another characteristic of lexical states that is also displayed by stative structures with verbs of motion has to do with the interpretation of the *Presente do Indicativo* (Simple Present): only with states can this tense receive a pure overlapping temporal reading, as shown in examples (7) and (8).

- (7) *A Maria gosta de linguística (agora / *habitualmente).*
The Maria like-PRS.3SG of linguistics (now / * habitually)
'Maria likes linguistics (now / * habitually).'
- (8) *A autoestrada A3 vai do Porto até Espanha (agora / *habitualmente).*
The motorway A3 go-PRS.3SG from-the Porto up to
Spain (now / * habitually)
'The motorway A3 goes from Porto to Spain (now / * habitually).'

Such interpretations contrast with those of eventive sentences with verbs of motion, which, in the context of the *Presente do Indicativo* (Simple Present), display habitual or quantificational readings, as shown in (9).

- (9) *A Maria vai da escola até ao supermercado (* agora / habitualmente).*
The Maria go-PRS.3SG from-the school up to-the
supermarket (* now / habitually)
'Maria goes from school to the supermarket (* now / habitually).'

Similar remarks can be extended to the *Imperfeito do Indicativo* (Imperfect Past): only stative predications lead to a pure temporal interpretation of this tense, corresponding to an overlapping-in-the-past relation. Once again, this property is shared by lexical states and stative structures involving verbs of motion, as exemplified in the following sentences.

- (10) *Antes de se reformar, o João era taxista.*
Before of himself retire-INF, the João be-PST.IPFV.3SG
taxi driver
'Before retiring, João was a taxi driver.'
- (11) *Antes da sua queda, a ponte romana atravessava o rio.*
Before of-the its fall, the bridge roman cross -
PST.IPFV.3SG the river
'Before collapsing, the Roman bridge crossed the river.'

In contrast, when events co-occur with the *Imperfeito* (Imperfect Past), the resulting sentences involve some kind of aspectual change. In particular, as shown in (12) and (13), with eventive constructions comprising verbs of motion, we get either habitual/quantificational readings (12) or “progressive-like” interpretations (13) (cf. Cunha 2004/2007).

- (12) *Antes de avariar, o barco atravessava o rio {todos os dias / habitualmente}.*
Before of break-INF, the boat cross-PST.IPFV.3SG the
river {all the days / habitually}
'Before breaking down, the boat crossed the river {every day / habitually}.'
- (13) *A Maria atravessava a ponte, quando recebeu um telefonema.*
The Maria cross-PST.IPFV.3SG the bridge when receive-
PST.3SG a phone call
'Maria was crossing the bridge when she received a phone call.'

All in all, the tests used in this section show that, when predications with verbs of motion display stative readings, they behave in the same way as lexical states do. We now turn to the identification of the kind of state displayed by these predications.

2.2 - Verbs of motion: individual-level, non-phase stative constructions

Verbs of motion not only participate in unequivocal stative constructions, but they also exhibit several characteristics that lead us to believe that their semantic

behaviour is very close to the one displayed by individual-level, non-phase lexical states:¹ phase states differ from non-phase ones in that the former can be coerced into processes, taking part in the Aspectual Network (cf. Moens 1987), while the latter are excluded from any aspectual changes; as for individual-level states, they apply directly to a given entity (whereas stage-level states apply to spatiotemporal intervals of a given entity).

Firstly, both lexical non-phase states and stative structures involving verbs of motion are typically incompatible with aspectual operators such as the Progressive and *começar a* ('to begin'). See (14) and (16), with lexical states, and (15) and (17), with verbs of motion exhibiting stative readings.

- (14) * *O Filipe começou a ser alto.*
The Filipe begin-PST.3SG to be-INF tall
'Filipe began to be tall.'
- (15) * *A ponte começou a atravessar o rio.*
The bridge begin-PST.3SG to cross-INF the river
'The bridge began to cross the river.'
- (16) * *O João está a ter olhos azuis.*
The João be-PRS.3SG to have-INF eyes blue
'João is having blue eyes.'
- (17) * *A autoestrada está a ir do Porto até Braga.*
The motorway be-PRS.3SG to go-INF from-the Porto
up to Braga
'The motorway is going from Porto to Braga.'

In contrast, when verbs of motion receive an eventive reading, they are perfectly compatible with the Progressive and *começar a* ('to begin'), as sentences (18) and (19) exemplify.

- (18) *O barco começou a atravessar o rio.*
The boat begin-PST.3SG to cross-INF the river
'The boat began to cross the river.'

¹ For an extensive discussion about the phase/non-phase distinction, see Cunha (2004; 2007; 2011). Regarding the difference between individual-level states and stage-level states, see, among many others, Carlson (1981), Chierchia (1995), Kratzer (1995), Cunha (2004/2007; 2011), and Arche (2006).

- (19) *Os peregrinos estão a ir do Porto até Santiago de Compostela.*
 The pilgrims be-PRS.3PL to go-INF from-the Porto up to Santiago de Compostela
 ‘The pilgrims are going from Porto to Santiago de Compostela.’

Furthermore, like lexical non-phase states (cf. (20)), stative structures associated with verbs of motion cannot occur with the *Pretérito Perfeito* (Simple Past), a EP terminative past tense, in the main sentence of a temporal *when*-clause (cf. (21)):

- (20) **Quando chegou ao Porto, a Maria foi portuguesa.*
 When arrive-PST.3SG to-the Porto, the Maria be-PST.3SG Portuguese
 ‘When Maria arrived in Porto, she was Portuguese.’
- (21) **Quando amanheceu, a linha de caminho de ferro partiu da estação.*
 When morning-come-PST.3SG, the line of railway leave-PST.3SG of-the station
 ‘When the morning came, the railway line left the station.’

However, when an eventive reading is available, verbs of motion freely occur in the *Pretérito Perfeito* (Simple Past) in the context of main sentences associated with *when*-clauses, as (22) confirms.

- (22) *Quando amanheceu, o comboio partiu para o Porto.*
 When morning-come-PST.3SG, the train leave-PST.3SG to the Porto
 ‘When the morning came, the train left to Porto.’

On the other hand, lexical non-phase states in the *Pretérito Perfeito* cannot participate in linearly ordered sentences with a temporal successive reading (cf. (23)). Once again, stative structures with verbs of motion behave in a similar way (cf. (24)).

- (23) * *O Filipe foi alto, jogou basquetebol e ganhou uma medalha.*
The Filipe be-PST.3SG tall, play-PST.3SG basketball and win-PST.3SG a medal
'Filipe was tall, played basketball and won a medal.'
- (24) * *A ponte atravessou o rio, recebeu muitos turistas e tornou-se famosa.*
The bridge cross-PST.3SG the river, receive-PST.3SG many tourists and become-PST.3SG famous
'The bridge crossed the river, received many tourists and became famous.'

However, if an eventive reading of a verb of motion is selected, the temporal successive reading of linearly ordered sentences in the *Preterito Perfeito* becomes natural, as (25) demonstrates.

- (25) *O João atravessou o rio, visitou o castelo e fotografou a cidade.*
The João cross-PST.3SG the river, visit-PST.3SG the castle and photograph-PST.3SG the city
'João crossed the river, visited the castle and took pictures of the city.'

Like lexical individual-level states (cf. (26)), stative structures involving verbs of motion are not compatible with temporal adverbials denoting short duration, such as *ontem* ('yesterday') or *no sábado* ('on Saturday') (cf. (27)).

- (26) * *O Filipe foi alto {ontem / no sábado}.*
The Filipe be-PST.3SG tall {yesterday / on-theSaturday}
'Filipe was tall {yesterday / on Saturday}.'
- (27) * *A estrada subiu a montanha {ontem / no sábado}.*
The road climb-PST.3SG the mountain {yesterday / on-theSaturday}
'The road climbed the mountain {yesterday / on Saturday}.'

Needless to say, eventive interpretations of verbs of motion are perfectly compatible with these type of adverbials, as shown in (28).

- (28) *O alpinista subiu a montanha {ontem / no sábado}.*
 The climber climb-PST.3SG the mountain {yesterday / in-the Saturday}
 ‘The climber climbed the mountain {yesterday / on Saturday}.’

Finally, another characteristic that is common to lexical individual-level states and stative constructions with verbs of motion concerns the impossibility of co-occurrence with adverbials quantifying over situations, like *todos os dias* (‘every day’), as examples (29)-(30) illustrate.

- (29) **O João sabe francês todos os dias.*
 The João know-PRS.3SG French all the days
 ‘João knows French every day.’
- (30) **A autoestrada vai do Porto até Lisboa todos os dias.*
 The motorway go-PRS.3SGfrom-the Porto up to Lisbon all the days
 ‘The motorway goes from Porto to Lisbon every day.’

This restriction does not apply to eventive readings of verbs of motion, as (31) confirms.

- (31) *O comboio vai do Porto até Lisboa todos os dias.*
 The train go-PRS.3SGfrom-the Porto up to Lisbon all the days
 ‘The train goes from Porto to Lisbon every day.’

Summarising, we verified that there is a set among the so-called verbs of motion that systematically alternates between stative and eventive interpretations. Moreover, according to the application of the relevant tests, the stative readings associated with verbs of motion describe quite stable or unchanging situations, since they pattern with individual-level, non-phase lexical states.

The question that must be answered now concerns the conditions under which these stative and eventive readings are qualified, that is, what linguistic factors contribute to obtain a stative or eventive reading with a verb of motion. We address this issue in the next section.

3 - Conditions underlying the state/event alternation of predications with verbs of motion

In this section, we take into consideration the conditions underlying the stative/eventive readings of predications with verbs of motion scrutinized in the previous section. We explore some triggers of the aspectual alternation between (non-phase individual level) states and events in order to determine if these verbs of motion have a basic reading – stative or eventive – or if they are aspectually underspecified.

We focus on two components of predications: (i) the tense of the verb and (ii) lexical properties of the relevant locative argument, i.e. the Figure. Notice that we are not assuming that these are the only relevant criteria underlying the state/event alternation in predications with verbs of motion. In fact, not all verbs of motion allow this alternation, therefore one has to consider the influence of lexical semantic information of the verb on the determination of the aspectual profile of the predication. For instance, in (32), with the verb *rastejar* ('to crawl'), the predication only has an eventive reading.

- (32) a. **A estrada rasteja até ao monte.*
The road crawl-PRS.3SG up to-the hill
'The road crawls up to the hill.'
- b. *O rapaz rastejou até ao monte.*
The boy crawl-PST.3SG up to-the hill
'The boy crawled up to the hill.'

Rojo & Valenzuela (2003) (see also Matsumoto 1996), for Spanish, suggest that verbs of manner of motion do not behave in the same way regarding the possibility of stative readings. In fact, in EP, the manner of motion verb *rastejar*, in (32a), does not allow a stative reading. However, this reading is possible with the manner of motion verb *correr* ('to run') in (33).

- (33) *A estrada corre para o fundo do vale.*
The road run-PRS.3SG to the bottom of-the valley
'The road runs to the bottom of the valley.'

This difference between verbs that can have a stative reading (as *correr*) and those that do not receive this reading (as *rastejar*) is still an open question whose answer could contribute to the main issue of the present section: the identification of

the conditions underlying the stative/eventive alternation of predications with verbs of motion.

Related to the stative/eventive alternation, there is another possibly relevant question which we will not address in the present work. This has to do with prepositional phrases that can (or cannot) occur with these verbs in both readings. Iwata (1996), among others, suggests that the rising of the stative reading (“extent reading”, in Iwata’s terms) is independent from the particular choice of prepositions that can occur in the verbal predicate, namely if the preposition is related to the origin, to the destination or to some medial part of the path associated to the verb. On the contrary, the stative reading seems to depend on the kind of verb². Although this seems to apply to most cases of predications with stative readings, there are some examples in EP that apparently show a connection between stative/eventive readings and the (im)possibility of combining verbs with some prepositional phrases. Take, for instance, the verb *chegar* (‘to arrive’): this verb can combine with preposition *a* (‘to’) in predications with both stative (34a) and eventive (34b) readings. However, preposition *de* (‘from’) seems to licence only eventive readings (see (35)).

- (34) a. *A autoestrada A3 chega a Valença.*
The motorway A3 arrive-PRS.3SG at Valença
‘The motorway A3 arrives at Valença.’
- b. *O rapaz chegou a Valença.*
The boy arrive-PST.3SG at Valença
‘The boy arrived at Valença.’
- (35) a. **A autoestrada A3 chega do Porto.*
The motorway A3 arrive-PRS.3SG from-the Porto
‘The motorway A3 arrives from Porto.’
- b. *O rapaz chegou do Porto.*
The boy arrive-PST.3SG from-the Porto
‘The boy arrived from Porto.’

²“This means that the extent interpretation is independent of the choice of prepositions. It thus seems correct to hold the verb responsible for the motion/extent contrast.” (Iwata, 1996:258)

Although these questions concerning the type of verb and the type of preposition seem to be related to the stative/eventive alternation, they will not be addressed in this study, as they seem to have a narrower influence in the rise of the alternation. So, we focus on the two above mentioned criteria (the tense used in the sentences and the lexical properties of the expression that denotes the Figure) in the remainder of this section.

3.1 - The influence of tense on the stative/eventive readings of predications with verbs of motion

The influence of some tenses on the aspectual reading of predications has been noticed by several authors. The *Presente do Indicativo* (Simple Present) and the *Pretérito Imperfeito* (Imperfect Past) typically turn situations into states (cf. Kamp & Rohrer 1983; Kamp & Reyle 1993; Oliveira & Lopes 1995; Cunha 2004), whereas the *Pretérito Perfeito* (Simple Past) maintains the basic aspectual profile of the predications. Furthermore, this tense is associated with the information that the situation has ceased before its temporal perspective point (cf. Kamp & Reyle 1993).

We can assume, as a starting point, that the stative/eventive alternation analysed in the previous section is primarily caused by the use of different tenses: the *Presente do Indicativo* and the *Pretérito Imperfeito* give rise to stative readings, whereas the *Pretérito Perfeito* gives rise to eventive readings. Therefore, in (36), the basic predication is a state and, as a result, it is incompatible with *Pretérito Perfeito* (cf. (36b)). As for examples (37), the basic predication is an event, and that is why (37a), with *Presente do Indicativo*, has a habitual or frequentative reading. In fact, the *Presente do Indicativo* promotes some changes on the basic aspectual profile of eventive predications, which turns them into “stable” or “permanent” situations.

- (36) a. *A autoestrada A3 vai até Valença.*
The motorway A3 go-PRS.3SG up to Valença
'The motorway A3 goes up to Valença.'
- b. **A autoestrada A3 foi até Valença.*
The motorway A3 go-PST.3SG up to Valença
'The motorway A3 went up to Valença.'
- (37) a. #*O rapaz vai até Valença (OK todas as semanas).*
The boy go-PRS.3SG up to Valença (all the week)
'The boy goes up to Valença (every week).'

- b. *O rapaz foi até Valença.*
The boy go-PST.3SG up to Valença
'The boy went up to Valença.'

Although this hypothesis apparently explains the stative/eventive alternation and the differences between examples (36) and (37), it does not cover all examples at stake. In fact, the use of tenses like *Presente do Indicativo* or *Pretérito Imperfeito* cannot be considered neither a necessary nor a sufficient condition for the rise of stative readings of verbs of motion for different reasons.

Firstly, in certain circumstances, namely when predications include long span temporal adverbials, stative readings arise with other tenses, namely with the *Pretérito Perfeito*, a tense that does not change the aspectual profile of predications. See examples (38) and (39), with the temporal adverbials *durante séculos* ('for centuries') and *durante muitos anos* ('for many years').

- (38) *Durante séculos, as vias romanas cruzaram a Península Ibérica.* - stative reading
For centuries, the roads Roman cross-PST.3PL the Peninsula Iberian
'For centuries, the Roman roads crossed the Iberian Peninsula.'

- (39) *Durante muitos anos, a autoestrada A3 foi do Porto até Braga, até que o governo decidiu prolongá-la para a ligar à fronteira espanhola.*
For many years, the motorway A3 go-PST.3SG from-the Porto up to Braga, until that the government decide-PST.3SG extend-INF-it to it connect-INF to-the border Spanish
'For many years, the motorway A3 went from Porto up to Braga, until the government decided to extend it to connect it to the Spanish border.'

So, we conclude that the *Pretérito Perfeito* is compatible with basic stative readings of verbs of motion.

Secondly, although it seems to be true that the *Presente do Indicativo* and the *Pretérito Imperfeito* favour stative readings, it is also true that there is still a clear difference between "inherently" stative interpretations and "inherently" eventive interpretations of predications with verbs of motion with these tenses. Therefore,

with *Presente do Indicativo*, “inherently” stative predications behave as true lexical states and give rise to “pure temporal overlapping” present readings (cf. (40)), and “inherently” eventive predications give rise to habitual readings (see also the stativity tests used in section 2 above), as in (41).

- (40) *A autoestrada A1 vai do Porto até Lisboa.* (“pure temporal overlapping present” reading)
The motorway A1 go-PRS.3SG from-the Porto up to Lisbon
‘The motorway A1 goes from Porto up to Lisbon.’
- (41) *O comboio Alfa vai do Porto até Lisboa.* (habitual reading)
The train Alfa go-PRS.3SG from-the Porto up to Lisbon
‘The Alfa train goes from Porto up to Lisbon.’

Finally, when combined with *Pretérito Imperfeito*, “inherently” stative predications give rise to temporal location readings (cf. (42)), whereas “inherently” eventive predications give rise to habitual (cf. (43)) or “progressive-like” readings, as in (44).

- (42) *As vias romanas atravessavam a Península Ibérica.*
(temporal location reading)
The roads Roman cross-PST.3PL the Peninsula Iberian.
‘The Roman roads crossed the Iberian Peninsula.’
- (43) *Os dinossaúrios atravessavam a Península Ibérica.*
(habitual reading)
The dinosaurs cross-PST.3PL the Peninsula Iberian
‘The dinosaurs crossed the Iberian Peninsula.’
- (44) *Quando ia para a escola, o João foi atropelado por um camião.* (“progressive-like” reading)
When go-PST.IPFV.3SG to the school, the João
be-PST.3SG hit-PTCP by a truck
‘When João was going to school, he was hit by a truck.’

These examples show that the mere occurrence of some tenses cannot be considered a sufficient condition to trigger eventive or stative readings of predications

with verbs of motion, since *Presente do Indicativo* or *Pretérito Imperfeito* are not always associated to basic stative readings and *Pretérito Perfeito* is not always associated to eventive readings of verbs of motion. Actually, some tenses may have some influence in determining the aspectual profile of predications, but they are not the main triggers of the stative/eventive alternation. So, in the next section, we turn to the lexical properties of the relevant locative argument, i.e. the Figure, and we analyse its influence on determining the aspectual profile of predications.

3.2 - The influence of lexical properties of the Figure argument on the stative/eventive alternation

In order to explain the stative/eventive alternation with verbs of motion, one has to consider the contribution of the Figure. We start putting forward the following hypothesis: the eventive reading arises if the predication describes a situation in which the Figure can have altered its location in the course of the eventuality. This requires that the Figure is “movable”, that is, the Figure denotes a “movable” entity. Therefore, when the situation described by the verbal predicate can change the location of the Figure, the eventive reading arises; otherwise, the stative reading arises. See example (45).

- (45) *O trilho sobe até ao cimo do monte.*
[- movable] → stative reading
The trail go-PRS.3SG up to-the top of-the hill
'The trail goes up to the top of the hill.'

In this case, the situation denoted by the predication that includes *subir* ('to go up') does not change the location of the entity denoted by *o trilho* ('the trail'), a “non-movable” entity, therefore the stative reading arises. However, in example (46), the situation denoted by the predication with *subir* changes the spatial location of the entity denoted by *o alpinista* ('the mountain climber'), and the eventive reading arises.

- (46) *O alpinista subiu até ao cimo do monte.*
The mountain climber go-PST.3SG up up to-the top of-the hill
[+ movable] → eventive reading
'The mountain climber went up to the top of the hill.'

Therefore, the rise of an eventive reading seems to be related to the existence of a “movable” entity. But this is not the whole picture. In fact, eventive readings arise also when what is at stake is the creation of the Figure entity or, instead, some change on its volume or in the way it occupies space, even if this entity is a “non-movable” one. For example, in (47), the situation denotes the creation of the entity denoted by *o túnel*³ (‘the tunnel’). This description is an eventive one and this is confirmed by the temporal adverbial *em 6 meses* (‘in 6 months’). In (48), the situation denotes an (eventive) change in the space that the entity denoted by *a cidade* (‘the city’) occupies. In both cases, an incremental change in the entity denoted by the sentence’s subject is responsible for the eventive reading.

- (47) *O túnel atravessou o monte em 6 meses.*
The tunnel cross-PST.3SG the hill in 6 months
'The tunnel crossed the hill in 6 months.'
- (48) *A cidade estendeu-se até ao rio em 2 anos.*
The city extend-PST.3SG up to-the river in 2 years
'The city extended up to the river in two years.'

Therefore, the fact that the Figure is “non-movable” does not guarantee a stative reading, since eventive readings can be ascribed to predications with verbs of motion that denote situations involving “non-movable” entities.

Furthermore, the “movable” nature of the Figure’s entity does not guarantee an eventive reading. In fact, an alternation between eventive and stative readings of predications with the same verb of motion and the same “movable” Figure is possible. See (49) and (50).

³ Iwata (1996: 257) calls this type of reading “inchoative reading”.

- (49) *O comboio é tão rápido que vai de uma ponta à outra do país no mesmo dia.*
 The train be-PRS.3SG so fast that go-PRS.3SG from one side to-the other of-the country on-the same day
 ‘The train is so fast that it goes from one side of the country to the other on the same day.’
- (50) *O comboio é tão comprido que vai de uma ponta à outra do cais.*
 The train be-PRS.3SG so long that go-PRS.3SG from one side to-the other of-the platform
 ‘The train is so long that it goes from one side of the platform to the other.’

In examples (49) and (50), the entity denoted by *o comboio* (‘the train’) is referred to with different properties in the main clause, which is crucial to the attribution of a stative or an eventive reading to the consecutive clause. In fact, although both main clauses denote states, in (49) the property is “to be fast”, which points to a “dynamic” description of the entity denoted by *o comboio* (‘the train’), whereas in (50) the property is “to be long”, which points to a non-dynamic description, focusing on the spatial extent of the train instead.⁴

In short, the data we have analysed so far suggest that the presence of “non-movable” Figures does not ensure stative readings, nor “movable” Figures ensure eventive readings.

Several authors have pointed out that in stative readings the Figure has to physically (spatially) occupy the path⁵ that is (lexically) associated with the verb of

⁴ Iwata (1996:271-272) points out the following example from Bennett (1975) that is similar to (50):

- (i) a. How long is your new tent?
 b. It goes from the back of our garage to the apple tree in the middle of the lawn.

⁵ We are not going to analyse the “path issue” and we assume that paths associated with stative readings can fall into different (bounded or unbounded) types (cf. Iwata 1996). See examples (i) and (ii). Notice that some possibilities of selection of the path can be related, to some extent, to lexical properties of the verb. For instance, *partir* (‘to leave’) and *chegar* (‘to arrive’) seem to select minimum extent paths, whereas *ir* (‘to go’) selects non minimum extent paths, and this difference can be related to the basic aspectual type of events.

- (i) a. *A A3 vai do Porto até Valença.* (bounded path)
 ‘The A3 goes from Porto up to Valença.’
 b. *A A3 vai para norte.* (unbounded path)
 ‘The A3 goes towards north.’
- (ii) a. *A A3 sai do Porto.* (initial part of the path)
 ‘The A3 leaves from Porto.’
 b. *A A3 chega a Valença.* (final part of the path)
 ‘The A3 reaches Valença.’
 c. *A A3 passa por Braga.* (medial part of the path)
 ‘The A3 passes through Braga.’

motion. Iwata (1996) says that the subject of a motion reading has to be “a moving point-like object”, whereas in the extent reading the subject has to be “a static, elongated object” (Iwata 1996: 257). Furthermore, “what is really crucial is that in extent sentences the subject and the path are coextensive” (Iwata 1996: 271). So, in (51), the entity denoted by *a estrada* (‘the road’) occupies the same extension as the path associated to the verbal predicate (between a location *x* and Madrid), which gives rise to the stative reading.

- (51) *A estrada vai até Madrid.*
The road go-PRS.3SG up to Madrid
‘The road goes up to Madrid.’

We saw in the previous section that individual level non-phase states in the *Preterito Perfeito* cannot occur together with temporal locating adverbials denoting short duration and that this generalization applies to predications with verbs of motion with stative readings, as in (52).

- (52) * *Ontem, a estrada foi até Madrid.*
Yesterday, the road go-PST.3SG up to Madrid
‘Yesterday, the road went up to Madrid.’

But when the Figure does not occupy the same extension as the path associated with the verbal predicate, the eventive reading arises. Therefore, one can combine *Preterito Perfeito* with temporal locating adverbials denoting short duration. See (53) and (54), in which the Figure corresponds to *o comboio* (‘the train’).

- (53) *O comboio vai até Madrid.*
The train go-PRS.3SG up to Madrid
‘The train goes up to Madrid.’
- (54) *Ontem, o comboio foi até Madrid.*
Yesterday, the train go-PST.3SG up to Madrid
‘Yesterday, the train went up to Madrid.’

In the cases in which the predication (and, probably, the world knowledge) does not determine whether or not the Figure occupies the whole path, with the verb in the Present, there is ambiguity between both (stative or eventive) readings, as in (55).

- (55) *O comboio vai até ao fim do cais.*
The train go-PRS.3SG up to-the end of-the platform
'The train goes up to the end of the platform.'

(55) can be contextually disambiguated, as in (56), in which the temporal clause *quando entra na estação* ('when the train enters the station') provides the context for an eventive reading.

- (56) *Quando entra na estação, o comboio vai até ao fim do cais.*
When enter-PRS.3SG in-the station, the train go-PRS.3SG up to-the end of-the platform
'When the train enters the station, it goes up to the end of the platform.'

However, recall that if the Figure cannot occupy the whole path, there is only an eventive reading. For instance, in (57), the entity denoted by *o passageiro* ('the passenger') does not occupy the same extent as the path (between a location *x* and the end of the platform), so (57) has only an eventive reading.

- (57) *O passageiro vai até ao fim do cais.*
The passenger go-PRS.3SG up to-the end of-the platform
'The passenger goes up to the end of the platform.'

So, it seems that a fundamental condition to the rise of stative readings is the possibility that the extent of the Figure can physically occupy the path that is associated with the verb of motion. There is another aspect to point out related to the state/event readings. In fact, as pointed out by other authors (cf. e.g. Iwata 1996; Gawron 2007; 2010), this alternation seems to be related to the existence of a temporal axis associated with the situation. Notice that both stative and eventive readings can be described in the following way. For the stative reading, e.g. *a estrada vai até Madrid* ('the road goes up to Madrid'), the situation denotes the spatial extent of an entity *x* (the road) and this extent ends in a location *y* (Madrid). As for the eventive reading, e.g. *o comboio vai até Madrid* ('the train goes up to Madrid'), the situation denotes the spatial-temporal extent of the movement of an entity *x* that ends in a location *y* (Madrid).

Cases like *o comboio vai até ao fim do cais* ('the train goes up to the end of the platform'), in (55), are ambiguous between both readings. In the stative reading, the

situation denotes the spatial extent of entity *x* (the train) that ends in *y* (the end of the platform), whereas in the eventive reading the situation denotes the spatial-temporal extent of the movement of entity *x* (the train) that ends in a location *y* (the end of the platform). Therefore, the introduction of temporal extent seems to be crucial to the eventive/stative alternation we are discussing.

3.3 - The interaction of conditions underlying the stative/eventive alternation

The stative or eventive readings of predications with verbs of motion seem to rely on several conditions interacting dynamically and depending (in a different degree) on a number of factors. We previously presented some of these factors. In this section, we analyse their interactions. We will begin with example (58).

- (58) *Um turista rodeia o castelo.*
A tourist circle-PRS.3SG the castle
'A tourist circles the castle.'

Example (58) exhibits only the eventive reading. In this case, the Figure ('a tourist') is movable and its spatial extent is smaller than the path lexically associated with the verb of motion. So, the occurrence of the *Presente do Indicativo* favours the rise of a habitual reading of the sentence. Furthermore, since the predication has an eventive reading, it can occur with *Pretérito Perfeito* and a temporal adverbial denoting a short duration time interval, as *ontem* ('yesterday') in (59).

- (59) *Ontem, um turista rodeou o castelo.*
Yesterday, a tourist circle-PST.3SG the castle
'Yesterday, a tourist circled the castle.'

In a case in which a movable Figure has a spatial extent that can occupy (without alterations and in a non-dynamic way) the path, with the *Presente do Indicativo*, the predication typically exhibits a stative reading. See (60).

- (60) *A água rodeia o castelo.*
The water surround-PRS.3SG the castle
'The water surrounds the castle.'

Nevertheless, an eventive reading of the predication (that corresponds to a habitual reading of the sentence) can arise depending on the context, namely if there is an explicit mention that, in certain time intervals, there is no total coincidence between the extent of the Figure and the extent of the path, i.e., if the temporal axis is taken into account, as in (61).

- (61) *A água rodeia o castelo sempre que a maré sobe.*
The water surround-PRS.3SG the castle whenever that the tide go-PRS.3SG up
'The water surrounds the castle whenever the tide goes up.'

With a Figure like 'water', when the predication occurs with *Pretérito Perfeito*, it receives an eventive reading, as in (62), but in an appropriate context (namely with an extended time interval adverbial) it can receive a stative reading, as in (63).

- (62) *A água rodeou o castelo (ontem).*
The water surround-PST.3SG the castle (yesterday)
'The water surrounded the castle (yesterday).'
- (63) *A água rodeou o castelo durante séculos (até que drenaram o fosso).*
The water surround-PST.3SG the castle for centuries (until that drain-PST.3PL the moat)
'The water surrounded the castle for centuries (until they drained the moat).'

Finally, if the Figure is not movable (e.g. the wall), only a stative reading is available (cf. (64)). Therefore, the occurrence of such a Figure in a predication with the *Pretérito Perfeito* and a short time interval adverbial (e.g. 'yesterday') is ungrammatical, as the predication corresponds to an individual level non-phase state (cf. (65)) and it can only combine with extended time interval adverbials (cf. 'during the middle age' in (66)).

- (64) *A muralha rodeia o castelo.*
The wall surround-PRS.3SG the castle
'The wall surrounds the castle.'

- (65) * *A muralha rodeou o castelo ontem.*
The wall surround-PST.3SG the castle yesterday
* ‘The wall surrounded the castle yesterday.’
- (66) *A muralha rodeou o castelo durante a Idade Média.*
The wall surround-PST.3SG the castle during the age middle
‘The wall surrounded the castle during the middle age.’

Notice that an eventive reading can always arise if the situation does not describe a change in the Figure’s location, but instead if it describes the creation or some incremental alteration in the entity that corresponds to the Figure, as in (67) and (68), similar to (47) and (48) above. In both cases, the predications describe the building of the wall.

- (67) *A muralha cercou o castelo em 6 meses.*
The wall surround-PST.3SG the castle in 6 months
‘The wall surrounded the castle in 6 months.’
- (68) *A muralha estendeu-se até ao rio em 2 anos.*
The wall extend-PST.3SG up to-the river in 2 years
‘The wall extended up to the river in two years.’

These observations are summarized in table 1.

The fact that the stative and eventive readings result from a combination of factors indicates that, probably, the verbs that we analysed are underspecified concerning this aspectual distinction. In other words, it seems that the cases under discussion do not correspond to two different lexical entries, but only to one. Furthermore, these verbs are aspectually underspecified regarding the state/event distinction and this lexical underspecification is compositionally solved at the sentence level, with information related to the Figure or to tense.⁶

⁶ Iwata (1996) assumes that none of the relevant meanings (*event/extent*) derives from each other. Morimoto (2013) argues for the same idea, saying that “los verbos objeto del presente estudio son lexicalmente neutros en cuanto al criterio de estatividad (o de dinamicidad)” (Morimoto 2013: 375).

<i>Presente</i>	<i>Pretérito Perfeito</i>	Movable Figure	Non-movable Figure	Extent of Figure < extent of path	Extent of Figure = extent of path	Reading of predication
x		x		x		eventive
	x	x		x		eventive
x		x			x	stative/ eventive
	x	x			x	eventive/ stative
x			x		x	stative
	x		x		x	stative / * / incremental

Table 1 - some conditions underlying the stative/eventive alternation

So, apparently, there is a group of “spatial” verbs that can provide information about (i) displacement, (ii) location⁷, or (iii) they can be underspecified. See the examples (69)-(74). Verbs as *circular* (that corresponds to one of the meanings of ‘to run’) seem to be displacement verbs, therefore they can only display eventive readings, as in (70), and are ungrammatical in contexts that force stative readings, such as the ones that include the *Presente do Indicativo* and a non-movable Figure, as in (69). As for *situar-se* (‘to be located’), this is a location verb, therefore it can have only stative readings (cf. (71)) and it is ungrammatical in an “eventive” context with the *Pretérito Perfeito* and a movable Figure, such as (72). Finally, verbs like *seguir* (‘to continue’) are underspecified regarding this displacement/location distinction, so they can exhibit both readings: in (73), the location (stative) reading arises due to the occurrence of a non-movable Figure, whereas (74) has a displacement (eventive) reading due to a movable Figure.

(69) **A estrada circula pela planície.*

The road run-PRS.3SG through-the plain
 ‘The road runs through the plain.’

(70) *O carro circula pela planície.*

The car run-PRS.3SG through-the plain
 ‘The car runs through the plain.’

⁷ Morimoto (2013) argues that these verbs mark a spatial localization (“ubicativa”) relation when they have a stative reading.

- (71) *A garagem situa-se na parte inferior do edifício.*
The garage be-PRS.3SG located at-the part lower of-the building
'The garage is located at the bottom of the building.'
- (72) **O carro situa-se na parte inferior do edifício.*
The car be-PRS.3SG located at-the part lower of-the building
'The car is located at the bottom of the building.'
- (73) *A estrada segue para oeste.*
The road continue-PRS.3SG towards west
'The road continues towards west.'
- (74) *O carro segue para oeste.*
The car continue-PRS.3SG towards west
'The car continues towards west.'

This tripartite possibility of aspectual classification is not one of a kind. In fact, several authors (Mourelatos 1978; Tenny 1987; Dowty 1991; Ramchand 1997; Leal & Oliveira 2015, among others) have pointed out that there are some verbs that project predications that are processes (activities, in Vendler's 1957/1967 classification) whereas other verbs project culminated processes (or accomplishments) irrespective of the aspectual properties of other elements occurring in the basic predication ("inner aspect", in Verkuyl 1993). On the other hand, some verbs are aspectually ambiguous, allowing the influence of other elements on defining the aspectual profile of the basic predication. See examples (75)-(77). In (75), *deambular* ('to wander') projects a predication that is a process, irrespective of the presence of the phrase *até ao rio* ('up to the river') denoting the end of the path (a non-cumulative prepositional phrase in Zwart 2005).

- (75) *O rapaz deambulou pela cidade (até ao rio)*
{* em 2 h. / durante 2h.}.
The boy wander-PST.3SG through-the city (up to-the river)
{* in 2 h. / for 2h.}
'The boy wandered through the city (up to the river) {* in 2 h. / for 2h.}.'

In (76), *almoçar* ('to lunch') projects a predication that is a culminated process irrespective of the presence of the phrase *uma tarte de legumes* ('a vegetable pie')

denoting a quantized nominal predicate (Krifka 1998) or a specified quantity of entities (Verkuyl 1993).

- (76) *O rapaz almoçou (uma tarte de legumes) {em 5 m. / # durante 5 m.}*
 The boy lunch-PST.3SG (a pie of vegetable) {in 5 m. / # for 5 m.}
 ‘The boy lunched (a vegetable pie) {in 5 m. / # for 5 m.}’

Finally, predications with *correr* (‘to run’) can be processes (77a) or culminated processes (77b) depending on the properties of the phrase that occurs in the predication: *na direção do rio* (‘towards the river’) is a cumulative prepositional predicate (Zwart 2005), whereas *a maratona* (‘the marathon’) is a quantized nominal predicate (Krifka 1998).

- (77) a. *O rapaz correu na direção do rio {* em 2h. / durante 2h.}*
 The boy run-PST.3SG in-the direction of-the river {* in 2 h. / for 2h.}
 ‘The boy ran towards the river. {* in 2 h. / for 2h.}’
 b. *O rapaz correu a maratona {em 2 h. / # durante 2h.}*
 The boy run-PST.3SG the marathon {in 2 h. / # for 2h.}
 ‘The boy ran the marathon. {in 2 h. / # for 2h.}’

All in all, the aspectual alternation between states and events observed in verbs of motion seems to come from some sort of lexical underspecification. This underspecification is not unique and can be also found in other types of verbs involving other aspectual alternations.

The conclusions of section 3 can be summarized as follows:

- I. The tenses that we analysed only favour the rise of the stative or eventive readings of predications with verbs of motion, since these predications can, under appropriate conditions, be associated with their basic eventive readings with *Presente do Indicativo* and stative readings with *Pretérito Perfeito*.
- II. The possibility of the spatial extent of the Figure occupying the whole extent

- of the path associated with the verb of motion is important to the rise of a stative reading, although it is not a sufficient condition.
- III. The non-movable nature of the Figure is also important to the rise of a stative reading, but again it is not a sufficient condition.
- IV. A stative reading arises when:
- a. the Figure is non-movable and its spatial extent occupies (non-incrementally) the whole path in spite of the tense used; in these cases, temporal adverbials denoting a short duration time interval cannot occur;
 - b. the Figure is either movable or non-movable, its spatial extent occupies non incrementally the path and the tense is (i) *Presente do Indicativo*, or (ii) *Pretérito Perfeito* with the adequate context, namely with temporal adverbials denoting extended time intervals.
- V. It follows from IV that both stative and eventive readings of verbs of motion are compositionally obtained.

4 - Concluding remarks

Our analysis of the examples of verbs of motion with stative and eventive readings enables us to draw some conclusions.

The stative readings of verbs of motion correspond to predications classified as individual level non-phase states.

At the lexical level, the verbs we have analysed are not specified concerning the state/event distinction. Therefore, these verbs are ambiguous between a temporally static or a temporally dynamic location of the Figure. On the contrary, the basic predication is specified regarding the state/event distinction, which explains the predications' different behaviour with different tenses and temporal locating adverbials. In particular, stative predications, that correspond to individual level non-phase states, typically combine with *Presente* and *Pretérito Imperfeito* and they only combine with *Pretérito Perfeito* in the context of an extended time interval.

Since verbs of motion are lexically associated with paths, it is fundamental to the rise of the stative reading that the Figure has spatial extent. The stative reading implies that the spatial extent of an entity x occupies a path y , whereas the eventive reading implies that the spatial and temporal extent of the displacement of an entity x occupies a path y . The eventive reading can also be associated with some incremental change in the Figure.

So, we are dealing with a group of spatial verbs that may or may not denote

displacement. When they denote displacement or some sort of incremental change in the Figure, an eventive reading arises; otherwise, the predication receives a stative reading.

There are other aspects related to the event/state alternation that were only pointed out, although they must be taken into consideration in future research, namely what types of verbs of motion exhibit this alternation, and what the restrictions are concerning the occurrence of these verbs together with other elements of the predication, in particular prepositional phrases.