

Martin Becker (University of Cologne)

More about the PPC – the PPC and its interaction with quantifiers in a diachronic perspective

This paper aims to provide new insights into the diachronic evolution of the Portuguese compound perfect (PPC) by taking into account its interaction with temporal quantifiers. This focus also allows us to highlight the competition between the PPC and its rival, the simple past form (the *Pretérito Perfeito Simples*, PPS), in the history of the Portuguese language. As will be shown in this paper, the interplay of the two past tenses with different temporal quantifiers turns out to be a perfect testing ground for microvariation in that it shows how speakers differ in exploring the tense system in synchrony. From a diachronic point of view, it casts light on the gradual change of the Portuguese tense system from the 15th to the 20th century, with its progressive restructuring and reorganizing of the past tense domain, which leads to the remarkable specialisation of the PPC in the Portuguese tense system.

1 Introduction

It is remarkable that the Portuguese language has developed an atypical compound perfect, which does not only diverge from its sister languages from a formal point of view (with the auxiliary *ter* < Lat. TENERE instead of *haver* < Lat. HABERE) but also – and especially – with respect to its semantic features. From a diachronic perspective, standard views on the grammaticalisation cline of the perfect cannot do justice to its historical evolution. The notion of grammaticalisation neither accounts for all aspects of the evolutionary dynamics of the Portuguese compound perfect (PPC from here onwards), nor is it in the line with the criteria to determine a certain stage of grammaticalisation.¹ To date, the diachronic research on the PPC remains tentative.² Therefore, it is imperative to provide a more in-depth analysis of the evolutionary pathway of this specific verbal category in Portuguese.

The analysis of the interaction between different temporal quantifiers and the competing past tenses, the PPC and the PPS, is also a contribution to the study of microvariation given that it reveals different facets of the semantic potential of the PPC (its heterogeneous co-existing readings) at a given stage of its history as well as the changing zones of competition with respect to the PPS in its diachronic evolution. As will be shown in this paper, the interplay of the two past tenses with different temporal quantifiers turns out to be a perfect testing ground for microvariation in that it shows how speakers differ in exploring the tense system in synchrony. From a diachronic point of view, it also sheds light on the gradual

1 Harre (1991, 150–153), for instance, claims that the Portuguese PPC represents a minor degree of grammaticalisation. He quotes Harris (1982) who situates the PPC at stage II (stage II: iterative and durative perfect readings) of a grammaticalisation scale. This view has been convincingly challenged by Squartini/Bertinetto (2000, 419f.) who highlight the idiosyncratic peculiarities of the Portuguese PPC (also in contrast to specific readings of Latinamerican varieties of Spanish).

2 The early studies of Irmen (1966), Sten (1973) and Suter (1984) are based on a small amount of data due to the unavailability of digital corpora at that time. Oliveira's study (Oliveira 2011) focuses, in the first place, on Spanish and gives only marginal space to the evolutions of the PPC in Portuguese (see 66f.). Schäfer-Prieß (1996) and Wigger (2005, 2006) concentrate in their respective studies on the normative descriptions of Portuguese grammaticography, which differ substantially from the linguistic reality mirrored in the Corpus do Português (Davies/Ferreira 2006–).

change of the Portuguese tense system from the 15th to the 20th century, with its progressive restructuring and reorganizing of the past tense domain, which leads to the strong specialisation of the PPC in Portuguese.

Building on previous work (Becker 2016, 2020), this paper aims to refine our insights into the diachronic evolution of the PPC, especially by taking into account its interaction with temporal quantifiers. The focus of this article provides not only new insights into the evolutionary pathway of the PPC (with its semantic developments and its different stages) but also into the competition between the PPC and its rival, the simple past form (the Pretérito Perfeito Simples, PPS from here onwards), in the history of the Portuguese language.

Section 2 aims to elucidate the semantics of the PPC in synchrony, comparing its characteristic readings with the standard perfect readings in other Romance languages, especially in Spanish. In addition, the peculiarities of the PPC are identified and an attempt at explaining why the Portuguese PPC – despite its idiosyncrasies – can be considered a representative manifestation of the perfect is presented.

Section 3 is concerned with the different readings of the PPC throughout its history, which are identified and associated with different stages of the semantic evolution (3.1). The interesting phenomena of semantic retention and of variation in the evolution of the PPC are accounted for in the second part of this Section (3.2).

Section 4 develops on the general results and aims to provide a more detailed and in-depth analysis of the semantic evolutions by focusing on the interactions of the PPC with some basic temporal quantifiers (such as *já* ‘already’, *sempre* ‘always’, *x vezes* ‘x times’, *cada vez mais* ‘increasingly’ and *ultimamente* ‘lately’, among other readings). These interactions prove to be all the more insightful as they demarcate the area of competition between the PPC and the PPS in the history of the Portuguese language and shed some light on the role of microvariation in the evolutionary pathway of its temporal sub-system. The systematic study of the compatibility with and the resulting readings of these quantifiers, in their interplay with the PPC and PPS, also discloses crucial semantic differences between the two past categories from the 14th century onwards.

The last section draws conclusions from the present analysis and summarizes the lessons that can be learned from the study of the interplay of the temporal quantifiers with the past categories under scrutiny.

2 Peculiarities of the Portuguese PPC

It is beyond doubt that the PPC does not share the typical formal and semantic properties of the standard perfect well-known in Romance and Germanic languages.³

First of all, the auxiliary of the Portuguese perfect construction is not the Romance off-spring of Latin *HABERE* (or *ESSE*), but the continuation of Latin *TENERE*. Compare the auxiliary selection of Portuguese and other main Romance languages:⁴

3 Cf. the very insightful comparison between the Portuguese and the English compound perfect in Santos (2008, 217ff.).

4 For an excellent synchronic and diachronic overview, see the seminal contribution of Bertineti/Squartini (2000).

- (1) a. Fr. *J'ai vu Jean.*
 Sp. *He visto a Juan.*
 It. *Ho visto Giovanni.*
 Cat. *He vist en Joan.*
 Rum. *L-am văzut pe Ion.*
- b. Pt. *Tenho visto o Pedro.*

From a semantic point of view, the PPC is at odds with standard perfect readings of other Romance languages, which are admitted only marginally by Portuguese speakers.

Particularly, the PPC is very rare with a resultative reading, which can be considered the prototypical realisation of the standard perfect in Romance. In its most characteristic manifestations, the perfect introduces an eventuality occurred in the past and a post-state (a result state) whose persistence until speech time and relevance for the moment of utterance is highlighted. Typically, in these standard perfect contexts, the speakers of Portuguese use the simple form, the *Preterito Perfeito Simples* (PPS). This contrast between Portuguese and other Romance languages (here Spanish) is illustrated in the following examples:⁵

- (2) a. Sp. *Juan ha olvidado comprar un billete. Tiene que pagar una multa.*
 b. Pt. *O João esqueceu de comprar um bilhete. Ele tem de pagar uma multa.*

‘John has forgotten to buy a ticket. He has to pay a fine.’

By the same token, the PPC is at odds with the so-called existential (or experiential) perfect reading. The existential reading focuses on a definite number of instances or at least one instance of a certain eventuality type, which took place within a perfect interval ($t_n \dots t_o$). The adverb ‘already’ (Pt. *já*, Sp. *ya*) typically triggers an existential reading, as can be seen from the following example:

- (3) a. Sp. *¿Ya has ido a París? Sí, ya he ido cinco veces.*
 b. Pt. *Você já foi (*tem ido) para Paris? Sim, eu já fui (*tenho ido) cinco vezes.*

‘Have you already been to Paris? Yes, I have been there five times.’

The so-called universal or inclusive reading constitutes a very particular perfect reading (see Iatridou/Anagnostopoulou/Pancheva 2003). This reading occurs in contexts where the adverbial expression ‘always’ (Sp. *siempre*, Pt. *sempre*) is

5 For the Spanish perfect compuesto, see especially Romani (2006).

combined with a homogeneous verb, e.g. a stative predicate such as *querer* ‘to love, to like’:

- (4) a. Sp. *Siempre te he querido, María.*⁶
 b. Pt. *Eu sempre gostei (??tenho gostado) de ti, Maria.*
 ‘I have always loved you, Maria.’

The universal reading is characterized by the fact that the assertion holds for all time points t_i of a temporal interval which ranges from a left boundary in the past to – at least – the utterance time t_0 . Interestingly, depending on the speaker, the PPC is either marginally accepted or totally rejected by native speakers of Portuguese. This point is discussed further in Section 4. It is significant that with quantised or telic expressions the interplay between the verbal predicate and the adverb ‘always’ (Sp. *siempre*, Pt. *sempre*) is slightly different. In this case, *siempre/sempre* refers to all instances within a time interval. However, the number of instances does not cover all time points of the interval but is limited to those constituting an appropriate moment or circumstance. This is illustrated in the following example:

- (5) a. Sp. *Siempre te he llevado en coche a la escuela.*
 b. Pt. *Sempre te levei (??tenho levado) de carro para a escola.*
 ‘I have always taken you to school by car.’

(5a), with a quantised/telic predicate, does not hold for any time point t_i , but only for those at which appropriate circumstances for the realisation of the eventuality in question prevail (for instance, a morning during the week, but not a Sunday or a Wednesday night). Speakers of Portuguese report that they find the use of the PPC in these contexts (which are restricted by an appropriateness condition) slightly more acceptable than in contexts with homogeneous verbal expressions such as stative verbs (*querer*, cf. (4)) and activity verbs (*vivir*).

Notwithstanding the semantic differences between the perfect readings, it has to be stressed that perfect readings are covered by the same underlying configuration. The typical perfect can be conceived of as a tense associated with an extended-now-interval, which ranges from an opening time point in the past (the left boundary) to – at least – the utterance time (as a possible right boundary). Thus, irrespective of where the interval ends, the time of utterance (t_0) is included within the extended-now-interval. In accordance with the specific properties of a given perfect reading, the extended-now-interval comprises a definite, an indefinite or an all-encompassing (all-quantification) series of instances of an eventuality (type), with or without a prominent post-state.⁷

6 Note that the use of the Perfecto Compuesto corresponds to the norm of Madrid. In Latin American Spanish as well as in some peninsular Spanish varieties such as in the Spanish spoken in Galicia, Asturias and the Western parts of Castille and Leon, the speakers fall back on the Indefinido (e.g. *Siempre te quise, María*).

7 Cf. the perfect analyses in the wake of McCoard (1978), von Stechow (1999), Iatridou/Anagnostopoulou/Pancheva (2003) and Rothstein (2007, 2008). For a summary, see Portner (2011, 1232–1234).

If the PPC is in fact an atypical perfect, the following questions arise: What are the characteristic properties of the compound form in Portuguese and in what way, if any, do they qualify the PPC as a perfect?

Grammaticography⁸ and linguistic literature⁹ have singled out several defining aspects of the PPC. In contrast to the typical perfect, the PPC refers to events and states which start in the past and last until the utterance time or even beyond. The PPC is compatible with two basic readings in accordance with the actional properties of the verb and its interaction with modifying temporal adverbs.

a) The PPC can display an iterative reading. This reading is characterized by the fact that an eventuality type is realised repeatedly, with instances ranging from a past time point to the utterance time (and even beyond). A case in point is (6):

(6) *Tenho vivido bons momentos desde que a Maria nasceu.*

(<http://caras.sapo.pt/famosos/2011/07/04/claudia-vieira-tenho-vivido-bons-momentos-desde-que-a-maria-nasceu>)

‘I have had good times since Mary was born.’

b) A durative reading is triggered by the interplay between the PPC with the properties of a homogeneous verb. In these durative contexts, the focus is on the uninterrupted duration of a certain state of affairs, as is the case in (7):

(7) *Tem estado muito calor.* (Hundertmark-Santos Martins 1982, 180)

‘It has been very hot.’

However, the most crucial property of the PPC is highlighted by a few number of scholars (e.g. by Sten (1973, 240) and Almeida (2003, 74ff.)): A particularly important feature relevant for profiling the semantics of the PPC, is the “quantificational indefiniteness” (see Becker 2020). In other words, the PPC refers to an indefinite number of instances of a certain eventuality type. This specific semantic feature of the PPC proves crucial in cases where there is a competition between the PPC and the PPS, as in the following two examples:

(8) *Tenho comido neste restaurante (mais de uma vez).* (apud Almeida 2003, 74)

‘I have eaten (more than once) at this restaurant.’

vs.

8 Compare the explanations in standard grammars of Portuguese (e.g. Hundertmark-Santos Martins (1982) and Gärtner (1998)).

9 See especially Paiva Boléo (1936, 127f.), Algeo (1976), Costa Campos (1987), Oliveira/Lopes (1994), Ilari (2001, 66), Oliveira (2003), Oliveira/Leal (2012), and – in a generative framework – Schmitt (2001, 439).

- (9) *Os portugueses foram sempre (*têm sido) bons marinheiros. (apud Almeida 2003, 75)*
 ‘The Portuguese (lit. were) have always been good sailors.’

In (8), the statement focuses on an indefinite number of instances of the eventuality type *eat_in_this_restaurant*, whereas (9) has to be interpreted in the scope of the all-quantification (*sempre*: for $\forall e$). Example (9) ascribes a stable property (a property holding at all time points t_i) to the subject referent. The relevance of this particular feature comes to the fore in contexts determined by definite quantification, for instance, a cardinal number. As the following pair of examples illustrates, the cardinal quantification *duas vezes* ($\exists 2e$) is totally incompatible with the PPC in Portuguese (10a), whereas in Spanish the *Perfecto Compuesto* and the definite quantification can combine without restriction (10b):

- (10) a. Pt. *Ultimamente a Maria veio (*tem vindo) duas vezes.*
 b. Sp. *Recientemente María ha venido dos veces.*
 ‘Maria has come twice lately.’

The feature of *quantificational indefiniteness* seems to be the equivalent, on the verbal level, to an operator, which plays an important role on the nominal level. Interestingly, the same kind of indefinite quantification is present in contexts determined by the indefinite plural article in French (as in *j’ai vu des chevaliers* ‘I have seen knights’) or by the zero article in Spanish and Portuguese in so-called bare noun contexts (for instance, in *compré/comprei Ø botellas de vino/garrafas de vinho* ‘I bought bottles of wine’). In another article (see Becker 2020), it is argued that both phenomena on the verbal and the nominal level should be ascribed to the same operator, the indefinite operator, which applies to both levels, the nominal and the verbal, in a similar way.

In contemporary Portuguese, a further semantic feature of the PPC is gradually coming to light, at least in particular contexts where the iterative or durative semantics of the PPC acquires a clearly characterising or even generalising *quality*, as in the following example:

- (11) *Eu sou uma pessoa que gosta de ver TV. Mas ultimamente tenho lido (muito).*
 ‘I am a person who likes to watch TV. But lately, I’ve read a lot.’

The statement in (11) contrasts two habits – the habit of watching TV and that of reading books. The utterance marked by the PPC characterizes a more recent, upcoming habit and represents an instance of what Smith (2003, 24) has labelled *generalising statements* in her ontology of situations (such as e.g. *drink beer or play the guitar*). This particular feature is clearly context-specific (e.g. induced by the adverbial expression *ultimamente* ‘lately’) and is therefore still confined to the

discourse level. However, the increasing frequency of characterising or generalising readings in PPC contexts may lead to a conventionalisation of this peculiar feature of the PPC in the long run.

These peculiarities of the PPC trigger the question: Can the PPC be considered a perfect? As argued elsewhere (see Becker 2020), the semantics of the Portuguese PPC presupposes in the same way as the standard perfect in other Romance languages an extended-now-interval with truthconditional relevance. This interval constitutes the interval of reference for the evaluation of the sentence in question. The perfect interval ranges from a time point in the past (left boundary) to the speech time or even beyond (right boundary) and comprises an indefinite number of instances of a certain eventuality type. What distinguishes the standard perfect from the Portuguese PPC, are different quantificational constraints. The standard perfect allows for all kinds of quantification, including a definite quantification, which, as illustrated above, is categorically excluded by the PPC in contemporary Portuguese. The next section shows that this has not always been the case in the course of the history of the Portuguese language.

3 Diachronic pathways of the Portuguese PPC

3.1 The evolutionary dynamics of the PPC

In this section, the diachronic trajectory of the PPC is outlined by highlighting some crucial contexts of change and by identifying specific readings which characterise the process of the semantic change and its different stages.

The PPC starts out as a typical perfect as it refers to the resultative state of an event. Consider the following example:

- (12) (...) *e sodes meus vassallos que me havedes feito menagem e juramento*
 (...). (CIPM: Demanda, CdP)
 ‘You are my vassals who honored me and took an oath (...).’

However, it must be acknowledged that, in the beginning, the verbs commonly used in the PPC typically express a speech act with illocutionary effects, such as *fazer juramento* ‘to swear’, *declarar* ‘to declare’ and the like. These first typical attestations of the PPC are, therefore, instances of a *persistent result reading*. The persisting result readings stems from the performative character of the verbal expression, which, in general, has a legally binding and therefore lasting effect. Example (12) shows that in the early attestations *haver* is the selected auxiliary. *Haver* is predominant until the end of the 15th century, but is increasingly ousted by its rival *ter* in the 16th century (for a more detailed account, see Becker (2020)). Especially, from a semantic point of view, the 16th century is of paramount importance for the further evolutions of the PPC. Throughout this century, a new reading of the PPC, which first appears at the end of the 15th century, consolidates itself and leads to important changes regarding the PPC’s range of usage. This new reading, which is induced by appropriate co-textual indicators, can be described as an *inferred summative reading*. The co-textual indicators of this reading are typically adverbs and adverbial expressions as well as specific configurations of the argument structure based on the underlying predicates. Against the backdrop of

these co-textual indicators, the speaker can infer that the event description refers to a quantitatively undetermined series or set of instances of a certain event type. This set or series of instances of a certain event type is contained in an interval, which extends from a past time point towards the present without, however, including the time of utterance itself. The peculiarities of the inferred summative reading become clearer with the analysis of an example:

- (13) *E em cada mosteiro destes tem posto no altar, em logar de fotoque, a figura do Caysan (...).* (Frois: Japam2, CdP)
 ‘In each of those monasteries, he has put, in place of Fotoque, the image/figure of Caysan (...).’

As can be seen, the statement (taken from Frois’ chronicle of Japan) refers to the activity of depositing representations of Caysan in several monasteries. Based on the distributive expression *em cada mosteiro* ‘in every monastery’, it can be inferred that this activity is composed of a set of instances of the same eventuality type *deposit a representation of Caysan on the altar* which occurs at different monasteries. In contrast to the contemporary reading of the PPC, i.e. the typical iterative reading, the focus is not on repeated events of depositing representations of Caysan in monasteries, but on a single macro-event composed of a series of sub-events – more precisely: the instances of depositing a representation of Caysan at different places. In the documents of the 16th and 17th century, typical contexts and indicators likely to suggest a summative reading are found. The following survey gives an insight into some of the most frequent contexts with their typical indicators.

a) A typical pattern which induces the inferred summative reading, is the combination of the PPC with a plural object NP (determiner + N with plural morphology). This pattern spreads rapidly in the 16th century and can be illustrated by a quotation taken from Barros’ chronicle of Asia. The author comments on several acts of insulting and robbing from which it can be inferred that the eventuality type of *fazer insultos e roubos* is composed of an undetermined set of robbing and insulting sub-events, the single instances of the eventuality type in question:

- (14) (...) *pelos insultos e roubos que tem feito em sua própria pátria (...).*
 (Barros: Asia3, CdP)
 ‘(...) for the insults and thefts he has done in his own homeland (...).’

b) The inferred summative reading also ensues from an object NP phrase, which is composed of the plural noun and the quantifying determiner *quanto* ‘how much’. This pattern typically occurs in contexts of exclamative modality:

(15) *Quantas contas tenho nesta vida feitas que me agora cumpre de riscar!*

(Miranda: Estrangeiros, CdP)

‘How many accounts have I made in this life which I now have to question (lit. to scratch out)!’

c) Sometimes even explicit adverbial quantifiers such as *continuamente* ‘continuously’ underline the summative reading:

(16) *Tem continuamente feitas muito numero de cadeiras (...)*. (Intino:

China, CdP)

‘He has continuously made a lot of chairs (...).’

d) Adverbial expressions such as *de tantos annos* ‘for so many years’ act as boundaries of time intervals. The expression *de tantos annos* sets an interval and invites the inference that several instances of the described eventuality type are inscribed in it. See example (17):

(17) (...) *he magoa ver o estrago que o Rey de Maluco tem feito de tantos*

annos a esta parte por todos aquelles lugares (...). (Rebello: Cartas, CdP)

‘It hurts me to see the damage the King of Maluco has caused, during so many years, to this part, at all those places (...).’

In combination with the typical actional properties of activities (e.g. + durativity, + dynamicity, – telicity) or accomplishments (e.g. + durativity, + dynamicity, + telicity) (see Vendler’s typology in Vendler 1967 and its extension in Smith 1997), the PPC typically gives rise to a summative interpretation. The speaker highlights a plurality of sub-events, or instances of an eventuality type which take place within a bound time interval.

However, the first instances of the PPC with achievements (i.e. non-durative eventualities) are found in the 16th century. In these contexts, the PPC does not suggest a resultative interpretation but – combined with particular cotextual elements – triggers an *incremental reading*. The notion of incrementality comes down to the idea that the partial achievements of each stage of a long-lasting process are summed up and bound within a temporal interval. The role of the PPC consists in highlighting the culmination point, which is the final point of this process of summing up the added achievements of each stage. The following example illustrates this clearly:

(18) *Olhai o estado a que a gente de Ximbara tem chegado, por uma parte*

tenho ira, e por outra compaixão (...). (Frois, Japam1, CdP)

‘Look at the state the people of Ximbara have come to. On the one hand, I feel anger, and on the other, compassion (...).’

The statement highlights the culmination point of a process of decline. This process unfolds gradually (by stages) and can be characterized as an accumulation or a summing up of increasing degrees of decline.

In the 17th century, the instances of the inferred summative and the incremental readings become more common. In the letters of the Jesuit Father António Vieira, both readings of the PPC are widely exploited and they are even combined with new expressions. The concessive-paradigmatic expression *por mais que* ‘as much as’ as well as the superlative domain-of-comparison restricting expression *um dos mais/uma das mais X* ‘one of the most X’ presuppose a plurality, at times indefinite, of instances of a certain eventuality type and comply, in this way, with the semantic requirements of the PPC. These two examples illustrate this clearly:

(19) (...) *por mais diligências que tenho feito (...)*. (Vieira: Cartas, CdP)

‘(...) with all the diligence I have made (...)’

(20) (...) *foi uma das mais notáveis que até hoje se tem feito no mundo (...)*.

(Vieira: Cartas, CdP)

‘(...) it was one of the most remarkable ones that until now has been done in the world (...)’

Moreover, Vieira seems to be one of the first authors who exploit the PPC in order to express the notion of *iterativity*. The Jesuit uses adverbial quantifiers such as *muitas vezes* ‘many times’, *outras vezes* ‘other times’ and *tantas vezes* ‘so many times’, in a very systematic way. These quantifiers express a vague or even undefined number of instances of a certain eventuality type. Consider the following example, which signals in the 17th century the modern – iterative – semantics of the PPC:

(21) (...) *queira Deus que nos não mintam, como tantas vezes têm feito*.

(Vieira, Cartas, CdP)

‘(...) may God grant that they do not lie to us as they have done so many times.’

What surfaces in the developments of the 16th and 17th centuries is an interesting pathway given that the summative and its counterpart, the incremental reading, seem to have a bridging function between the original resultative reading and the modern iterative reading. In view of its instances in summative and incremental contexts, the auxiliary *ter* seems to be progressively reinterpreted as a kind of sum operator, whose function is to merge instances of a certain eventuality type into a

joined set delimited or bound by a temporal interval. This general summing-up function seems to become more specific as an iterative reading, when speakers begin to combine the PPC construction with explicit quantifications, especially with the *x vezes*-type of expressions. The following section aims to obtain a more detailed picture concerning the pathway of the PPC. However, before turning to this evolution, another important aspect of the trajectory of the compound construction, the retention of its original functions, and more generally, the role of variation in the history of this form, has to be considered.

3.2 Semantic retention and the role of variation in the evolution of the PPC

As the previous section illustrates, a certain dynamics of change is well underway in the 16th century. However, historical documents also reveal a counter-tendency. Contrary to expectations, these documents bear equal witness to the retention of traditional readings of the PPC in important contexts for centuries to come. Especially, in the documents of the 17th and 18th century, a large amount of result readings associated with the PPC can be observed. This tendency of retention is also mirrored in the following examples taken from Padre Vieira's *Letters* (17th century) and from Vernei's *Verdadeiro Método de Estudar* (18th century), which refer to a single instance of an eventuality type (*chegar* and *compor_uma_gramática* 'arrive and write a grammar').

- (22) *Corre aqui por certo que o exército germânico ou tem chegado ou vai chegando às ribeiras do Reno.* (Padre António Vieira, *Cartas*, 1626–1692, CdP)

'It is taken for granted here that the German army has either arrived or is coming to the banks of the Rhine.'

- (23) *Eu sei quem tem composto uma Gramática, pouco diferente da ideia que propusemos.* (Luís António Vernei, *Verdadeiro Método de Estudar*, 1765, CdP)

'I know who has written a „Grammar“ that is minimally different from the idea we have suggested.'

Even in the 19th century, many instances of the traditional result reading of the PPC are found. Interestingly, these traditional readings are observed especially, though not exclusively, in the writings of Brazilian authors. This peculiarity may be interpreted as a piece of evidence for the more conservative character of Brazilian Portuguese. It can also be an indicator that Brazilian authors follow earlier European literary models. In any case, it is a clear sign of variation within the tense system of the Portuguese language. The examples (24) and (25), taken from the works of two of the most prominent Brazilian authors, José de Alencar (1829–1877) and Machado de Assis (1839–1908), illustrate this point:

- (24) *Como tens achado a partida?* (Alencar, Lucíola, CdP)
'How did you find (lit. have you found) the match?'
- (25) *É por isso que lhe não tenho dado as cartas que o banqueiro tem trazido há um mês.* (Machado de Assis, Luís Soares, CdP)
'That is why I have not given you the letters the banker brought a month ago.'

Another sign of retention is how the summative reading of the PPC – particularly paramount for triggering the dynamics of change in the 16th century – preserves its place in the grammar of 20th century speakers. For instance, the author Manuel do Nascimento continues to use the PPC in the 1940s in his novel *O Aço Mudou de Têmpera*:

- (26) *Você que não come mais aos desgraçados porque não pode e arma agora em defensor do povo! – E você, tudo o que tem comprado, donde tem saído?* (Manuel do Nascimento, *O Aço Mudou de Têmpera*, 1945)
'You who do not eat from the poor any longer because you cannot and now you stand as the defender of the people! - And you, everything you have bought, where has it gone?'

In the context of (26), the speaker refers to several buying (sub-)events, more precisely, to the sum of instances of the eventuality type *to_buy_something*, but not to repeated *buy_everything* events. Undoubtedly, the induced reading is a clear instance of the summative reading and not of the actual iterative reading.

Another aspect of semantic retention concerns the structure of the perfect interval. Until the second half of the 20th century, the interval comprising the different instances of a certain eventuality (type) does not extend to the utterance time. This peculiarity emerges because the original result reading of the PPC (as well as its summative extensions) focuses on the post-state (relevant at the utterance time) but not on the event itself (located clearly before the utterance time). It is not until the moment when the iterative and durative PPC readings become prevalent that the series or set of instances of a certain eventuality can extend to the speech time and even beyond. The exclusion of instances at the speech time is clear in the following examples, the first taken from the 17th century and the second from the first half of the 20th century:

- (27) (...) *e como as ocupações e jornadas tem sido tão contínuas, que não temos tido descanso, por isso não respondi logo a Vossa Reverência.*
(Padre António Vieira, *Cartas*, 1626–1692)

‘(...) and since the occupations and journeys have been so continuous that we did not have any rest, for this reason, I did not respond directly to Your Reverence.’

- (28) *Não tem estado em Coimbra? – Sim: tenho estado. Mas agora não estou.* (João Gaspar Simões, Pantano, 1939)
 ‘Haven’t you been to Coimbra? Yes, I have been there, but now I am not there.’

In the example from Vieira, the temporal order of eventualities clearly emerges. The enduring state of not having any rest is previous to the consequence specified by the PPS form *respondi* ‘I answered’.

Even more explicit is the second example, which contrasts what was the case in the past (*tenho estado*) to the present state of affairs (*agora não estou*). These examples demonstrate that the relevant perfect interval does not include continuations to the speech time. In contemporary Portuguese, however, this specific constraint has been lifted, as example (29) shows. Here the speaker summarizes his thoughts, while he is and may continue to be in the future a member of the Microsoft company (*estar na Microsoft* ‘to work at Microsoft’).

- (29) *Esta é uma questão que tenho pensado muito ao longo de 7 anos que tenho estado na Microsoft (...).* (Pt:Intrv:Web, Carlos Lacerda, CdP)
 ‘This is an issue I have been thinking about a lot in the last 7 years I have been working at Microsoft (...).’

Last but not least, another aspect of variation (apart from the diachronic layers of traditional vs. innovative readings) should also be mentioned. As is shown above, there are cases that suggest that Brazilian Portuguese preserves more firmly than European Portuguese traditional readings in the 19th and 20th century. This is a claim to be confirmed by a more detailed study. However, at least a certain diatopic variation between European and Brazilian Portuguese can be detected in the data of the *Corpus do Português* (Davies/Ferreira): Perusal of the frequency of PPC usages in Portugal and Brazil reveals that there are conspicuous quantitative differences in the exploitation of the semantic potential of the PPC in the 20th century. The relationship to the competing PPS is of particular interest from a quantitative point of view.

Table 1 illustrates that the PPC is significantly¹⁰ more frequent in European Portuguese than in Brazilian Portuguese.

10 The χ^2 test turned out to be significant, see the result with $\chi^2 = 85,3 > 3,84$.

	PPS	PPC	Ratio PPS:PPC
Brazil	256034 ¹¹	3395	98,7%:1,3%
Portugal	252036	4143	98,4%:1,6%

Distribution of the total amount of PPC between Brazilian and European Portuguese: BP 45:
EP 55%, with $\chi^2 = 85,3 > 3,84$

Tab. 1: Functional load between the PPS and PPC in BP and EP

On the basis of 10 million items for each variety, we can appreciate the fact that the total amount of PPC instances is distributed between European and Brazilian Portuguese according to the ratio of 55% for European Portuguese, compared to 45% for Brazilian Portuguese. This unequal distribution requires further analysis. For instance, is the lower frequency of the PPC in Brazilian Portuguese a sign of its conservatism (with the PPC function being less developed) or is it due to a certain diasystematic differentiation (the PPC may be considered more literary and/or more formal in Brazil)? These differences clearly create a large field for future research on the variational differentiation of the verbal system in the Portuguese-speaking world.

This section outlines important stages of the evolutionary pathway of the Portuguese PPC from the 14th century to contemporary Portuguese. The analysis of the corpus data not only reveals the emergence of new readings and important transitions between the different stages of the evolution, but also sheds light on the remarkable range of variation along the path of linguistic evolutions. As shown above, there is a considerable retention of traditional readings of the PPC (first of the resultative, later of the summative and incremental readings). At the same time, there is diatopic variation between European and Brazilian Portuguese as to the frequency of the PPC. Last but not least, there are suggestions of individual differences concerning the exploitation of the PPC, with pioneering figures like Frois and Barros in the 16th century, Chagas and Vieira in the 17th century and, finally, Bluteau in the 18th century. This topic is studied in more detail elsewhere (see Becker 2016) and remains an interesting subject for further research.

4 New insights on the evolution of the PPC from quantificational adverbs

The analysis of the interactions of the PPC with quantification adverbs begins with the examination of the adverb *já* ‘already’,¹² which introduces a temporal perspective point (see Kamp/van Genabith/Reyle 2011, 214ff.) from which the result state of a previous past eventuality is contemplated. The run-time of the past eventuality remains unspecified, and the focus of the speaker is on the fact that, at a given temporal perspective point, the result state (already) holds. Typically, the adverb *já* ‘already’ occurs – in English as well as in Romance languages – with the Standard Present Perfect. Consider the following example:

¹¹ Given the slightly different sizes of the European (10,5 million) and Brazilian subcorpus (vs. 10,3 million), the query results have been normalized to a level of 10 million items.

¹² A first very instructive analysis of the interaction between the past categories PPC and PPS and adverbial quantifiers has been provided for contemporary Portuguese by Costa Campos (1986, 411ff.).

- (30) a. *Mario has already written a letter to aunt July.*
b. *Juan ya ha escrito una carta a la tía Julia.*

Given its semantics, the PPC should be incompatible with the adverb *já* in contemporary Portuguese. Consider for instance:

- (31) **Mário já tem escrito uma carta à tia Júlia.*
'Mario has already written a letter to aunt Julia.'

In contrast to the PPC, the PPS in combination with *já* is a perfect match:

- (32) *Mário já escreveu uma carta à tia Júlia.*

The first instances of the pattern *já* + PPS can be traced back to the 14th century. In most cases, the PPS typically refers to a definite number of instances of a certain eventuality type that take place in the past. As pointed out above, this reading represents the typical existential or experiential reading. The following examples refer to a definite number of instances – or at least one as is the case in (34) – of a particular eventuality type:

- (33) *Homem cativo e pobre de sem, já te guareci duas vezes de perigo de morte e nunca me deste niũũ galardom.* (A Demanda do Santo Graal, cópia do século XV)
'Wicked man and poor in mind, I have already saved you twice from the danger of death and you never gave me a reward.'
- (34) *No fim faltavam dez réis. – Eu já dei, eu já dei! exclamavam todos, excitados.* (Eça de Queirós, O Crime do Padre Amaro)
'At the end, 10 Reis were missing. – I have already given, I have already given! everyone exclaimed excitedly.'

Strikingly, the adverb *já* does not couple with the PPC before the 16th century. The first instances of *já* + PPC are restricted to speech act verbs. The speakers exploit the persistent result reading of the compound form in order to stress the illocutionary effect of the speech act. The commitment engaged by the speaker continues to be binding at the utterance time. Consider the following example, taken from a play written by the Renaissance playwright Gil Vicente:

- (35) *Ama: Já lh'eu tenho prometido. Moça Muito embora, seja assi.* (Gil Vicente, *Obra Completa*, A–M, CdP)

‘Mistress: I have already promised it to you. Maid: A lot, in fact. So be it.’

In the 17th century, the range of possible verbs compatible with the PPC expands beyond the narrow limits of the speech act predicates. However, the persistent result reading of the PPC continues to prevail. In (36), the Jesuit Father António Vieira highlights his actual state of mind, which is the result of his awareness that the situation in India is hopeless (*desengano e desespero*):

- (36) *Sinto o estado da Índia, que até agora não tinha tão compreendido, e por mais que lembro sempre o seu remédio e socorro, já me tenho desenganado de todo e desesperado.* (Padre António Vieira, *Cartas*, 1626–1692, CdP)

‘I feel sorry about the state of India, which until now I had not understood so well and though I always remember its remedy and help, I have already become disappointed with everything and I am in despair.’

Writers in the 18th century continue to exploit the PPC in order to stress the effectiveness of the result of a past eventuality. In (37), the speaker emphasises the well-known facts concerning the plot of the play (with its recognition and peripety part) underlining that they have already been exposed previously:

- (37) *Além destas duas partes da fábula (...), há também uma terceira, que eu chamo paixão: já se tem explicado o reconhecimento e a peripécia.* (Correia Garção, *Obras Completas*, 1756, CdP)

‘Apart from these two parts of the fable (...), there is also a third one, which I call passion: We have already explained the recognition and the peripetia.’

However, a further development comes to light in the following example:

- (38) *E que não he mais difficil escrever em Latim e Portuguez juntamente Ou sem alguma das letras vogaes, como já se tem feito.* (José de Macedo (assinado por António Melo da Fonseca), *Antídoto da língua portuguesa*, without date, CdP)

‘And that it is not more difficult to write in Latin and Portuguese together. Or without some of the vowel letters as has already been done.’

In (38), the speaker’s aim is not to dwell on the persisting effects of a past eventuality but rather to emphasise that a certain type of eventuality has already taken place. Thus, this example represents an instance of the experiential reading (‘there is at least one occurrence of the eventuality e’: *escrever sem alguma das letras vogaes*).

Although, in the 19th century, the traditional readings, the persistent result and experiential readings, endure, new readings of the PPC emerge in combination with the adverb *já*. One of these readings is the incremental reading, which focuses on the added results of the gradual achievements of a process. For instance, verbs like *curvar* ‘to bow’ and *habituar* ‘accustom’ are typically linked to degree achievements as they imply different degrees of realisation of a certain property (e.g. the property of being bowed or of being accustomed). An activity predicate like *chorar* ‘to cry’, on the other hand, can be quantified with respect to its degree of realisation (indicated, for instance, by degree adverbs like *às vezes* ‘sometimes’ and *muito* ‘often’). The emergence of incremental readings with *já* is illustrated by the following examples and their degree-specifying indications like *demais* ‘too much’, *muito* ‘a lot’ and *assaz* ‘enough’:

(39) (...) *já me tenho curvado demais*. (Joaquim Manuel de Macedo, Os dois amores)

‘I have already bent too much.’

(40) *Tenho chorado muito (...) já se me acabaram as lágrimas*. (Castro Alves, Espumas Flutuantes)

‘I have cried a lot. I have run out of tears.’

(41) *Já tenho habituado este povo a ouvir missas instantâneas*. (Henrique Meilhac e Ludovico Halévy, A Bela Helena)

‘I have already accustomed these people to listen to instant Masses.’

As well as the incremental reading, the iterative reading also appears in the documents of the 19th century. The records show that the PPC is not only compatible with vaguely quantifying adverbial expressions like *muitas vezes* ‘many times’ but also allows for definite quantifications (*duas/três vezes* ‘two/three times’). The following example shows that the requirement of quantificational indefiniteness is not a constraint for the use of the PPC in the 19th century:

- (42) *Já lhe tenho repetido três vezes (...) (Joaquim Manuel de Macedo, A Moreninha)*
'I have told you three times (...).'

It is remarkable that instances of the pattern *já* + PPC can still be found in the 20th century. The data from the *Corpus do Português* (Davies/Ferreira) provide a small number of examples that attest to the traditional readings of the PPC.

The persistence of traditional readings clearly indicates that the Portuguese tense system displays a wide range of variation and points to the existence of several diachronic layers in synchrony. Besides, it also indicates that speakers dispose of varying sub-systems with respect to the temporal domain. Below is a list of the attested readings.

- a) The persistent result reading:

- (43) *Sua função dentro do Tratado de Assunção já tem sido estabelecido como nexó de ligação entre o Mercosul e os respectivos Poderes Legislativos (...). (Instituições do Mercosul)*
'Its function within the Treaty of Asunción has already been established as a link between the Mercosul and its respective legislative powers (...).'

- b) The inferred summative reading (a set of instances of the eventuality type in question):

- (44) (...) *ninguém, neste momento, estaria mais bem qualificado do que ele para uma distinção que já tem sido conferida a escritores mais obscuros. (Wilton Martins, out-19-1997)*
'nobody, at this time, would be better qualified than him for a distinction that has already been bestowed on more obscure writers.'

- (c) An iterative reading with vague quantification:

- (45) *E já me tenho arrependido muitas vezes de ter mencionado pessoas. (Mário de Carvalho)*
'I have regretted many times having mentioned people.'

Apart from the traditional readings, another reading, which evolves in the late 20th century, appears. Consider the following examples:

- (46) (...) *como muita gente tem morrido por este sertão de meu Deus! Até pai já tem matado filho pra comer!* (Maria Dusá, Lindolfo Rocha, 1980)
 ‘given that many people have died for this Sertão of my God! There were fathers who killed their sons in order to eat!’
- (47) (...): *a quase exclusividade dos caciques deste país prolifera na nossa onnipotente capital e são tantos que já tem havido necessidade de os exportar (...).* (19-07-97 A regionalização e os caciques centrais)
 ‘(...): the near exclusivity of the caciques of this country proliferates in our omnipotent capital and there are so many that there has already been a need to export them (...).’

The two examples also show how speakers exploit the semantic potential of the PPC. In an appropriate context, the PPC contributes to a characterising *nuance* of the statement by abstracting the single instances of the eventuality in question. What is emphasised in these characterising contexts, is not the plurality of concrete instances but rather their typical character, in other words, the fact that they stand for or represent a more general tendency. This aspect becomes apparent on closer examination of the two examples above: in (46), for instance, the speaker does not want to specify a number of concrete occurrences but rather seeks to underline that, generally speaking, there has even been an eventuality type of this kind (i.e. *a_father_killing_son* eventuality type). Likewise, in the second example (47), the speaker wants to focus on the situation that has arisen (i.e. the necessity of having to export caciques), again abstracting the concrete number and character of the instances.

It should be noted, however, that the pattern *já* + PPC is rare in the history of the Portuguese language in comparison with its simple past counterpart. In the 19th century, it gains popularity as shows the ratio: 21 occurrences per 1 million words for the PPC vs. 193 occurrences per 1 million words for the PPS. However, in the course of the 20th, the pattern sharply declines, with only 10 occurrences per 1 million words vs. 322 occurrences per 1 million words for the PPS. These figures suggest two trends concerning the evolution of the PPC. Although the form becomes increasingly incompatible with the result marker *já* instances of *já* + PPC continue to appear in the 20th century. This suggests that, at least for some speakers, the PPC continues to preserve its traditional functions, which can be put to use in appropriate contexts. It also shows that speakers’ grammars can vary considerably as to the interpretation and the application of a certain grammatical category. Finally, it can be interpreted as another example of variation in the temporal sub-system of Portuguese, which mirrors, at the same time, an ongoing and very differentiated process of grammatical change.

Let us now consider *sempre* ‘always’, the second crucial adverbial. As has been mentioned in Section 2, *sempre* is generally associated with the universal (or inclusive) perfect reading. The pattern *sempre* + PPS has been predominant from

the beginning, with first attestations of the universal reading in the 14th century. This is shown by the following example:

- (48) *E vsem delles como sempre vsarom e acostumarom em tempo del rej dom afonso nosso auoo.* (Chartularium Universitatis Portugalensis vol. 1, 1300)
 ‘And they shall use them as they always were accustomed to use them in King Afonso’s, our Grandfather’s, times.’

Here, the speaker (the source) refers to all relevant time points (or occasions) within a certain past time interval I (with t_1 to t_n : *em tempo del rej dom afonso*, ‘in the lifetime of King Dom Afonso’) for which the proposition p holds.

In the example below, the temporal interval of reference clearly does not extend to the speech time given that the status described in the document (*sempre foi da coroa rreal*, ‘it always belonged to the royal crown’) is disputed at the utterance time (cf. *de numca ha desmembrarem de sua coroa Reall*, ‘to never separate from your royal crown’):

- (49) *Sennhor a vosa villa de momçam fãz Sabër a uosa alteza como sempre foi da coroa rreal e os Reix antepasados lhe Tem dado cartãs e priuillegeos em que lhe prometem de numca ha desnembrarem de sua coroa Reall. Pidimos a uosa alteza que (...)* (Cortes portuguesas, 1498)
 ‘Sir, your town of Momçam lets you know, Highness, as it always belonged to the royal crown that the ancestor Kings have granted documents and privileges, in which they promise to never separate from your royal crown. We ask you, Highness, to (...)’

In contemporary Portuguese however, the utterance time is included in the temporal reference interval set by the adverbial expression *sempre* as the following, generous, self-assessment of the speaker indicates:

- (50) *Soares adiantou: “Sempre estive na política por motivos de natureza ética e imperativos morais.”* (CdP, Ao coice é que é, 22.11.95)
 ‘Soares said: “I have always been in politics for reasons of ethics and moral imperatives”.’

In the case of the pattern *sempre* + PPC as in the case of *já* attestations are scarce and do not occur before the 16th century (with only 3 instances per 1 million words for the PPC vs. 260 instances per 1 million words for the PPS in the 16th century).

The first instances correspond to the persistent result reading, as in the following example:

- (51) *Que enfim, por não quereremos provar da mesa divina suavidade que nos Deus sempre tem posta, amamos como mesquinhos a nossa fome.*
(Lucena, historia da vida do Padre S. Francisco Xavier, 1600)
‘That, finally, because we do not want to taste the sweetness of the divine table that God always serves us, we love, as petty persons, our hunger.’

Vieira, who, as mentioned already, explores the summative reading in a very systematic way, also actualises it in combination with the adverbial expression *sempre*. The example below refers to an indefinite number of instances (a set of instances of p) for which p holds without exceptions (the meaning of *sempre* in this context):

- (52) *As duas advertências que V. Rev. ma (sic!) aponta são totalmente essenciais, e na mesma conformidade se tem procedido sempre, não falando em dinheiro (...).* (Padre António Vieira, Cartas, 1626–1692)
‘The two warnings you, our Highness, point to are absolutely essential and in the same way we have always proceeded, not talking about money (...).’

A new PPC reading emerges at the end of the 18th century and foreshadows a certain variety of generalising reading. In this context, the pattern *sempre* + PPC does not focus on the sum of single instances of the eventuality in question, but rather on the general tendency or character of a certain state of affairs. In the following examples, the speakers abstract the purely quantificational aspect in order to stress the law-like status of their assertions. In other words, (53) and (54) are gnomic statements on the role of punishment for the wicked and the role of dancing, in the life of nations:

- (53) *C. O temor do castigo das leis divinas e humanas tem sido sempre o flagelo dos homens maus, que só fazem a sua glória em viver no meio dos vícios e da corrupção;* (J. J. da Cunha Azeredo Coutinho, Obras econômicas, c1790s, CdP)
‘The fear of punishment of divine and human laws has always been the scourge of evil men who only make their glory in living in the midst of vice and corruption.’

- (54) *A Dança tem sido sempre usada entre todas as Nações.* (Padre José Amaro da Silva, Amaro: Compendio, CdP)
 ‘The Dance has always been used among all Nations.’

This specific generalising, or, when it comes to human entities, characterising reading may explain a surprising result of this corpus query: As Table 2 shows, the pattern *sempre* + PPC preserves a residual but nevertheless stable place in the grammar of some speakers. In addition, the data corroborate the observation of the previous section that there is some interesting variation as to the frequency of the PPC as well as to its relationship with the competing PPS in the Portuguese speaking world (European vs. Brazilian Portuguese).

	<i>sempre</i> + PPS	<i>sempre</i> + PPC	Ratio PPS:PPC
Brazil	1866 ¹	26	98,6%:1,4%
Portugal	2047	73	96,5%:3,5%
Total	3913	99	97,5%:2,5%

Ratio (*sempre* + PPC): BP 26% : EP 74%, $\chi^2 = 18,33 > 3,84$

Tab. 2: The universal reading in European and Brazilian Portuguese in the 20th century

As the figures show, the compound form yields 2,5% of the joint instances of the two main past categories with the adverb *sempre* (though the weight of the PPS is, of course, overwhelming). Clearly European speakers have a preference for the compound form (with a ratio of 1: 2,5 for European and Brazilian Portuguese, respectively). Given the results of the chi-square test ($\chi^2 = 18,33 > 3,84$), it can be asserted that these findings in the diatopic distribution of the preferences concerning the usage of the PPC are significant. The pattern *sempre* + PPC might continue to be able to survive in contemporary Portuguese due to its specialisation for generalising and characterising readings. These specialised readings set it apart from the characteristic universal reading displayed by the PPS in its typical contexts of occurrence with *sempre*. Let us consider a representative example of the generalising reading:

- (55) *Sempre tem havido guerras. É a história. É o fatalismo histórico dos homens.* (Nascimento, Manuel do, O Aço Mudou de Têmpera, 1945)
 ‘There have always been wars. This is history. This is the historical fate of mankind.’

Example (55) is another instance of the law-like (or gnomic) value of the PPC in contexts with the adverb *sempre*. The speaker wants to make a general statement on the role of war in the history of mankind (something like ‘war is an ineradicable part of human history’) and invokes abstract concepts like ‘history’ (*a história*) and ‘historical necessity’ (*o fatalismo histórico*).

The combination of the PPC with *sempre* in its competition with the PPS gives interesting insights into the process of differentiation between the two (past) tense categories and also casts some light on the important role of variation in this

process. Remarkably, it highlights the importance of the persistent result reading in its 16th century uses, the role of the summative interpretation (an inferable set of instances of a certain eventuality type), mirrored especially in the writings of 17th century author A. Vieira and the emergence of a generalising (or characterising) reading. This latter reading, which allows for gnomic or law-like statements, becomes more prominent in the 20th century and seems to contribute to the preservation of a residual function and place of the PPC in the grammar of, at least, some native speakers of Portuguese. This particular reading distinguishes itself from the typical universal reading associated with *sempre* in that it abstracts a definite set of individual instances (the all-quantification of *sempre*) and shifts the focus to the general and atemporal character of a gnomic or law-like statement about an entity or a state of affairs.

A brief examination of some other adverbial expressions can help create a more complete picture. As the historical sketch above reveals, the expression *x vezes* ‘x times’ is an interesting candidate for the reconstruction of diachronic developments concerning the PPC. The expression *x vezes* allows for the quantification of instances in a manner either precise (or definite) (e.g. *três vezes* ‘three times’) or more vague, as is the case with *várias vezes* and *algumas vezes* ‘several times’. The latter is in line with the semantics of indefinite quantification displayed by the PPC in contemporary Portuguese. In contrast, a precise quantification of instances is at odds with the contemporary semantics of the PPC. Furthermore, questions emerge about the structure of the delimiting extended-now-interval and especially its right boundary. For instance, does it include the time of utterance or not? This question is considered below.

The combination *x vezes* + PPS is attested in the 14th century. In the earliest attestations, cases of precise quantification (such as *duas, três vezes* ‘two, three times’) as well as of vague quantification (e.g. *muitas, repetidas vezes* ‘many times, repeatedly’) can be perceived. The pattern *x vezes* + PPS exclusively occurs in contexts ascribed to the past. Thus, the right boundary of the relevant interval is always situated before the time of utterance. This configuration is attested in the earliest documents:

(56) (...) *e lidarom com elles muytas vezes.* (Crónica Geral de Espanha de 1344, 1300–1400)

‘(...) and they fought with them very often.’

(57) *Bem sabedes como el rey don Afonso me deitou da terra duas vezes;*
(...). (Crónica Geral de Espanha de 1344, 1300–1400)

‘You know well how the king don Afonso drove me off the land twice; (...).’

In contemporary Portuguese, the pattern *x vezes* + PPS is also very frequent. As can be seen from the example below, the temporal interval of reference ends before the utterance time:

- (58) *Eu me identifico muito com os violonistas, porque eu também fui violonista, muitas vezes fiz aulas e mantive contatos com pessoas que já tive disco, como o Pedrassoli (...).* (Jorge Rafael)

‘I identify myself a lot with guitarists, because I was also a guitar player and often took classes and I kept in touch with people of whom I had already records like o Pedrassoli (...).’

Contrary to what is shown to be the case for the PPS, the first attestations of the pattern *x vezes* + PPC appear quite late in the records. Only one attestation containing this pattern dates back to the 15th century. While examples of the pattern are rare in the 16th century as opposed to the competing pattern with the PPS (3,5 occurrences and 117 occurrences per 1 million words, respectively), a noteworthy increase of the pattern can be observed in the course of 17th century (when it reaches a peak with 21 instances per 1 million words). In quantitative terms, this pattern is in decline in the 18th and 19th centuries (with 12,6 occurrences per 1 million words) and its use declines even further in the 20th century (with a match of only 3,1 occurrences per 1 million words). These quantitative trends mirror the semantic development and, especially, reflect the constraints imposed by the PPC with respect to its compatibility with adverbial expressions.

In the 16th century, the PPC typically appears with speech act verbs like *dizer* ‘to say’ and *declarar* ‘to declare’ or with verbs of perception (e.g. *ouvir* ‘to hear’, *ver* ‘to see’). In these contexts, the PPC marks the persistent effect of the utterance or the perception while the quantifier *x vezes* highlights its repeated character and, therefore, the illocutionary value:

- (59) (...) *e algumas vezes eu lhe tenho ouvido* (João de Barros, Crónica do imperador Clarimundo, 1520)

‘(...) and sometimes I listened to him’

- (60) (...) *porque como ja tenho dito muitas vezes (...).* (Enformação das cousas da China, 1520)

‘(...) because as I have said many times (...).’

In the 17th century, the Jesuit author António Vieira is the first to exploit the semantic potential of the PPC beyond its original range of usage meaning, by extending it to the realm of iteration in a systematic way. In his works, the highest number of PPC instances combined with iterative expressions like *muitas vezes* ‘many times’, *outras vezes* ‘other times’ and *tantas vezes* ‘so many times’ are found.

- (61) (...) *como tantas vezes se têm perdido.* (Vieira: Cartas, CdP)

‘(...) as they have gotten lost so often.’

The expression *repetidas vezes* ‘repeatedly’ along with the PPC is not used before the 18th century. This combination is now the typical realization of the central, i.e. the iterative, reading of the compound form in contemporary Portuguese. This is one of the first attestations:

- (62) (...) *porque ja repetidas vezes tenho falado a ambos com os sentimentos do meu coração (...)*. (Diogo Ignacio de Pina Manique, Pina Manique e a Universidade de Coimbra, 1781)
 ‘(...) because I have repeatedly told you both with the feelings of my heart (...)’

If the typical instances of the pattern *x vezes* + PPC as found in the 18th and 19th centuries are compared with those from the 20th century, a striking contrast emerges. The typical instances of *x vezes* in the 18th and 19th centuries have a definite character. Consider the following example:

- (63) *Cinco vezes com esta tenho aumentado a era na data destas cartas depois de 695 até 699 (...)*. (J. Cunha Brochado, Cartas, 1707)
 ‘Five times with this one, I have increased the era of the date of these letters after 695 to 699 (...)’
- (64) (...) *tenho tido por quatro vezes vertigens súbitas e as primeiras no gabinete, (...)*. (Luís Joaquim Santos Marrocos, Memórias e Cotidiano do Rio de Janeiro no Tempo do Rei)
 ‘(...) I have had sudden vertigo four times and the first ones in the office (...)’

In the 20th century, cases of vague quantification prevail. Generally, the pattern *x vezes* + PPC is realised by expressions such as *algumas vezes*, *inúmeras vezes*,¹³ *quantas vezes*, *tantas vezes*, *várias vezes*, *muitas vezes*, *às poucas vezes*,¹⁴ *raras vezes*, *diversas vezes*, *poucas vezes*, *às/por vezes*. In contrast, not a single instance of a precise quantification with the PPC appears in the 20th century texts of the *Corpus do Português*. Of the overwhelming number of attestations, let us consider one example that bears testimony to the prevailing quantificational vagueness:

- (65) *Tem tocado com brasileiros? Perez – Conheço alguma coisa. Tenho tocado algumas vezes com brasileiros, como o baterista Portinho e o baixista Sérgio Brandão.* (Danilo Perez, 6 outubro 1997)

13 See e.g. Paes de Andrade, Quer CPI para escândalo, 05-19-1997.

14 See e.g. Linolfo Rocha, Maria Dusá, 1980.

‘Have you played with Brazilians? Perez – I know something about that. I have played with Brazilians a few times, like drummer Portinho and bass player Sérgio Brandão.’

In conclusion, the pattern *x vezes* + PPC provides important insight into the evolutionary pathway of the compound form. During its first stage, in the 15th and 16th centuries, speakers exploit the persistent result reading of the PPC. In its second stage, iterative readings become more prominent. This general trend is mirrored in the first attestations with the vague quantifier *repetidas vezes* ‘repeatedly’ that appear at the end of the 18th century. However, it must be emphasised that, in the 18th and 19th centuries, instances of precise quantification by cardinal numbers (e.g. *duas/três vezes* ‘two/three times’ etc.) are clearly preferred. It is not until the 20th century that, as a final step of evolution, the indefiniteness constraint becomes dominant. The indefinite iterative reading becomes then the most prominent reading of the PPC in contemporary Portuguese.

In order to create a more complete picture of iterative readings, let us consider the compatibility of the PPC with the quantifying adverbial expression *cada x*. Expressions like *cada vez mais/maior* ‘increasingly’ and *(a) cada x* ‘every x’ (x = *ano* ‘year’, *dia* ‘day’, *mês* ‘month’, etc.) only occur from the 20th century onwards. The adverbial quantifying expression *cada x* is compliant with either an incremental reading (*cada vez mais/maior* – it then focuses on an indefinite set of increasing degree achievements) or an indefinite set of cyclical eventualities (e.g. *(a) cada x anos/semanas/dias* ‘every x years/weeks/days’). In line with the evolution of *x vezes* ‘x times’, the pattern *cada x* + PPC only becomes prevalent in the 20th century. This is consistent with the observation that the indefinite iterative reading only becomes pervasive in the last century. Consider the following two examples:

- (66) *Principalmente de uns 15 a 20 dias, tem entrado cada vez mais em um projeto presidencial.* (Byron Sarinho, 09-07-1997)

‘Especially, about 15 to 20 days ago, he has increasingly engaged in a presidential project.’

- (67) *Trata-se de uma pesquisa pessoal insubstituível, que tenho renovado a cada dois anos, desde 1986.* (FOLHA:10695:SEC:opi, 1994a)

‘This is an irreplaceable personal research, which I have renewed every two years since 1986.’

Last but not least, the combination and distribution of the adverb *ultimamente* ‘lately’ with the PPC and the PPS, respectively also deserve an analysis. Along with *repetidas vezes* ‘repeatedly’, the adverb *ultimamente* is intrinsically linked to the indefinite iterative reading and, therefore, represents one of the prototypical manifestations of the contemporary semantics of the PPC. In its current reading, *ultimamente* sets the characteristic extended-now-interval. This perfect interval ranges from a left boundary situated in the past to a right boundary, including the

utterance time. The interval contains a set of an indefinite number of instances of a certain eventuality (type), for example:

- (68) *Ultimamente, Prince tem assinado os discos com um símbolo (uma mistura entre os símbolos da sexualidade masculina e feminina).* (CdP, Prince)
 ‘Lately, Prince has signed the discs with a symbol (a mixture between the symbols of male and female sexuality).’

Interestingly, *ultimamente* emerges in the texts of the 17th century. António Vieira pioneers this adverb too in his writings. In the 17th and the 18th centuries however, the adverb *ultimamente* is exclusively linked to the PPS. This combination occurs because *ultimamente* confines entirely to the past the temporal interval taken into account (with the right boundary clearly situated before the utterance time). This is attested in the following quotation taken from Vieira, who explicitly defines the setting of the temporal interval and of its boundaries by indicating a specific date (*de 24 de Julho e primeiro de Agosto* ‘from the 24th of July and the 1st of August’):

- (69) *Todas as cartas que ultimamente recebi, de 24 de Julho e primeiro de Agosto, concordam em que Pedro Jaques vai buscar a el-rei; (...).*
 (CdP, Padre António Vieira, Cartas, 1626-1692)
 ‘All the letters I have received lately, from July 24 to August 1, agree that Pedro Jaques will search for the king; (...).’

The adverb *ultimamente* displays a polysemous character in the evolution of Portuguese. In the 17th century, it denotes a final state in the past, comparable to expressions like English *in the end* or *finally*. This reading, which continues to be present in the documents of the 18th century, loses ground when the innovative readings of the PPC come to the fore. The following example illustrates this clearly:

- (70) *Mas depois de varios discursos, ultimamente se acordou: Que saindo a Frota antes de quinze de Setembro, (...).*
 (CdP, Francisco Manuel de Melo, Epanaphora politica primeira, 1637)
 ‘But after several speeches, they finally reached an agreement: That if the Fleet leaves before 15th of September, (...).’

In the 19th century, the contrast between the PPS and PPC is deepened. Generally, *ultimamente* + PPS is used to refer to the last period or stage of a past time interval. This constellation is illustrated by the following example where the speaker refers to a past eventuality of renting a house which, at the final stage of a past time interval, belonged to the Caffre family:

- (71) *Alugou-se uma casa em Pedrouços, casa que ainda existe e é a que ultimamente pertenceu á familia Caffre (...).* (Marques de Fronteira E Alorna, Memórias do Marquês da Fronteira e Alorna, 1854)
‘We rented a house in Pedrouços, a house that still exists and that is the one, which belonged lately to the Caffre family (...).’

In the 20th century, the meaning of *ultimamente* in PPS contexts slightly shifts and converges with the meaning of *recentemente* ‘recently’ where the speakers envisage a time point or interval not far from the time of utterance (not a final stage of a completed past time interval), as in the following examples:

- (72) *Ultimamente fiz uma viagem à Índia e isso levou-me a escrever uma série de poemas.* (Urbano Tavares Rodrigues)
‘Lately, I made a trip to India and this made me write a series of poems.’
- (73) *Ultimamente, foram desenvolvidas tecnologias novas que permitem negociar na rede de uma forma muito segura.* (Sérgio MainettiOP, 27.04.1997)
‘Lately, new technologies have been developed that allow you to do business in the internet in a very safe way.’

In the examples above, the adverbial expressions *recentemente*, in the case of (72), and *no último tempo* ‘in the last time’ in the case of (73), could easily replace the adverb *ultimamente*.

In contrast to the episodic interpretation suggested by the pattern *ultimamente* + PPS, the PPC yields an iterative and durative reading in examples from the 19th century. In (74), the speaker insists on a set of eventualities (arguing eventualities) which take place in a past time interval. The time of utterance serves as a point of reference, from where to look back to a past interval that comprises an indefinite number of instances of the eventuality type in question:

- (74) (...) *a atenção de que eu preciso para falar a respeito da discussão que tem havido ultimamente na câmara.* (José de Alencar, Ao Correr da Pena)
‘(...) the attention I need in order to to speak about the discussion that has been going on lately in the Chamber (Council).’

In the 20th century, the pattern *ultimamente* + PPC includes the utterance time in the temporal interval taken into consideration. Example (75) displays an incremental character as it focuses on the added sum of increasing degrees of divergence (measurement function). Example (76) is quoted above but given that it illustrates so clearly the different ingredients of the prototypical PPC readings in contemporary Portuguese, is used again in this section. The notion of iterativity, the indefinite number of instances of an eventuality type taken into account and the extended-now-interval ranging from a past moment to the utterance time now included:

- (75) *Reconheço que ultimamente tem aumentado essa divergência interna, mas não vou questionar.* (CdP, Juraci Magalhaes, 04-10-1997)

‘I recognize that this internal divergence has increased lately, but I will not question (that).’

- (76) *Ultimamente, Prince tem assinado os discos com um símbolo (uma mistura entre os símbolos da sexualidade masculina e feminina).* (CdP, Prince)

‘Lately, Prince has signed the discs with a symbol (a mixture between the symbols of male and female sexuality).’

In conclusion, *ultimamente* confirms the hypothesis concerning the temporal interval of reference for the location of eventualities. It confirms in particular the hypothesis that the 20th century is the decisive point for the integration of the utterance time into the interval of reference. Furthermore, the semantic peculiarities and differences between the PPC and the PPS clearly come to light. The PPS typically refers to a single event and corresponds to episodic past readings (‘there is, at least, one eventuality of the type p’), whereas the PPC always points to a set or an indefinite number of instances of the eventuality type p. Finally, *ultimamente* itself is subject to semantic change, especially in contexts with the PPS, where it can indicate different types of past time configurations (e.g. in the sense of ‘finally’ or ‘recently’).

5 Conclusions

The analysis of the evolutionary path of the PPC presented in this article provides a differentiated picture of the dynamics of change with respect to the system of past categories.

First of all, stark differences concerning the usage of the PPC and PPS, from a diachronic as well as from a quantitative point of view, emerge. The PPS is more commonly found with adverbs under scrutiny than the PPC. The earliest attestations of the PPC can be traced back to the end of the 15th century (cases of *x vezes* ‘x times’) and to the beginning of the 16th century. Strikingly, the patterns *ultimamente*

+ PPC ‘lately’ and *cada vez mais* + PPC ‘increasingly’ do not appear before the 19th and 20th centuries, respectively.

The typical readings of the PPC in combination with the different temporal quantifiers are also clearly identified. In the 16th century, the persistent result reading becomes dominant with all quantifiers. In the 17th century, the summative and incremental readings become common in the writings of innovative authors, especially Chagas and Vieira, in whose writings one of the first attestations for an iterative reading based on adverbial expressions of the *x vezes*-type is found. However, the pattern *repetidas vezes* ‘repeatedly’ + PPC starts to appear only in the late 18th century and examples of the iterative reading remain marginal until the 19th century. Likewise, towards the end of the 18th century, some instances of a generalising PPC reading appear for the first time in appropriate contexts with the quantifier *sempre* ‘always’.

In the 19th century, although all kinds of readings (more traditional ones like the resultative reading and the summative reading as well as innovative ones like the iterative reading) co-exist, the iterative reading becomes increasingly salient. However, as the analysis of the interaction with the temporal quantifiers shows, both types of iterative readings – iterative readings with definite and with vague/indefinite quantification – are compatible with the PPC. In the 20th century, the usage of the PPC becomes more specialized, as the quantificational indefiniteness becomes a strict requirement for the form. This development can be clearly observed in the evolution of the patterns *x vezes* ‘x times’, *cada vez* ‘each time’ and *ultimamente* + PPC ‘lately’. Moreover, further evolutions in the later 20th century become evident, for instance the strengthening of the generalising and even gnomic (law-like) readings of the PPC, especially with the adverbs *já* ‘already’ and *sempre* ‘always’. This contributes to a functional differentiation of the PPC in contrast with the PPS, and may explain why the PPC, though semantically specialised in notions of iterativity and indefinite quantification, continues to be used, though rarely, in contexts of overlap and competition with the PPS. Also, the study of the interaction between the PPC and the adverbial quantifiers shows that it is not until the 20th century that the relevant extended-now-interval, which is paramount for the status of the PPC as a perfect, also includes (at least) the utterance time t_0 .

In addition, the in-depth analysis of the corpus data conveys interesting insights into the role of microvariation in the temporal sub-domain of the Portuguese language. It emerges from the study that traditional uses and readings of the PPC are – at least to some extent – still preserved in the 20th century, particularly in their typical contexts of occurrence (as e.g. the result reading with achievement predicates or with quantifiers such as *sempre* ‘always’). Apart from the co-existence of innovative and traditional readings at different stages of the evolutionary path, interesting differences concerning the distribution of the past categories and their readings in European and Brazilian Portuguese can be appreciated. These findings can be interpreted from two different angles: From a synchronic perspective, the results point to an important range of microvariation in the temporal sub-system of the Portuguese language, which mirrors, at the same time, different diachronic layers of its evolutionary path. Focusing on the individual level of the language users, our findings suggest that there is a considerable range of variation between the individual grammars of the speakers and that, for this reason, certain readings of the PPC continue to be still available in the grammar of some speakers but are far from being acceptable for (even most) other speakers. This correlates with

different frequencies of usage and manifests itself in diverging judgments of acceptability as to the readings of the PPC.

The implications of these findings, especially the co-existence of traditional and innovative readings of the PPC in synchrony and the specific dynamics of its evolution in diachrony, are pursued elsewhere (see Becker 2016). Building on Geeraerts' notion of the prototypical organization of categories and their dynamics of diachronic change (Geeraerts 1997, 10f., 23ff.; 2010, 2654f., see also Goes 1999), grammatical categories can also be organized in a prototypical way and change according to principles of prototypicality. From a synchronic point of view, more central and more peripheral readings or usages of a grammatical category can be distinguished. This idea does justice both to the observed co-existence of traditional resultative or summative readings, and to indefinite iterative readings in the 20th century. From a diachronic point of view, the prototype approach offers a model for the dynamics of change of the PPC, which can be conceived of as a shift of the prototypical reading or readings from one initial centre (with its network of different, more or less central or peripheral readings) to a new target centre of category organisation (for a more detailed account see Becker 2016).

In this article, it becomes clear how (micro)variation can reflect a very complex process of linguistic change, in this case, the specialisation of the PPC and the differentiation of its range of use with respect to the competing PPS in the course of time. There is no doubt that the issue of (micro)variation remains an intriguing subject for further research on these two (past) categories. An appropriate research agenda has to include both perspectives: On the individual level, varying grammars in the domain of tense need further documentation and analysis. From a variational perspective, differences in the tense systems of European, African and American varieties of Portuguese have to be studied more systematically and based on new corpora.

References

- Algeo, James E. 1976. The Portuguese Present Perfect, *Luso-Brazilian Review* 13, 194–208.
- Almeida, Maria Elisete. 2003. Le 'pretérito perfeito simples' du portugais en discours et en récit, in: Céline Benninger/Anne Carlier/Véronique Lagae (edd.), *Temps et texte*, Valenciennes: Presses universitaires de Valenciennes, 71–82.
- Becker, Martin. 2016. O Pretérito Perfeito Composto em diacronia – uma evolução perfeita?, *Estudos de Lingüística Galega* 8, 25–43.
- Becker, Martin. 2020. Das Pretérito Perfeito Composto – ein Perfekt? Zur Semantik und Diachronie der *ter* + Partizip-Konstruktion, in: Benjamin Meisnitzer/Elissa Pustka (edd.), *Zwischen Sprechen und Sprache – Entre fala e lingua*, Frankfurt am Main: Peter Lang, 83–110.
- Costa Campos, Maria Henriqueta. 1986. L'opposition du portugais 'pretérito perfeito simples pretérito perfeito composto': un cas singulier dans l'ensemble des langues romanes, in: Jean-Claude Bouvier (ed.), *Actes du XVII Congrès International de Linguistique et Philologie Romanes (Aix-en Provence, 29 août - 3 septembre 1983)*, vol. 4, Aix-en-Provence: Publications Université de Provence, 409–422.

- Costa Campos, Maria Henriqueta. 1987. O pretérito perfeito composto: um tempo presente?, in: *Actas do III Encontro da Associação Portuguesa de Linguística (Fundação Calouste Gulbenkian, Lisboa, Outubro 1987)*, Lisbon: APL/Colibri, 75–85.
- Davies, Mark/Ferreira, Michael (2006–), *Corpus do Português: 45 million words, 1300s 1900s*. [<http://www.corpusdoportugues.org>].
- Gärtner, Eberhard. 1998. *Grammatik der portugiesischen Sprache*, Tübingen: Niemeyer.
- Geeraerts, Dirk. 1997. *Diachronic Prototype Semantics*, Oxford: Clarendon Press.
- Geeraerts, Dirk. 2010. Cognitive Approaches to Diachronic Semantics, in: Claudia Maienborn/Klaus von Heusinger/Paul Portner (edd.), *Semantics*, Berlin/New York: De Gruyter, 2652–2675 (Handbücher zur Sprach- und Kommunikationswissenschaft, 33.3).
- Goes, Jan. 1999. *L'adjectif. Entre nom et verbe*, Paris/Brussels: Duculot.
- Harre, Catherine E. 1991. *Tener + Past Participle: A Case Study in Linguistic Description*, London: Routledge.
- Harris, Martin. 1982. The 'Past Simple' and the 'Present Perfect' in Romance, in: Nigel Vincent/Martin Harris (edd.), *Studies in the Romance Verb*, London: Croom Helm, 42–70.
- Hundertmark-Santos Martins, Maria Teresa. 1982. *Portugiesische Grammatik*, Tübingen: Niemeyer.
- Iatridou, Sabine/Anagnostopoulou, Elena/Pancheva, Roumyana. 2003. Observations about the Form and Meaning of the Perfect, in: Artemis Alexiadou/Monika Rathert/Arnim von Stechow (edd.), *Perfect Explorations*, Berlin/New York: De Gruyter, 153–204.
- Ilari, Rodolfo. 2001. *A expressão do tempo em português*, São Paulo: Ed. Contexto.
- Irmen, Friedrich. 1966. O pretérito composto em português, *Revista de Portugal* 31, 222–238.
- Kamp, Hans/van Genabith, Josef /Reyle, Uwe. 2011. Discourse Representation Theory. An Updated Survey, in: Dov Gabbay (ed.), *Handbook of Philosophical Logic*, 2nd ed., vol. 15, Dordrecht: Springer, 125–394.
- McCoard, Robert W. 1978. *The English Perfect: Tense Choice and Pragmatic Inferences*, Amsterdam: North-Holland.
- Oliveira, Fátima/Lopes, Ana. 1994. Tense and Aspect in Portuguese, in: Rolf Thieroff (edd.), *Tense Systems in European Languages*, vol. 2, Tübingen: Niemeyer, 95–116.
- Oliveira, Fátima. 2003. Tempo e Aspecto, in: Maria H. Mira Mateus/Ana M. Brito/Inês Duarte/Isabel Hub Faria/Sónia Frota/Gabriela Matos/Fátima Oliveira/Marina Vigário/Ana Villalva (edd.), *Gramática da Língua Portuguesa*, Lisbon: Caminho, 127–178.

- Oliveira, Fátima/Leal, António 2012. Sobre a iteração do pretérito perfeito composto em português europeu, *Revista de Estudos Linguísticos da Universidade do Porto* 7, 65–88.
- Oliveira, Leandra Cristina de. 2011. ‘He vivido’ y ‘tenho vivido’: funciones y trayectoria de cambio del perfecto compuesto español y portugués, *Anuario brasileño de estudios hispánicos XXI*, 59–80.
- Paiva Boléo, Manuel de. 1936. O perfeito e o pretérito em português em confronto com as outras línguas românicas, *Cursos e Conferências* 6, *Suplemento ao vol. XIII do Boletim da Biblioteca da Universidade*, Coimbra: Biblioteca da Universidade, 124–266.
- Portner, Paul. 2011. Perfect and Progressive, in: Klaus von Heusinger/Claudia Maienborn/Paul Portner (edd.), *Semantics. An International Handbook of Natural Language Meaning* (HSK 33.2), Berlin/Boston: De Gruyter, 1217–1261.
- Romani, Patrizia. 2006. Tiempos de formación romance I. Los tiempos compuestos, in: Concepción Company Company (ed.), *Sintaxis histórica de la lengua española*, vol.1, Mexico City: UNAM/Fondo de Cultura Económica, 243–346.
- Rothstein, Björn. 2007. *Tempus*, Heidelberg: Winter.
- Rothstein, Björn. 2008. *The Perfect Time Span: On the Present Perfect in German, Swedish and English*, Amsterdam/Philadelphia: John Benjamins.
- Santos, Diana. 2008. Perfect Mismatches: ‘Result’ in English and Portuguese, in: Gunilla Anderman/Margaret Rogers (edd.), *Incorporating Corpora: The Linguist and the Translator*, Clevedon: Multilingual Matters, 217–242.
- Schäfer-Prieß, Barbara. 1996. Das *pretérito perfeito composto* in den frühen Portugiesischgrammatiken, in: Annette Endruschat/Eberhard Gärtner (edd.), *Untersuchungen zur portugiesischen Sprache*, Frankfurt am Main: TFM, 29–45.
- Schmitt, Christina. 2001. Cross-Linguistic Variation and the Present Perfect: The Case of Portuguese, *Natural Language & Linguistic Theory* 19, 403–453.
- Smith, Carlota S. 1997. *The Parameter of Aspect*, Dordrecht/Boston/London: Kluwer.
- Smith, Carlotta S. 2003. *Modes of Discourse*, Cambridge: Cambridge University Press.
- Squartini, Mario/Bertinetto, Pier Marco. 2000. The Simple and Compound Past in Romance Languages, in: Östen Dahl (ed.), *Tense and Aspect in the Languages of Europe*, Berlin/New York: De Gruyter, 403–439.
- Stechow, Arnim von. 1999. Eine erweiterte Extended-Now Theorie für Perfekt und Futur, *Lili* 113, 86–118.
- Sten, Holger. 1973. *L’emploi des temps en portugais moderne*, Copenhagen: Munksgaard.
- Suter, Alfred. 1984. *Das portugiesische Pretérito Perfeito Composto*, Bern: Francke.
- Vendler, Zeno. 1967. *Linguistics in Philosophy*, Ithaca: Cornell University Press.

- Wigger, Lars-Georg. 2005. *Die Entwicklungsgeschichte der romanischen Vergangenheitstempora am Beispiel des Pretérito Perfeito Composto im Portugiesischen*, PhD dissertation, Eberhard Karls Universität Tübingen.
- Wigger, Lars-Georg. 2006. Die Entwicklung des PPC: *haver* und *ter* als temporale Hilfsverben, in: Rolf Kemmler/Barbara Schäfer-Prieß/Axel Schönberger (edd.), *Portugiesische Sprachgeschichte und Sprachgeschichtsschreibung*, Frankfurt am Main: Domus Ed. Europea, 267–288.