Patrícia Amaral & Chad Howe

Nominal and verbal plurality in the diachrony of the Portuguese Present Perfect[*]

1. Introduction: Iteration and the Portuguese Perfect

In contemporary Portuguese, the *Pretérito Perfeito Composto* (henceforth PPC), formed by the Present of *ter* 'to have' + Past Participle, differs from other Romance Perfects in that it does not display the full range of interpretations that are attested for present perfects cross-linguistically (Campos 1986, Giorgi & Pianesi 1997, Schmitt 2001). In main clauses with the indicative, the PPC does not have a resultative interpretation[1] and must receive an iterative interpretation, as exemplified in (1):[2]

(1)   A   Ana   tem   chegado   atrasada (*uma vez).
        the   Ana   have. 3SG   arrive.PPART   late   (one   time)
        'Ana has been arriving late (*once).'

The PPC in (1) is interpreted as denoting a repetition of events of arriving late with non-overlapping run times; this requirement of event iteration can be tested since co-occurrence with the adverbial *uma vez* 'once' is ruled out.[3]

---

[1]   Throughout this paper, we will use RESULTATIVE INTERPRETATION to refer to the interpretation in which a Present Perfect indicates the existence of a resultant state. We will discuss "durative" readings of the PPC in Portuguese as well: this type of interpretation is also referred to as the PERFECT OF PERSISTENT SITUATION (Comrie 1976), CONTINUATIVE, or UNIVERSAL PERFECT (see Nishiyama and Koenig 2004 for a review of terminology related to readings of the Perfect).

[2]   Abbreviations used in the glosses are as follows: 3PL = Third Person Plural (Present), 3SG = Third Person Singular (Present), ACC = Accusative, F = Feminine, M = Masculine, FUT = Future, INF = Infinitive, PST = Perfective Past Tense (*Pretérito Perfeito Simples*), PPART = Past Participle.

[3]   In subordinate clauses in the subjunctive, the PPC does not receive an iterative interpretation, as shown by (i):

The unavailability of the resultative interpretation is shown in (2): the PPC cannot be used to refer to a present state resulting from a recent event, hence the unacceptability of (2c). In Portuguese, the resultant state/ recency inter-pretation required as an appropriate response to the question in (2) would necessitate the use of the aspectual periphrasis *acabar de* '(lit.) to finish' + Infinitive, as in (2a), or of the simple perfective past with a temporal adverbi-al, as in (2b).

(2) Onde   está   a   Ana?
     where be. 3SG the Ana
     'Where is Ana?'
     a. Está   aqui: acabou   de   chegar.
         be. 3SG here   finish.PST   of   arrive.INF
         'She's here: she has just arrived.'
     b. Está   aqui: chegou   agora.
         be. 3SG here   arrive.PST   now
         'She's here: she has arrived just now.'
     c. ??Está aqui: tem   chegado.
         be. 3SG here   have. 3SG   arrive.PPART
         ?? 'She's here: she has been arriving.'

Another test for the iterative interpretation is the incompatibility of the PPC with "once-only" events, as with *to be born* and *to die* in (3), adapted from Campos (1986):

(3) *O   animal   tem   nascido   (morrido).
      the animal   have. 3SG be_born.PPART (die.PPART)
      '??The animal has been born repeatedly (died repeatedly).'

The same predicates are acceptable with the PPC with a plural subject, since the plurality of *being-born* or *dying* events now distributes over each of the plural participants:[4]

_____

(i)   É possível que a Ana tenha chegado atrasada uma vez.
       'It is possible that Ana has arrived late once.'
When reference time does not coincide with utterance time, the iterative reading does not arise (Mateus et al. 2003), as in (ii) and (iii), from Mateus et al. (2003: 142-143), examples (54) and (55):
(ii)   Quando a Ana chegar a casa da Maria, já o Rui a tem visitado.
       'When Ana arrives at Maria's home, Rui will have already visited her.'
(iii) Sempre que a Ana chega a casa da Maria, já o Rui a tem visitado.
       'Everytime Ana arrives at Maria's home, Rui has already visited her.'
[4] Plural subjects compatible with the PPC are bare plurals and existentially and uni-versally quantified NPs, but not cardinalized nominal expressions, e.g.

(4) Muitos animais   têm   nascido   nesta   rua.
     Many   animals   have.3PL   be_born.PPART   on-this street
     'There have been many events of animals being born on this street.'

The requirements on event iteration are stricter than mere event plurality: the PPC requires a repetition of events that are regularly distributed over a time interval and the plurality of events cannot be cardinalized, as in (5):

(5) A   Ana   tem   chegado   atrasada (*três vezes).
     the Ana   have. 3SG   arrive.PPART late   (three times)
     'Ana has been arriving late (repeatedly) (*three times).'

Crucially, this requirement on event plurality is true regardless of the number of participants in the eventuality and thus is part of the encoded meaning of the PPC (see Cabredo Hofherr, Laca & de Carvalho 2010 for a treatment of the PPC in a variety of Brazilian Portuguese as a pluractional operator).

However, corpus data provide evidence that in earlier stages of Portuguese the PPC denoted the resultant state of a single event, i.e. it received a resultative or recent past interpretation with no implication of plurality of events. This is shown in (6) (in boldface), an example from the 15th century extracted from the *Corpus do Português* (CdP).[5]

(6) [Context: The speaker just found out that the king has died.]
     *ca em el Rey meu Senhor eu **tenho perdido** um tão bom e verdadeiro amigo*
     (CdP, 15th Century)
     'Since in the person of my Lord the King **I have lost** such a good and true friend'

In this case, the context rules out a plural interpretation of the form *tenho perdido*: the speaker is referring to the death of the king, a recent once-only event. In contemporary Portuguese, under the same contextual premises, (6) would be semantically anomalous.

Another instance of an unambiguous non-iterative interpretation of the PPC is (7), extracted from the *Tycho Brahe Parsed Corpus of Historical Portuguese* (TBCHP).[6] Here, the complement of the verb requires a single event interpretation.

(i) *?? Dez animais têm   nascido   nesta rua.*
         ten animals have.3PL   be_born.PPART   on-this street
     We will return to this issue later.
[5] *Corpus do Português*, Mark Davies and Michael Ferreira (2006) (45 million words, 1300s-1900s). Available online at *http://www.corpusdoportugues.org*.
[6] *Tycho Brahe Parsed Corpus of Historical Portuguese* (approximately 2.3 million words, 1400s-1800s). Available at http://www.tycho.iel.unicamp.br.

(7)   Eu ey por bem que Nicolaao Jusarte, fidalgo de minha casa, a que **tenho
       ffeito merce** da capitania de um dos navios que vão pera a India nesta
       armada d'outubro, vaa no navio do Porto (TBCHP, 16th Century)
       'I order that Nicolau Jusarte, nobleman of my house, whom I **have awarded**
       the honor of being the captain of one of the ships that will go to India in the
       October fleet, shall go on the ship from Oporto.'

In (7), both the number of the NP *um dos navios* and contextual information
force a once-only event interpretation: under normal circumstances, someone
is chosen as the captain of a ship going on a specific expedition only once.

This paper details the semantic change leading from the interpretation of
the PPC as denoting the resultant state of a (possibly single) event to the
current non-resultative interpretation of the PPC, with pluractional properties
(following the notion of 'pluractionality' proposed by Van Geenhoven 2004).
In our analysis, the pluractional meaning arises as a consequence of semantic
ambiguity given appropriate morphosyntactic conditions. We assume an
ambiguity between a resultative reading (i.e. with focus on the resultant state
denoted by the participle) and a multiple event reading, the latter type of rea-
ding being favored in certain contexts by pragmatic factors (Traugott and
Dasher 2001, Eckardt 2006). The multiple event reading serves as the vector
for semantic change: the pluractional interpretation of the PPC arises in con-
texts in which the semantic plurality in the arguments of the verb induces
event plurality, which gradually becomes conventionally associated with the
PPC form.

This paper is organized as follows. In section 2, we present the semantic
properties of the PPC in contemporary Portuguese. In section 3, we analyze
the periphrasis *ter* + Past Participle in diachrony. In section 4 we detail our
proposal concerning the semantic change undergone by the Portuguese PPC.
Section 5 provides concluding remarks.

2.   The Present Perfect in contemporary Portuguese

Before turning to our discussion of the Portuguese PPC in diachrony, we will
provide some initial observations concerning those semantic and syntactic
properties discernable in present-day Portuguese that bear on our subsequent
diachronic explanation.

Previous analyses of the PPC in Portuguese have argued that part of its co-
re meaning is the aspectual restriction of required iteration of telic eventuali-
ties (see Campos 1986, Giorgi and Pianesi 1997, Schmitt 2001, and Cabredo
Hofherr, Laca & de Carvalho 2010). We present the aspectual properties of

the PPC in section 2.1. In terms of its temporal properties, analyzed in section 2.2, the PPC in Portuguese is similar to perfects in other Romance languages, requiring that an eventuality be evaluated in an interval containing utterance time, where utterance time may or may not be a final subinterval (see Howe 2007).

2.1 Aspectual properties

The primary semantic feature distinguishing the PPC in Portuguese from other, typologically related *have*-perfects is the requirement that a plurality of events be distributed evenly over an interval. In the case of non-stative eventualities, the distribution occurs via event iteration. Recall that in (1), the PPC with the achievement verb *chegar* 'arrive' was incompatible with a one-time event interpretation. For examples (8) and (9) below, both cases refer to an unbounded plurality of blossoming events, where the number of iterations is undetermined. These events are distributed over the relevant time interval, with a left boundary that is located before utterance time and a right boundary that follows utterance time. Thus, utterance time is included in the interval of evaluation. The difference between the two is that (8) denotes a plurality of blossomings with one single participant, *a árvore* 'the tree' (i.e. the same tree blossoming at multiple, non-overlapping times), whereas in (9) there are multiple participants in multiple blossoming events. Thus, (8) is not true if the tree blossomed only once, say in the previous spring, and (9) cannot be true if there are multiple blossomings of different trees that occur once and have the same run time. In sum, it is not enough to simply have a "plurality" of events; these events must also be distributed along the time interval of which the predicate holds.

(8) A   árvore   tem   florido.
     the   tree   have. 3SG   blossom.PPART
     'The tree has been blooming.'

(9) As   árvores   têm   florido.
     the   trees   have.3PL   blossom.PPART
     'The trees have been blooming.'

We also observe iteration of events with complex telic events, as in (10). With this aspectual class, what is iterated is not an eventuality that has reached its completion, which for (10) would be an eventuality of reading the whole book. Rather, the PPC contributes an imperfective interpretation: (10) has an intermittent reading in which subparts of the same book were read on

different occasions—i.e. a plurality of sub-events of the same type (*reading from the book*).[7] Here we follow Smith (1997) in assuming that, for imperfective aspect, the eventuality denoted by the predicate is evaluated as a superinterval of the interval of evaluation (i.e. the interval of evaluation is contained within the temporal run time of the eventuality).

(10)   a.   A Maria   tem   lido   *As   vinhas   da   ira*,
              the Maria have. 3SG   read.PPART   the   grapes   of   wrath
              mas   ainda   não   acabou.
              but   yet   not   finish.PST3SG
              'Maria has been reading *The Grapes of Wrath*, but she hasn't finished it yet.'

       b.   A Maria   tem   lido   *As   vinhas   da   ira*
              the Maria have. 3SG   read.PPART   the   grapes   of   wrath
              (desde   o   mês   passado).
              since   the month   past
              'Maria has been reading (parts of) *The Grapes of Wrath* (since last month).'

The imperfective aspectual value of the Portuguese PPC can be shown by comparing (10) above with the imperfective aspectual periphrasis in (11) and the past perfective form in (12). The imperfective periphrastic form with *andar a* + Infinitive in (11a) does not entail a completed book-reading event, similar to the PPC in (10a).[8] The perfective past form in (12a), however, in an out-of-the-blue context, does carry this entailment. Both the PPC and the imperfective past forms are compatible with adverbials that indicate duration— e.g. *desde o mês passado* 'since last month' as in (10b) and (11b). These adverbials cannot cooccur with perfective forms, as shown in (12b).

(11)   a.   A Maria   anda   a   ler   *As vinhas da ira*
              the Maria walk. 3SG   to   read.INF   the grapes of wrath
              mas   ainda   não   acabou.
              but   yet   not   finish.PST3SG
              'Maria is currently reading *The Grapes of Wrath*, but she hasn't finished it yet.'

---

7   This is reminiscent of Van Geenhoven's observation about the sentence *John was eating a fish*: "Here, the pluractional operator corresponding to imperfective aspect creates a plurality of eatings which each involve a part of an object. Imperfective aspect thus triggers a partitive interpretation of the accomplishment's complement." (Van Geenhoven 2005:118).

8   It can be argued that the intermittent reading for example (10) is the preferred reading due not only to semantic factors but also to pragmatic ones. While it is certainly possible to have repeated instances during which the entire book is read, this reading is marked pragmatically due to the typical length of a book and the recency implications associated with the PPC.

b. A Maria anda   a   ler   *As vinhas da ira*
    the Maria walk. 3SG to   read.INF   the grapes of wrath
    (desde   o mês   passado).
    since   the month past
    'Maria is currently reading *The Grapes of Wrath* (since last month).'

(12) a. ??A   Maria leu   *As   vinhas da ira*
         the   Maria read.PST the grapes of wrath
         mas   ainda não   acabou.
         but   yet   not   finish.PST3SG
         '??Maria read *The Grapes of Wrath*, but she hasn't finished it yet.'

    b. A Maria   leu   *As   vinhas   da ira*
        the Maria   read.PST3SG the   grapes   of wrath
        (*desde o mês   passado).
        since   the month past
        'Maria read *The Grapes of Wrath* (*since last month).'

With stative predicates, both iterative and durative interpretations[9] are available, as shown in (13). As is typical with perfects with stative predicates (see Dowty 1979, among others), there are multiple readings available for (13): one in which there are iterated states of Pedro being sick which alternate with states of Pedro not being sick during the relevant time interval (analogous to examples 8, 9, and 10), and another that is durative—i.e. refers to only one state of illness that initiated in the past and continues without interruption up to, and possibly after, utterance time. The schemata in (10′) and (13′) below represent the types of readings described for examples (10) and (13). The schema in (10′) depicts the multiple event reading available for both stative and non-stative predicates. The schema in (13′) represents the durative interpretation available with stative predicates. In (10′) and (13′), (i) *e* is an eventuality of the type denoted by the predicate, (ii) *IEval* is the interval of evaluation, (iii) LB and RB are the left and right boundaries, respectively, of *IEval*, (iv) $\tau(e)$ is the total run time of the eventuality, and (v) UT is utterance time.

(13) O   Pedro   tem   estado   doente
     the Pedro   have. 3SG be.PPART   sick
     'Pedro has been sick.'

---

9 Here we are departing from the current literature on the Portuguese PPC, which either does not address the availability of durative readings (cf. Schmitt 2001) or argues that they are not available in all varieties of Portuguese (cf. Cabredo Hofherr, Laca & de Carvalho 2010).

(10′) Multiple Event/Pluractional Reading:
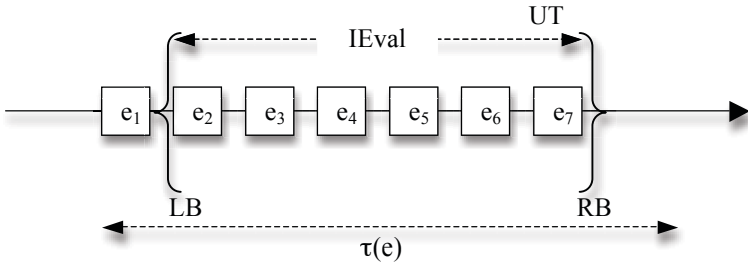
(13′) Durative Reading:
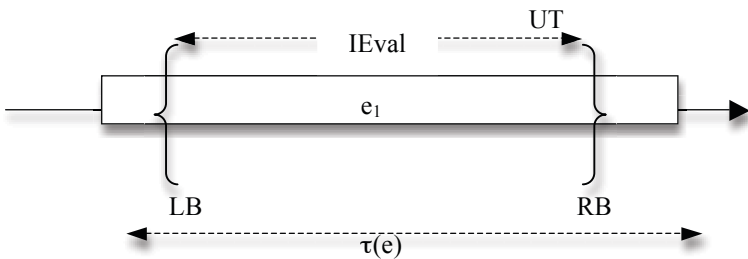
The schema in (10′) shows the aspectual requirement that iterated even-
tualities be distributed as regular and discrete repetitions throughout the in-
terval of evaluation (noted by Cabredo Hofherr, Laca & de Carvalho 2010 as
the requirement for discontinuity and regularity). Our diachronic analysis will
illustrate that this aspectual property is predictable from the proposed vector
of semantic change: the requirement on temporal distribution observed in
synchrony arises in diachrony in the interaction between the interpretation of
the verbal predicate and nominal quantification in its complements.

2.2. Temporal properties

Two main properties characterize the temporal semantics of the PPC in Por-
tuguese. First, the interval of evaluation for the PPC must include utterance
time (Campos 1986, Cabredo Hofherr, Laca & de Carvalho 2010). This
feature is typical among perfects cross-linguistically and accounts for the
incompatibility of the PPC with adverbials that exclude utterance time (see
Klein's 1992 discussion of the "Present Perfect Puzzle"). Thus, in (14), *até
ontem* 'until yesterday' cannot co-occur with the PPC because it places the
right boundary of the interval of evaluation prior to utterance time.

(14) Até agora / #Até ontem, a Ana tem viajado sozinha.
'Until now / #Until yesterday, Ana has been traveling alone.'

The location of the left boundary is also restricted in a PPC, though not in the same manner as the right boundary. In example (15), the incompatibility with *desde ontem* 'since yesterday' arises pragmatically as an indirect result of the iteration of events required by the aspectual profile of the PPC. In order for an interval of evaluation to felicitously contain multiple instances of an iterated event, that interval must be sufficiently extended so as to allow for this iteration, where the required "sufficient" extension is determined on the basis of world knowledge. Multiple (and hence distinct) traveling events cannot, under normal conditions, occur in an interval beginning only one day prior to utterance time.

Campos observes that the proximity between the left boundary of the interval of evaluation of the PPC and the utterance time is not part of the semantics of this construction, offering example (16) as evidence (taken from Campos 1986: 41, example 12).

(15) Desde sempre/ #Desde ontem, a Ana **tem viajado** sozinha.
'Since always/ #Since yesterday, Ana has been traveling alone.'

(16) A língua falada no Brasil **tem evoluído** muito desde que os portugueses ali chegaram no século XVI.
'The language spoken in Brazil **has evolved** a lot since the Portuguese arrived there in the 16th century.'

The temporal characteristics of the PPC discussed here are largely consistent with those of the resultative source construction (discussed below), especially as they relate to utterance time, which must be included in the interval of evaluation of the PPC. The most important distinction between the PPC and the resultative construction is that while the denotation of the latter, a resultant state, is evaluated relative to a point in time (utterance time), the denotation of the PPC (iterated eventualities) can only be evaluated with respect to a time interval. The interval of evaluation of a PPC includes the utterance time and must be a sufficiently extended time interval that allows for the iterated eventualities denoted by the predicate to hold.

3. The diachronic picture

At least until the 16th century, both the verbs *ter* (from Latin *tenēre*) and *haver* (from Latin *habēre*) occurred in the periphrastic construction with the

Past Participle in Portuguese.[10] According to Wigger (2004:178), the overall frequencies of *haver* + Past Participle and *ter* + Past Participle were roughly equivalent in the 13th and 14th centuries. The subsequent centuries saw a steady decline of *haver* + Past Participle, so much so that by the 17th and 18th centuries *ter* is found almost categorically in collocations with a Past Participle (Wigger 2004:178). For this reason, our analysis focuses on data from the 16th century so that we can target the process of change. Eventually, *ter* became the auxiliary of the PPC. Note that in contemporary Portuguese the alternation between *ter* and *haver* can be marginally found in the Past Perfect, depending on register (*tinha saído/ havia saído*) but not in the Present Perfect, where the use of *haver* is ruled out (*tem saído/ *há saído*).

The lexical semantics of *ter* (originally meaning 'to obtain, to hold') has been proposed as a catalyzing factor in explaining the semantic properties of the Portuguese PPC within Romance (see, e.g., Giorgi and Pianesi 1997).[11] While we shall not account for the iterative interpretation of the Portuguese PPC as a function of the lexical semantics of *ter*, we will argue that the choice of *ter* as the auxiliary in the PPC played a role in the semantic change undergone by this form.[12] A study of the constructions *ter* + Past Participle and *haver* + Past Participle in texts of the 13th century reveals that *ter* tended to occur more often in the resultative construction than *haver* (Cardoso and Pereira 2003). In the following, we introduce this construction within the periphrastic forms with *ter* + Past Participle. We will focus on the ambiguity triggered by certain collocations of one of these constructions in diachrony.

3.1. Two constructions with *ter*

To begin, it is necessary to distinguish two constructions with *ter* + Past Participle found in synchrony in Portuguese (and in other Romance languages,

---

[10] We are excluding from our domain of inquiry the verb *ser* 'to be'*,* which could also occur in a periphrasis with the Past Participle in Portuguese.

[11] Viotti (1998:44) notes that in Vulgar Latin *habēre* was already significantly desemanticized, a process which is reflected in the distribution of *haver* as early as in the 10th century. Consequently, *haver* no longer assigned thematic roles, either to agents or patients, and collocated in generic and existential constructions (see Mattos & Silva 1991, Ribeiro 1993, and Wigger 2004). The verb *ter* undergoes a later process of desemanticization and subsequently occurs in competition with *haver* in the periphrastic construction with the Past Participle.

[12] Cabredo Hofherr, Laca & de Carvalho (2010) argue that the effect of auxiliary selection in the semantics of the PPC is "indirect" and concerns its functional opposition with the resultative construction.

like Spanish and Galician), the resultative construction[13] and the PPC, exemplified in (17) and (18), respectively.

(17) Tenho   a   porta   fechada.
      have. 3SG   the door.**FSG** closed.**FSG**
      'I have the door closed.'

(18) Tenho   fechado   a   porta.
      have. 3SG   close.PPART.**MSG** the   door.**FSG**
      'I have been closing the door.'

In (17), the participial adjective *fechada* agrees in gender and number with the NP *a porta*, and the word order is [*ter* NP PPART]. In (18), an instance of the Portuguese PPC, the word order is [*ter* PPART NP] and there is no agreement between the direct object of the verb and the past participle, regardless of the position of the direct object with respect to the PPC form.[14] In (17), the NP is the direct object of the verb *ter* and *fechada* is a secondary predicate modifying the complement of the verb. This periphrasis formed with the verb *ter* has its roots in the resultative construction which is considered to be the origin of the Present Perfect in the Romance languages, exemplified in (19), from Salvi (1987: 226):

(19) habeo   epistul-am   script-am   (Latin)
      have.1SG   letter-FSG:ACC   written-FSG:ACC
      'I have a letter written / I have written a letter.'

This construction, found as early as in Pre-Classical Latin texts, displayed the following properties: (i) the verb *habeo* is a main verb with a full meaning of possession, (ii) the past participle *scriptam* has a predicative function and is a secondary predicate of the direct object, displaying the behavior of an adjective, (iii) there is no obligatory coindexation between the subject of *habeo* (in (19), the speaker) and the logical subject of the participle (i.e. in (19) the letter that is in possession of the speaker may or may not have been written by her/him), and (iv) this construction was restricted to past participles of telic verbs. The structure assumed for this construction is that of a small clause, given in (19′):

---

[13] Note that the small clause "resultative" construction in Romance discussed in section 3.1 is not the same as the construction in English discussed by Dowty (1979) and Williams (2008)—e.g. *Al pounded the cutlet flat.* (Williams 2008:5).

[14] In contemporary Portuguese, word order is a reliable criterion to distinguish the two constructions. In the case of the PPC, there may be interpolation of adverbs like *lá* or *até*, but not of a complement NP.

(19′) [$_{VP}$ *habeo* [$_{A'''}$ NP A″]]   (Salvi 1987: 228)

Thus, (19) can be glossed as 'I own a written letter.' Accordingly, the resulta-
tive construction exemplified in (17) and the PPC in (18) have different en-
tailments. The resultative construction denotes a state that holds at utterance
time, whereas the PPC denotes an eventuality that is distributed over a time
interval right-bounded by utterance time but which may or may not be true at
utterance time,[15] as shown by the contrast between (20a) and (21a). Hence,
the resultative construction accepts modification by an adverbial that refers to
utterance time (or an extended present), whereas the PPC may only co-occur
with an adverbial that introduces a time interval (cf. (20b) vs (21b)).

(20) a. ??Tenho a porta fechada, mas a porta não está fechada.
          ?? 'I have the door closed, but the door is not closed.'
      b. Agora tenho a porta fechada.
          'Now I have the door closed.'

(21) a. Tenho fechado a porta, mas a porta não está fechada.
          'I have been closing the door, but the door is not closed (now).'
      b. Até agora tenho fechado a porta.
   'Up till now I have been closing the door.'

Compare the schematic representation of the interpretation of the resultative
construction, given below as (20′), with the one provided in (10′), which can
also depict the PPC in (21).

———————

[15] Peres (1996:36) considers the location of the event with respect to utterance time
      to be context-dependent, allowing for the possibility that an eventuality denoted by
      a PPC may not hold at utterance time. Consider (i) and (ii):

(i)   O Paulo tem estado muito doente. Não sei se agora já estará recuperado,
      porque não falo com ele há dois dias. [undetermined]
      'Paulo has been very sick. I don't know if he has already recovered because
      I haven't spoken with him in two days.'
(ii) O Paulo tem estado muito doente. Olha como está pálido.
      [includes the utterance time]
      'Paulo has been very sick. Look how pale he is.'

(20′) Resultative
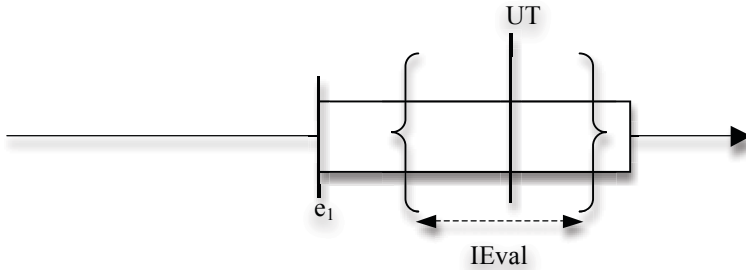
The resultative construction is aspectually stative and hence contributes no entailment of a prior event (although one may infer the existence of an event yielding the resultant state). For this reason, it is neither compatible with instrumental phrases (e.g. *com o pé* 'with my foot') nor with adverbials that modify an eventive predication (e.g. *rapidamente* 'quickly'), as in (22a). The PPC, on the other hand, may occur with such modifiers, as in (22b):

(22) a. ??Tenho a porta   fechada com cuidado / com o pé /
          'I have   the door   closed   carefully /   with my foot /
          rapidamente / frequentemente.
          quickly /   frequently.'

      b. Tenho fechado a porta   com cuidado / com o pé /
          'I have closed the door   carefully /   with my foot /
          rapidamente / frequentemente.
          quickly /   frequently.'

In contemporary Portuguese, there is also a difference in the participial forms that may occur in each of these constructions. For verbs that allow a weak and a strong participle like *acender* 'to light' (cf. Nunes 1989, Maia 1986), e.g. *acendido* and *aceso*, respectively, the former occurs in the PPC and the latter in the resultative construction:

(23) a. Tenho   acendido/ *aceso   velas.
          I have lit_1.msg / lit_2.msg candles
          'I have been lighting candles.'

      b. Tenho   a vela   acesa/* acendida.
          I have   the candle.f lit_2.fsg / lit_1.fsg
          'I have the candle lit.'

We will return to these properties as we analyze the emergence of the Portuguese PPC.

3.2. Collocational tendencies of *ter* + Past Participle

An analysis of the periphrases of *ter* + Past Participle in the corpus data from the 16th century reveals three distinguishable patterns:

1. *Ter* + Participial Adjective (referred to as STRUCTURALLY RESULTATIVE in what follows): there is overt agreement between the complement NP and the past participle (the participle is a secondary predicate of the direct object), as in (17);

2. STRUCTURALLY PERFECT: there is overt non-agreement between the complement NP and the past participle (for transitive verbs, as in 18); and

3. STRUCTURALLY AMBIGUOUS: both the NP complement and the past participle are [MSG], so it is not possible to determine on morphosyntactic grounds whether the periphrasis is an instance of the resultative construction or an instance of the Present Perfect, as in (27) below.

Despite the fact that in synchrony the resultative construction displays the order [*ter* NP PPART], word order was not used as a discriminating criterion in the analysis of the corpus data because it has proven not to be a reliable criterion in previous diachronic stages of Portuguese (cf. Wigger 2004, Cardoso & Pereira 2003), as shown by some of the examples below. Besides the agreement criterion, it is possible to identify other distributional facts that relate to the syntactic properties of the resultative construction. In (24), the two participial adjectives *cerrada* and *selada* are coordinated with a prepositional phrase which predicates a property of the argument *a carta* 'the letter'. Crucially, a coordination structure of this type would be anomalous with the PPC.

(24) Vejo…que **temos** a carta **cerrada**, **selada** e com sobre escrito
       (TBCHP, 16th century)
       'I see that we **have** the letter **closed**, **sealed** and inside an envelope.'

Evidence for treating these examples as instances of the resultative construction comes from the predicative function of the participle, as attested by its syntactic behavior. In (25), the past participle behaves as an adjective, since it may undergo degree modification (*tão dilatada* 'so much expanded').

(25) os Padres da Companhia de Jesus, que nelas **tem tão dilatada** a fé de Cristo
       (TBCHP, 16th century)
       'the Priests of the Company of Jesus, who **have** the faith in Christ so much **expanded** [in the provinces of the Empire].'

Note that in (25) the NP complement *a fé* occurs after the participle and yet we find the properties of the resultative construction, thus supporting the assumption that at this diachronic stage word order is not a reliable criterion for discriminating the construction type (see Cardoso & Pereira 2003).

The second type of pattern identified above is exemplified in (26). Here, there is no agreement between the past participle *amostrado* 'demonstrated', which is [MSG], and the NP *muita amizade* 'much friendship', headed by a noun that is [FSG].

> (26) e pela muita amizade que **tenho amostrado** a el Rey de França
> (TBCHP, 16th century)
> 'and for all the friendship that I **have** repeatedly **demonstrated** to the King
> of France'

The presence of a recipient argument (*a el Rey de França* 'to the King of France') is also a formal test to identify the eventive interpretation of the *ter* + Past Participle form. The resultative construction, which is aspectually stative, would not be compatible with such an argument.

Finally, (27) shows a structurally ambiguous case: the head of the direct object NP *nome* 'name' is [MSG], and the participle displays the *-o* ending. On morphosyntactic grounds, (27) could either be an instance of the resultative construction or of the PPC.[16]

> (27) e o nome deste soldado também o tempo **tem gastado**, como o tem a
> outras muitas cousas bem dignas de memória   (TBCHP, 16th century)
> 'and the time **has** also **eroded** the name of this soldier, as has been
> the case with many other things well worth remembering'

The structural ambiguity exemplified in (27) will be an important component of the process of semantic change, which, in our proposal, leads to the iterative meaning of the Portuguese PPC. However, we will claim that the contexts in which semantic change was triggered must display yet another type of ambiguity, semantic ambiguity, described in the next section.

---

[16] As one reviewer points out, the verb *gastar* 'to spend/to erode' in contemporary Portuguese has both a weak and a strong, or "truncated" (Nunes 1989: 318, Lindsay 1894: 543) form of the past participle, *gastado* (as in example 27) and *gasto*, respectively. In synchrony, the former occurs in compound tenses and cannot have an adjectival use, while the latter is limited to adjectival contexts, including the resultative construction (e.g., *A placa tem o nome gasto* 'The sign has the name worn out') and the passive voice. Before the 18th century, however, only the form *gastado* was available, further corroborating our observation about the potential ambiguity of examples like (27). See Bosque (1990) for a discussion of "perfective adjectives" of the type represented by *gasto*.

4.   The proposal: Mechanisms for change

4.1. Contexts of Semantic Change

We propose that the contexts inducing the semantic change undergone by the Portuguese PPC constitute a subset of the examples that instantiate pattern 3 above (STRUCTURALLY AMBIGUOUS). This subset is formed by examples with transitive verbs with a direct object that is [MSG] but semantically contributes a plural interpretation. We argue that this plural interpretation arises when the direct object contains either a universal quantifier or a mass noun.

   What is crucial about these examples is that they present two types of ambiguity. First, they are ambiguous on structural grounds, since the direct object is syntactically [MSG] and the past participle displays a [MSG] ending. That is, from their morphosyntactic properties it is not possible to determine whether they are instances of the resultative construction or if they are instances of the PPC. In the former case, the past participle is analyzed as a predicate of the nominal complement of the verb and agrees with it. In the latter case, there is no agreement, and auxiliary verb and participle constitute a morphosyntactic unit. The examples conforming to this pattern are ambiguous due to the reanalysis permitted by their structural properties.

   Second, they are ambiguous on semantic grounds, as the semantic plurality of the internal argument of the verb triggers a plural interpretation of the eventuality described by the verb. If an example is interpreted as the resultative construction, it denotes a state that holds at utterance time and is true of multiple participants. On the other hand, if an example is interpreted as the PPC, it denotes a series of (multiple, distinct) events leading to the resultant state. Each of the events corresponds to one of the participants affected by the eventuality. The driving assumption of our proposal is that this ambiguity arises VP-internally, i.e. plurality in the verbal domain is triggered by semantic plurality of the internal argument of the verb.

   The two types of ambiguity are exemplified in (28). The morphosyntactic ambiguity between the resultative construction and the PPC arises via [MSG] agreement between the participle (*escrito*) and the antecedent of the relative pronoun, *tudo* 'everything'. The semantic ambiguity is triggered by the meaning of this antecedent, which is a universal quantifier. The *wh*-phrase here is the nominal complement of the verb *escrever* 'to write'.

   (28)   em tudo o que **escrito tenho**, o tenho mizclado   (TBCHP, 16th century)
          'in everything that I **have written**, I have mentioned it (the decorum)'

Under a resultative interpretation, (28) denotes a set of written works in which the issue of 'decorum' is mentioned. It can be inferred that this set of works is a result of either one or multiple writing events by the author. Alter-

natively, under the PPC interpretation, (28) denotes multiple events of writing within a time interval, such that in all the events the author mentioned the issue of 'decorum'. The interpretation inducing temporal distribution of the writing events (i.e. plurality in the event domain) is favored over a single-event interpretation, since presumably the same author could not have written all his works on a single occasion. The ambiguity here consists of the possibility of universal quantification over written works versus quantification over writing events.

We claim that the resultative construction is the historical precursor of the PPC in Portuguese. Note that the emergence of the iterative interpretation requires a stage at which the construction *ter* + Past Participle entails the prior occurrence of the event denoted by the verb, as the PPC in contemporary Portuguese denotes regular *event iteration* over a time interval. A semantically plural object triggers a plural interpretation of the eventuality denoted by the verb also when it is not possible to differentiate the participants affected by the eventuality. In fact, this is true of many corpora examples from the 16th century, like (28). This semantic feature of the direct object favors the ambiguity between: (i) an entailment of existence of a single event and (ii) an entailment of existence of plural events whose cardinality is undetermined. As noted by Cusic (1981), certain types of nominal complements may lead to *diffuseness* and *multiplicity* at the event level, i.e. semantic plurality in the nominal domain has a bearing on event individuation. We argue that in the types of contexts described, the implications resulting from event individuation eventually led to semantic change, resulting in the present-day aspectual properties of the PPC.

From a semantic point of view, two features in the nominal domain contributed to induce plurality in the verbal domain: (i) the nominal complement of the verb often contains an indefinite pronoun (e.g. *tudo, pouco*) that may have either a singular or a plural referent, or (ii) the nominal complement of the verb contains a universal quantifier or a mass noun, inducing a distributive interpretation. Following Schein (1993, 2003), we assume that distributivity over individuals is mediated by distributivity over subevents; in other words, distributive quantification requires concurrent quantification over events. This interaction between nominal and event quantification plays a role in the emergence of the pluractional meaning in the diachrony of the Portuguese PPC.

In sum, on our analysis, nominal quantification involving the direct object of the verb has a bearing on temporal distribution, inducing a change in the aspectual properties of the PPC. We assume that the nominal properties that play a role in the semantic change undergone by the PPC are found in the direct object, which is in line with the "ergative-like" pattern found in the literature on pluractionality. Cross-linguistically, the arguments of the verb that can be shown to systematically interact with pluractional operators are

subjects of intransitive verbs and objects of transitive verbs (see Cusic 1981, Newman 1990).

4.2. Onset contexts

Before turning to the analysis of specific examples from the corpora, we want to discuss briefly the role that context and ambiguity play in semantic change. The cases of ambiguity discussed in the previous sections represent "onset contexts"—contexts in which an item can be understood as having "older" and "newer" uses (Eckardt 2006:42). For our purposes, the older meaning of the *ter* + Participle construction is the resultative meaning (with the concomitant resultant state entailment) and the newer meaning is the pluractional interpretation.

The transition between different stages of meaning has been argued to occur as a result of inference on the part of the speaker who seeks to enhance the expressive content of an item beyond its conventional meaning, i.e. through a process of pragmatic enrichment (Traugott and Dasher 2001, Heine 2002, Diewald 2002). However, Eckardt argues that "[m]ore than mere pragmatic inference is required in order to force a construction's meaning to shift" (2006:53). On her view, inferential (i.e. pragmatic) tendencies alone do not explain how and when an item will come to take on a new meaning (or meanings) in a given context; there must also be accompanying structural and semantic ambiguities that both allow and constrain the processes of inference. The onset contexts for the emergence of pluractional meaning with the Portuguese *ter* + Past Participle construction, we argue, are only those that satisfy the syntactic and semantic criteria detailed in the previous section. An analysis based only on the conventionalization of possible pragmatic inferences associated with the *ter* construction would not distinguish the pattern of semantic change exhibited in Portuguese from those of other Romance languages with similar structures.[17]

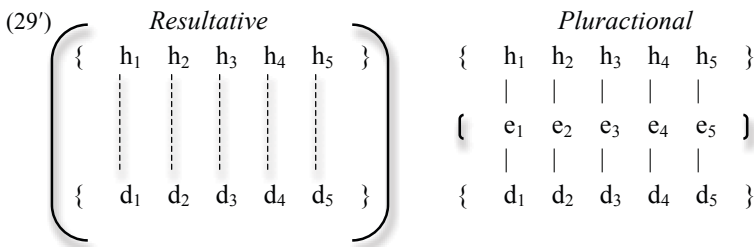### 4.3. Nominal quantification and temporal distribution

We turn now to the instances of onset contexts for the shift from resultative to pluractional meaning. There are two necessary components of ambiguity in these cases. One is associated with the morphologically [MSG] participle

---

[17] Indeed, Spanish displays a resultative construction with *tener* (< *tenēre*), e.g. *Tengo todos los libros leídos* 'I have all of the books read' and a Present Perfect with *haber* that does not require an iterative interpretation. See Harre (1991) for a detailed discussion of the *tener* construction in Spanish.

and the other is associated with the semantics of the nominal complement. This is exemplified in (29). In addition to the structural ambiguity (i.e. *cada hospital* MSG 'each hospital' and *provido* MSG 'granted'), we find a universal quantifier (*cada* 'each') that distributes a set of physicians over a set of hospitals (where the terms "hospital" and "physician" should not be taken literally, since the text builds on the metaphor of "spiritual health"):

(29)   **tenho provido** cada hospital de seu físico, que são os abades, retores, vigários e curas (TBCHP, 16th century)
'I **have granted** each hospital with a physician, who are the abbots, rectors, vicars, and priests'

The schema in (29′) depicts the ambiguity between the two interpretations of (29). Here, h_n is a hospital belonging to a set of hospitals, d_n is a doctor, and e_n is the event of assigning a doctor to a hospital. The square brackets represent the eventualities whose truth is evaluated for each case. Under the resultative reading, it must be the case that each hospital have a doctor assigned to it where the set of hospitals is exhausted. From this stative interpretation, one may infer a mapping between each hospital-doctor pair and an assignment (sub)event, yielding a set of assignments of the same type. Under the pluractional reading, it must be the case that there are multiple sub-events resulting in hospital-doctor mappings. The change in the bracketing between the resultative and the pluractional interpretations is meant to capture the semantic change. For the resultative interpretation, the relevant ingredients are the resultant hospital-doctor assignments, whereas the pluractional use requires that multiple distinct events of hospital-doctor assignments have occurred.

(29′)

$$
\text{Resultative} \qquad\qquad\qquad \text{Pluractional}
$$

$$
\begin{bmatrix}
\{ \ h_1 \quad h_2 \quad h_3 \quad h_4 \quad h_5 \ \} \\
\phantom{\{} \vdots \quad\; \vdots \quad\; \vdots \quad\; \vdots \quad\; \vdots \\
\{ \ d_1 \quad d_2 \quad d_3 \quad d_4 \quad d_5 \ \}
\end{bmatrix}
\qquad
\begin{array}{c}
\{ \ h_1 \quad h_2 \quad h_3 \quad h_4 \quad h_5 \ \} \\
\mid \quad\; \mid \quad\; \mid \quad\; \mid \quad\; \mid \\
[\ e_1 \quad e_2 \quad e_3 \quad e_4 \quad e_5 \ ] \\
\mid \quad\; \mid \quad\; \mid \quad\; \mid \quad\; \mid \\
\{ \ d_1 \quad d_2 \quad d_3 \quad d_4 \quad d_5 \ \}
\end{array}
$$

The hospital-doctor assignments could have been achieved either through a single event (e.g. through an event of signing a letter) or through multiple temporally-sequenced events, each pertaining to a different hospital-doctor pair. Whereas in this case both explanations seem equally plausible, in other examples the plural event interpretation seems more appropriate on pragmatic grounds (if, for instance, the same individual could not have performed mul-

tiple actions of the same type simultaneously). We believe that this type of pragmatic factor may have played a role in supporting the contextual adequacy of the plural interpretation. However, our claim is that the ambiguity between the plural interpretation in the nominal domain and in the verbal domain is semantic, not pragmatic.

From a syntactic perspective, there are several factors favoring reanalysis where the complement of the verb is instantiated by a pronoun displaying [MSG] agreement, hence creating a morphosyntactic ambiguity between the resultative construction and the PPC. There are a number of cases in which the PPC occurs in a relative clause with a pronominal antecedent, with the relative pronoun preceding the PPC (as in (28) and (30) below). The word order in these tokens favors the analysis of the *ter* + Past Participle construction as a syntactic-semantic unit, suggesting the increased syntactic cohesion typical of verbal periphrases. In example (30) below, the NP *(n)este pouco* 'this little bit' is the antecedent of a relative clause headed by *que*. This surface structure allows for two distinct parses, one associated with the resultative construction, shown in (30′), and the other with the PPC, as in (30″).

(30)   D'aqui se póde conhecer que cousa he pintura e pintor neste pouco que
        tenho dito. (TBCHP, 16th century)
        'From here it can be known what painting and painter are, from this little bit
        that I **have said**.'

(30′)   Resultative:
        [$_{NP}$ este pouco [$_{COMP}$ que$_i$ [$_S$ [$_{NP}$ (eu)] [$_{VP}$ tenho [NP$_i$ [$_{AdjP}$ dito]]]]]]

(30″)   PPC:
        [$_{NP}$ este pouco [$_{COMP}$ que$_i$ [$_S$ [$_{NP}$ (eu)] [$_{VP}$ tenho dito [NP$_i$]]]]]

This type of syntactic indeterminacy contributes to reanalysis in the presence of semantic factors that induce ambiguity.

A crucial component of the semantic change we are analyzing is the entailment of a prior event yielding a resultant state. When the occurrence of the event denoted by the verb becomes part of the encoded meaning of the form, we expect to see an expansion in the aspectual classes of the verb phrases as well as other distributional facts ruled out in the stative resultative construction. This is exemplified in (31), where the factor inducing event plurality is the presence of the mass noun *contentamento*.[18] Mass noun

---

[18] An anonymous reviewer rightly pointed out that (31) could not have been inter-
      preted as an instance of the resultative construction given that in synchrony such
      an analysis is ruled out. We believe that this is due to the lexical semantics of the
      verb *receber* and not, as the reviewer suggested, to the nominal complement of the
      verb. Our point is precisely that (31) exemplifies the expansion of the *ter* + Past

complements adhering to the criteria for structural ambiguity (i.e. [MSG]) also
give rise to a multiple event interpretation:

> (31)   Eu **tenho recebido** tanto contentamento com vossas cartas, pelas quais tenho
> visto, e pelas obras sabido, como me tendes bem servido
> (TBCHP, 16th century)
> 'I **have received** so much satisfaction with your letters, by which I have
> seen, and by the works known, how you have served me well.'

The complement *tanto contentamento* 'so much satisfaction' in (31), though
morphologically singular, allows for an interpretation of multiple receiving
events, strengthened by the prepositional adjunct *com vossas cartas* 'with the
letters from you' which distributes the satisfaction-receiving events over
individual letters (cf. Schein 2003). Note that the presence of this prepositio-
nal phrase with an instrument role (*com vossas cartas*) confirms the emerging
eventive interpretation of the construction. Such an adjunct could not occur
with the aspectually stative resultative construction, as shown in section 3.1.
In (31) there is a potential ambiguity between a single event reading—i.e the
writer received several letters on a single occasion—and a multiple event
reading. In the latter, there is an incremental effect; the writer's degree of
satisfaction increases with each non-overlapping event of letter receiving.
Here, the mass noun allows for a similar distribution of participants over
eventualities as observed in example (29). In this case, the mapping of each
letter to a degree of *contentamento* induces a plurality of letter-receiving
events.[19] On the pluractional reading, the focus is on the repetition of letter-
receivings with the complement being interpreted as incrementally increased
with each iteration. Note that due to the homogeneity of mass nouns, each
part of *contentamento* is not distinct from another part; hence, on the plural
interpretation of the events, event individuation yields events that are all of
the same type (i.e. "satisfaction-receiving" events). This condition conforms
to the requirement on event iteration of the PPC in synchrony.

It is not surprising that a multiple event reading would be available given
the quantificational nature of the nominal modifiers in examples (28), (29),
(30), and (31) (i.e. *tudo, cada, pouco*, and *tanto*). Crucially, the semantics of
these quantifiers induces a distributive interpretation of the event denoted by
the verb with respect to the participants in the event but does not 'count' the

---

Participle construction to predicates that were not licensed by the resultative con-
struction.

[19]   One reviewer pointed out that nouns like *contentamento* are not simply mass nouns
but rather represent what Tovena (2001) refers to as an "intensive quantity" with
an inherent degree structure. We believe that this analysis is compatible with the
incremental interpretation of the example, which would favor, on our proposal, the
emergence of the multiple event meaning.

iterated events introduced by the pluractional reading, unlike cardinal expressions. The lack of adverbial modifiers expressing cardinality, as well as cardinalized NPs in subject position, is a property of the distribution of the PPC in contemporary Portuguese (recall (5), repeated here) . The corpus data suggest that this type of modification was never available.

(5)   A Ana tem chegado atrasada (*três vezes).
           'Ana has been arriving late (repeatedly) (*three times).'

With respect to modification with cardinal adverbials, we want to point out one crucial distinction between the diachronic collocational tendencies of the PPC in Portuguese and those of the Spanish *haber* Perfect (from Latin *habēre*). Thibault (2000:97) draws a comparison between the plural event meaning of the Portuguese PPC and the possibility of iterated events with the compound past in Spanish, which is claimed to be the required meaning in some Spanish dialects (e.g. Mexican Spanish, see Moreno de Alba 1978). In synchrony, the Portuguese PPC is not compatible with cardinal adverbials. For Mexican Spanish, however, the *haber* Perfect can co-occur with cardinal modification, as shown in (32).

(32)   Sí; he ido <u>dos ocasiones</u> [a su tierra]. (from Lope Blanch 1976)
         'Yes. I have gone <u>on two occasions</u> [to his hometown].'

Thibault presents historical data that illustrate the emergence of the so-called plural meaning of the Spanish *haber* Perfect as a function of frequent collocation with "indicadores iterativos" 'iterative indicators' like *dos vezes* 'two times' and *muchas vezes* 'many times' (Thibault 2000:98). Our analysis of the diachronic data from Portuguese revealed no instances of the *ter* + Past Participle construction co-occurring with these types of adverbials. In light of these distinct collocational patterns in diachrony, it is not surprising that the contemporary data from Portuguese, as in example (5), and Spanish, as in (32), display divergent semantic properties with respect to modification with cardinal adverbials. This observation provides some corroboration for our claim regarding the interaction between nominal and verbal plurality as the locus for semantic change and the subsequent semanticization of event plurality that is unique to the semantics of the PPC in contemporary Portuguese.

To summarize, the contexts described in the above examples represent a necessary condition for the shift from resultative to pluractional meaning. We have presented several factors pertaining to plurality in the nominal domain that play a role both in the mapping between the eventuality denoted by the participle and the time interval as well as in the process of event individuation. For example (29), the DO complement *cada hospital* 'each hospital' indicates a plurality of participants in an event and induces a distributive interpretation, resulting in the subsequent interpretation of multiple events. This

effect is also obtained in example (28) as as result of the meaning of the universal quantifer *tudo* 'everything'. Finally, the plural adjunct *com vossas cartas* 'with your letters' combines with the NP *tanto contentamento* 'so much satisfaction' in (31) to produce an incremental interpretation with the predicate *recebido* 'received'. These contexts are the relevant vectors of change that precipitate the transition from resultative to pluractional in the presence of morphosyntactic ambiguity.

In the 16th century TBCHP corpus, we observed several instances of *ter* + Past Participle that, despite adhering to our primary criterion for structural ambiguity (i.e. both the NP complement and the past participle are [MSG]), were ruled out as cases resulting in a possible multiple event reading. Such cases do not display the semantic properties that might favor the pluractional interpretation. Note that (33) would, on structural grounds, be a suitable candidate for an onset context for the semantic change undergone by the PPC.

(33) e **tem** um templo **alevantado** a êste ídolo, que se chama o Paraiso de Amida
       (TBCHP, 16th century)
       'and (they) **have** a temple **raised up** for this idol who is called Amida
       Paradise'

Nevertheless, the possibility of a plural event reading in (33) can be ruled out because of the number of the direct object and of the nature of the predicate *alevantar* 'to raise up/to erect', which, in an unmarked context, would not allow multiple instances of the same event. Thus, it is not simply structural ambiguity that allows for this transition but rather the possible interpretations licensed by the interaction between the verb *ter* and one of the pluralizing factors described above.

Finally, we have claimed that the source of plurality that gives rise to the pluractional meaning of the PPC in Portuguese is found in the interaction between the verbal complex *ter* + Past Participle and a direct object complement. Another possible catalyst for this trend might be the influence of a plural subject, which, like plural objects, can induce a multiple event reading. Thus, compare example (34a), which refers unambiguously to a single washing event, to (34b), which allows for either a single event reading (i.e. the collective reading) or a multiple event reading (i.e. the distributive reading). Moreover, if the indefinite complement in (34b) takes narrow scope, the presence of a plural subject would allow for a multiple event reading in which Peter, Paul, and Mary all wash different cars at the same time. In section 2.1, we demonstrated that a multiple, simultaneous event reading with a plural subject is not possible with the PPC in contemporary Portuguese; the multiple events must be distributed over the time interval and have non-overlapping run times (see example 9).

(34) a.   Peter washed a car.
      b.   [PL Peter, Paul, and Mary] washed a car.
      c.   Peter washed [PL some cars].

In comparison, example (34c) entails multiple car-washing events, under the assumption that any one person can only wash one car at time. Here we can see evidence for how object plurality might play a role in the process of event individuation that is not systematically required with plural subjects. Taking the resultative construction as the diachronic source of the PPC, the type of event plurality required by the PPC in synchrony (i.e. multiple events distributed without overlap over the relevant interval of evaluation) is only possible with a singular subject and plural objects, as shown in (35).

(35) O Pedro tem [PL os carros lavados].
       'Peter has the cars washed.'

4.4. Distribution of PPC predicates in diachrony

The predicates that occur with the Portuguese resultative construction in synchrony must be (i) telic and (ii) transitive. Analyses of the development of periphrastic past forms from resultative constructions in Romance frequently underscore the gradual expansion of these predicates to include both atelic and intransitive predicates (see Detges 2000, among others). What is particular to the Portuguese PPC is that the intransitive cases are accompanied by further semantic information that allows for the emergent pluractional meaning (see 39 below). As a further test case, we will also observe changes in the collocational patterns with the adverbial *até agora* 'until now', which can be used as a heuristic for the increased semanticization of the pluractional meaning of the PPC in diachrony.

   In the 16th century data, we observed only eight cases (3%) of stative predicates with *ter*. In the 18th century data, this number increases to 105 (21.3%), a result consistent with the general trends in expansion of semantic classes across periphrastic forms in Romance. Of the eight cases from the 16th century, almost all stative predicates are with verbs of cognition, as shown in example (36). Several studies have argued that the collocation of resultative constructions with stative verbs was an initial stage in the transition to becoming a periphrastic past (see e.g. Detges 2000). Analysis of the 18th century data, however, revealed a number of tokens in which non-cognition statives were attested, as in example (37).

(36)   quero nesta declarar o que **tenho** disto **entendido** e que queria que lá se
fizesse (TBCHP, 16th century)
'I want in this (letter) to declare what I **have understood** of this and what I
would like to be done there'

(37)   **tenho sido** vossa inimiga até o presente   (TBCHP, 18th century)
'I **have been** your enemy up till the present'

What is notable about the example in (37) is the availability of a durative
interpretation. In this case, the eventuality denoted by the stative predicate is
initiated in the past and continues, without interruption, into the present. This
reading is reinforced in example (37) by the boundary modifier *até ao
presente* 'until the present' which brings the right boundary of the interval at
which the eventuality holds up to utterance time. This reading of the PPC is
available in synchrony despite claims that stative predicates with the PPC are
also coerced into an iterative reading (cf. Schmitt 2001).

    Also evident in the data is the variable compatibility with achievements.
In synchrony, achievement verbs can only be used in the PPC if an iterative
interpretation is coerced. Thus, without a context that allows for multiple in-
stantiations of the eventuality, as provided in example (38) by the overt ad-
verbial modification with *muitas vezes* 'a lot', the PPC would be infelicitous.

(38)   O João tem chegado ao cimo do monte muitas vezes.
'João has been arriving at the top of the hill a lot (recently).'

Moreover, we would not expect in contemporary Portuguese to have intran-
sitive verbs occur with the resultative construction—e.g. **Tenho a carta
chegada* '*I have the letter arrived'. It seems then that we can use the co-
occurrence of these predicates with the PPC as a test for the expansion of the
semantic domain in diachrony. In addition, if these predicates do co-occur
with the PPC, we would only expect to find them in contexts for which an
interpretation of multiple events is clearly possible if not required. Observe
the following example:

(39)   que tal nome merecem os extremos a que o mundo **tem chegado** nesta
materia (TBCHP, 16th century)
'that such a name deserve the extremes that the world **has reached** with this
issue'

In example (39), we have selected a protypical achievement predicate—
chegar 'reach/arrive'—which must occur in a context that allows for the
eventuality to be repeated when used with the PPC in synchrony. This token
co-occurs with a pluralizing element—i.e. *os extremos* 'the extremes'—
allowing for compatibility with the emergent pluractional meaning of the *ter*
+ Past Participle periphrasis. In a separate survey of diachronic data from

Corpus do Português, we observed no examples of *ter* + {*chegado*/ *alcança-do*} attested before the 16th century, further corroborating the claim that the 15th and 16th centuries represent a crucial point in the development of the *ter* + Past Participle constructions (see Wigger 2004).

Finally, the resultative construction is incompatible with interval adverbials. The PPC, however, is acceptable with these types of modifiers. Compare the following with example (14) above.

(40)   #Tenho a carta escrita até agora.
         '#I have the letter written up till now.'

Therefore, we would expect that as the pluractional emerges we should see increased compatibility with this modifier. Of the uses of *até agora* in the 16th century data, all occur either with stative predicates or under the scope of negation—an ateliciizing context (see Smith 1997). For the 18th century, we expect to find *até agora* with a wider range of predicates as the meaning of the PPC becomes semanticized, generalizing across verb classes. As expected, *até agora* is attested with atelic or ateliciizing elements, such as a stative predicate, as in (41) or a plural object, as in (42). Crucially, these contexts are found across a variety of verb types—e.g. non-stative *visto* 'seen'.

(41)   Nem o Gabinete de Espanha **tem tido** até agora vigor
         (TBCHP, 18th century)
         'And the Spanish Office **has** not **had** the strength up till now'
(42)   as que **tendes visto** até agora. (TBCHP, 18th century)
         'those that you **have seen** up till now'

Taken together, the observations made in this section offer further evidence of the diachronic trajectory of the *ter* + Past Participle construction as it develops from a structure that indicates the resultant state of a past action to a marker of event plurality. We have argued that a transition of this type would be evidenced by specific changes in the compatibility of *ter* with different predicates, namely atelic and intransitive predicates. Our preliminary comparison of the 16th and 18th century TBCHP data supports this claim and provides evidence of the increased grammaticalization of pluractional meaning with the PPC. These results are consistent with the observation that, cross-linguistically, the diachronic change undergone by the resultative construction involves semantic widening, expanding the class of verbs with which this structure can occur (see Dahl and Hedin 2000:393).

5.   Conclusions

In this paper we have proposed an account of the interpretation of the Portuguese PPC by observing its diachronic development from the original resultative source construction (following Wigger 2004 and others). In contemporary Portuguese, the PPC, which takes the verb *ter* as an auxiliary, requires event plurality; its resultative *ter* counterpart does not. We conclude that at some point in the diachrony of the resultative construction, there was a shift in the meaning of the *ter* + Past Participle periphrasis that resulted in speakers using this form to make reference to a plurality of events. We have proposed a mechanism to account for this change: the pluractional meaning of the PPC emerges from transfer of semantic plurality in the nominal domain to the verbal domain. This transfer results in the interpretation of event plurality, which is subsequently semanticized, becoming part of the conventional meaning of the PPC. We have analyzed various cases in which nominal plurality due to universal quantification (examples 28 and 29) or to the meaning of a mass noun (example 31), is argued to derive from a complement of the verb. From a structural perspective, event plurality arises only in the cases in which reanalysis is possible, i.e. those cases in which morphosyntactic ambiguity licenses either a resultative construction or a PPC.

Given this confluence of factors, the interpretation and semanticization of event plurality can be viewed as emerging under a specific set of semantic and structural conditions. We have described these conditions as the onset contexts for this change. We follow Eckardt (2006) in assuming that analyses of language change can benefit from the rigors of formal semantic description, especially in the identification of the mechanisms that precipitate and transmit structural and semantic change. In the present analysis, we have defended this approach to modeling language change, using the interaction between the nominal and verbal domains as a test case. The success of this enterprise in the study of language change will be measured by the degree of explanatory precision that semantic analysis can offer.

References

Bosque, Ignacio (1990). "Sobre el aspecto en los adjectivos y en los participios." In: Ignacio Bosque (ed.): *Tiempo y aspecto en español*, 177–211. Madrid: Cátedra.

Cabredo Hofherr, Patricia, Brenda Laca, & Sandra de Carvalho (2010). "When *Perfect* means *Plural*: the Present Perfect in North-Eastern Brazilian Portuguese." In: Patricia Cabredo Hofherr & Brenda Laca, (eds) *Layers of Aspect*, 67–102. Stanford, CA: CSLI.

Campos, Maria Henriqueta C. (1986). "L'opposition du portugais Pretérito Perfeito Simples – Pretérito Perfeito Composto : un cas singulier dans l'ensemble des

langues romanes." *Morphosyntaxe des Langues Romanes. Actes du XVIIe Congrès International de Linguistique et Philologie Romanes (Aix-en-Provence)*, 411–422.

Cardoso, Adriana & Susana Pereira (2003). "Contributos para o estudo da emergência do tempo composto em Português." *Revista da ABRALIN*, vol. II, nº2, 159–181.

Comrie, Bernard (1976). *Aspect*. Cambridge: Cambridge University Press.

Cusic, David (1981). *Plurality and Aspect*. PhD Dissertation. Stanford.

Dahl, Östen & Eva Hedin (2000). "Current relevance and event reference." In Ö. Dahl (ed.) *Tense and aspect in the languages of Europe*, 386–401. Berlin and New York: Mouton de Gruyter.

Detges, Ulrich (2000). "Time and truth: The grammaticalization of resultatives and perfects within a theory of subjectification." *Studies in Language* 24:345–377.

Diewald, Gabriele (2002). "A model for relevant types of contexts in grammaticalization." In: I. Wischer & G. Diewald (eds) *New Reflections on Grammaticalization*, 103–120. Amsterdam: John Benjamins.

Dowty, David (1979). *Word Meaning and Montague Grammar*. Dordrecht: Reidel.

Eckardt, Regine (2006). *Meaning Change in Grammaticalization*. Oxford: Oxford University Press.

Giorgi, Alessandra & Fabio Pianesi (1997). *Tense and Aspect: From Semantics to Morphosyntax*. Oxford: Oxford University Press.

Harre, Catherine (1991). *Tener + Past Participle: A Case Study in Linguistic Description*. London: Routledge.

Heine, Bernd (2002). "On the role of context in grammaticalization." In: I. Wischer & G. Diewald (eds) *New Reflections on Grammaticalization*, 83–102. Amsterdam: John Benjamins.

Hopper, Paul & Elizabeth Traugott (1993). *Grammaticalization*. Cambridge: Cambridge University Press.

Howe, Chad (2007). "A Semantic/Pragmatic Analysis of Present Perfects in Peninsular Spanish" In: J. Cihlar, A. Franklin, D. Kaiser, & I. Kim-bara (eds) *Papers from the 39th Regional Meeting of the Chicago Linguistic Society*, 144–161.

Klein, Wolfgang (1992). "The Present Perfect 'Puzzle'." *Language* 68:525–552.

Lindsay, Wallace M. (1894). *The Latin Language*. Oxford: Clarendon Press.

Lope Blanch, Juan M. (1976). *El habla popular de México: materiales para su estudio*. México: UNAM.

Maia, Clarinda de Azevedo (1986). *História do Galego-Português: Estudo Linguístico da Galiza e do Noroeste de Portugal desde o século XIII ao XVI*. Lisboa: Fundação Calouste Gulbenkian & Instituto Nacional de Investigação Científica.

Mateus, Maria H. M. et al. (2003). *Gramática da Língua Portuguesa*. Lisboa: Caminho.

Mattos e Silva, Rosa V. (1991). "Caminhos de mudanças sintático-semânticas no português antigo." *Cadernos de Estudos Linguísticos* 20: 59–74.

Moreno de Alba, José (1978). *Valores de las formas verbales en el español de México*. México: UNAM.

Newman, Paul (1990). *Nominal and verbal plurality in Chadic*. Dordrecht: Foris.

Nishiyama, Atsuko & Jean-Pierre Koenig (2004). "What is a perfect state?" In: B. Schmeiser, V. Chand, A. Kelleher & A. Rodriguez (eds) *WCCFL 23 Proceedings*, 101–113. Somerville, MA: Cascadilla Press.

Nunes, José Joaquim (1989). *Compêndio de Gramática Histórica Portuguesa (Fonética e Morfologia)*. (9th ed.). Lisboa: Livraria Clássica Editora.

Peres, João (1996). "Sobre a semântica das construções perfectivas do Português." *Congresso Internacional sobre o Português* V. 2:33–58.

Ribeiro, Ilza (1993). "A formação dos tempos compostos: A evolução histórica das formas *ter*, *haver*, e *ser*." In: I. Roberts & M.A. Kato (eds) *Português brasileiro: Uma viagem diacrônica*, 343–86. Campinas, São Paulo: Editora da Unicamp.

Salvi, Giampaolo (1987). "Syntactic Restructuring in the Evolution of Romance Auxiliaries." In: M. Harris & P. Ramat (eds) *Historical Development of Auxiliaries*, 225–36. Amsterdam: Benjamins.

Schein, Barry (1993). *Plurals and Events*. Cambridge: MIT Press.

Schein, Barry (2003). "Adverbial, Descriptive Reciprocals." In: J. Hawthorne & D. Zimmerman (eds) *Language and Philosophical Linguistics*, 333–68. Malden, MA: Blackwell.

Schmitt, Cristina (2001). "Cross-linguistic variation and the Present Perfect: The case of Portuguese." *Natural Language and Linguistic Theory* 19:403–453.

Smith, Carlota (1997). *The Parameter of Aspect.* 2nd ed. Dordrecht: Kluwer.

Thibault, André (2000). *Perfecto simple y perfecto compuesto en español preclásico*. Tübingen: M.N. Verlag.

Tovena, Lucia M. (2001). "Distributional restrictions on negative determiners." In: K. Jaszczold & K. Turner (eds) *Meaning Through Language Contrast*, 3–28. Amersterdam/Philadelphia: John Benjamins.

Traugott, Elizabeth C. & Richard C. Dasher (2001). *Regularity in Semantic Change*. Cambridge: Cambridge University Press.

Van Geenhoven, Veerle (2004). "*For*-adverbials, frequentative aspect, and pluractionality." *Natural Language Semantics* 12:135–190.

Viotti, Evani (1998). "Uma história sobre *ter* e *haver*." *Cadernos de Estudos Linguísticos* 34:41–50.

Wigger, Lars-Georg (2004). *Die Entwicklungsgeschichte der romanischen Vergangenheitstempora am Beispiel des Pretérito Perfeito Composto im Portugiesischen*. PhD Dissertation. Universität Tübingen.

Williams, Alexander (2008). "Patients in Igbo and Mandarin." In: J. Dölling, T. Heyde-Zybatow, & M. Schäfer (eds) *Event Structures in Linguistic Form and Interpretation*, 3–30. Berlin/New York: Mouton de Gruyter.