Portuguese temporal expressions with *haver* and their Romance counterparts – Semantic interpretation and grammaticalization[1]

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1. Preliminary aspects

This paper analyses Portuguese temporal phrases that include the verb *haver* ('there be') and involve retrospective time measurement from an anchor point – for an analysis of comparable phrases, cf. e.g. Molinès (1989), Bras (1990), Bras & Molinès (1993), Asher *et al.* (1995),[2] or Móia (2000). The main focus is on grammaticalization issues, which – to my knowledge – have not been comprehensively discussed in the literature about this subtype of expressions.

I will start by observing two preliminary facts. First, the phrases under scrutiny have counterparts in many Romance languages, also with verbs, originating from two Latin predicates – *habēre* and *facĕre* – as shown in Table 1, and exemplified in sentences (1):[3]

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[2] The latter – referring back to Molinès (1989) and Bras & Molinès (1993) – state that '[...] [locating time adverbials] fall into [...] classes, depending on [...] whether or not the identification of the referent depends on the projection of a length of time on the temporal axis (from some given point). For example, for the adverbials *il y a 3 jours*, *3 jours avant Noël*, *depuis 3 jours* (3 days ago, 3 days after Christmas, for the last 3 days) the measure "3 days" is projected on the temporal axis.' (Asher *et al.* 1995: 109).

[3] (Informal) Brazilian Portuguese can also use *ter* ('to have'), a verb derived from the Latin predicate *tenēre*, in this type of phrases (cf. *o Pedro casou **tem** dois anos*), but I will not explore this possibility here.

	from Latin *habēre*	from Latin *facĕre*
Portuguese	*haver*	*fazer*
Spanish	—	*hacer*
Italian	—	*fare*
French	*y avoir*	*(ça/cela) faire*

Table 1. Romance verbs in temporal phrases involving retrospective measurement from an anchor point

(1)   Port.   O Pedro casou *há* dois anos.
      Port.   O Pedro casou *faz* dois anos.
      Sp.   Pedro se casó *hace* dos años.
      It.   Pedro si è sposato due anni *fa*.
      Fr.   Pedro s'est marié *il y a* deux ans.
      Fr.   *Ça fait* deux ans que Pedro s'est marié.[4]

Portuguese and French stand out in this group as they use verbs deriving from both predicates, though – as is clearly the case in Portuguese, with *haver* and *fazer* – they have striking grammatical differences. Germanic languages, as we can see in (2), use uninflected postpositional or prepositional elements in these constructions:[5]

(2)   Engl.   Paulo got married two years *ago*.
      Germ.   Paulo heiratete *vor* zwei Jahren.

Secondly, all these expressions – except apparently for Italian *fare* – are ambivalent and can mark two very distinct semantic values. I will describe them right away, focusing henceforth only on Portuguese *haver*.

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[4]   Apparently, expressions like *ça faire deux ans* strongly prefer the sentence-initial position followed by *que* (the same holding for *il y a deux ans* with a durational value, in sequences comparable to (3)). This type of construction is also possible for the Portuguese and Spanish counterparts: *há dois anos que*, *faz dois anos que*, *tem dois anos que* (BP), *hace dos años que*. Fernández (1999: 3170) clearly acknowledges, for Spanish, that these two types of structures – with and without *que* – are 'remarkably different' from a syntactic point of view. The Portuguese structures with *que* have some differences in linguistic behaviour, that I will not analyse here; for the sake of simplicity, I will henceforth concentrate only on the constructions without *que*.

[5]   Curiously, *ago* is a postpositional element also derived from a verb, namely a past participle – e.g. Huddleston & Pullum (2002: 632); interestingly, these authors note that '*ago* is of course no longer construed as a past participle, but how the construction should be analysed is unclear: it is syntactically highly exceptional'.

The first value is what I termed in previous work (cf. e.g. Móia 2006) time-anchored duration, that is, the duration atelic situations reach at given points of the time axis, typically a temporal perspective point (henceforth, TPpt). With this value, *haver*-phrases are the counterpart of English *for*-adverbials, possibly in combination with a deictic or anaphoric (desambiguating) phrase, like *now* – for a present TPpt – or *then* – for a non-present TPpt (for duration adjuncts in English cf. e.g. Bennett & Partee 1978, Mittwoch 1980, Kamp & Reyle 1993). Let us see an example with the utterance time as TPpt:[6]

(3)   O Pedro mora em Lisboa *há três meses* (*atrás).
       'the Pedro lives in Lisbon there-is three months (*behind)'

       [Pedro has been living in Lisbon for three months (now).]

As for the semantic interpretation of durational *haver*-phrases, it corresponds to the schema in (4) below (for a formal analysis within the Discourse Representation Theory, cf. Móia 2011a). In a nutshell, what this schema implies is that we need consider two eventualities: the atelic situation as a whole (ev, Pedro living in Lisbon), and the part of that situation that extends up to the temporal perspective point, i.e. the utterance time in (3) (ev′); the stated duration (X-TIME) affects only the sub-situation (extending to – or culminating at – the perspective point).

(4)
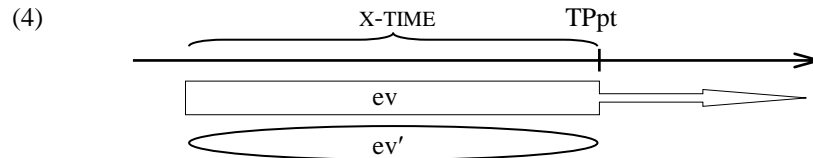
Note as well that, in a quite interesting construction, these duration *haver*-phrases may also occur in complement – rather than in adjunct – position, as in (5), with the predicate *durar* ('to last') – cf. Móia (2011a).

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[6]   Most examples in this paper will be given in three lines, containing: the Portuguese sentence, its gloss (inserted within single inverted commas), and its English translation.

(5) A guerra já dura *há dois anos* (*atrás).
     'the war already lasts there-is two years (*behind)'

     [The war has been going on for two years (now).]

The second value *haver*-phrases may have in Portuguese (illustrated in the first sentence of (1) above) is time-denotation / temporal location. In fact, *haver*-phrases may simply denote intervals that precede a given point of the time axis by a given amount of time, as shown in the following schema:

(6)
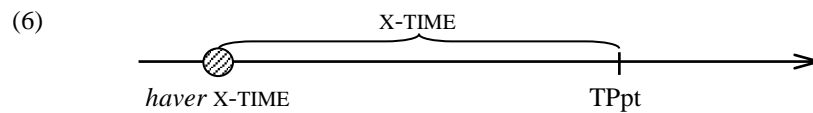
Typical examples are those in (7) and (8), involving a nominal (post-prepositional) position:

(7) O Pedro morou em Lisboa até *há dois anos* (atrás).
     'the Pedro lived in Lisbon until there-is two years (behind)'

     [Pedro lived in Lisbon until two years ago.]

(8) O problema data de *há dez anos* (atrás).
     'the problem dates to there-is ten years (behind)'

     [The problem dates back ten years.]

These *haver*-phrases may – with the same surface form – locate eventualities in time, when they occur in adverbial position (with an underlying covert locating preposition, I assume – cf. Móia 2000), as in (9) (or (1) above):

(9) O Pedro acabou o curso $\varnothing_{em}$ *há dois anos* (atrás).
     'the Pedro finished the course $\varnothing_{at}$ there-is two years (behind)'

     [Pedro graduated two years ago.]

Obviously, as observed before, in this time-denoting/location value, *haver*-phrases are the counterparts of very different English expressions: *ago*-adjuncts (normally, if a present TPpt is involved, as in the structures given here) or *before*-adverbials (in parallel structures, if a non-present TPpt is involved).

4

To end this preliminary section, I will just underline that durational and time-denoting/locating *haver*-phrases exhibit distinctive grammatical properties, which easily allow them to be distinguished, and normally preclude ambiguity. I will not go through all these differences in detail here, but will nevertheless underline that: (i) the latter may combine with a postpositional element *atrás* ('behind'), if measurement is made from the utterance time, whereas the first never combines with it; (ii) the latter may combine with any kind of situation – telic or atelic –, whereas the former only combine with descriptions of atelic situations (showing Aktionsart restrictions akin to those of other duration adjuncts); (iii) the latter typically combine with tenses involving anteriority to TPpt, such as perfective and pluperfective past and perfective future, whereas the former only combine with tenses involving overlapping to TPpt, such as present, imperfective past and imperfective future (cf. Móia 1999, for more details).

2. Verbal and non-verbal properties of temporal *haver*

One of the most interesting grammatical features of the temporal expressions under analysis is that they include a verb predicate, *haver*, whose properties are not completely typical of verbs. As a matter of fact, *haver* behaves, in some respects, like a true verb and, in some others – where it is normally reduced to the present form *há* ('there is') –, like a prepositional connective. This is, by the way, true – though to different extents – of most Romance verbs in Table 1, whose special behaviour has sometimes been underlined in the literature.[7] As will be clear from the description below, Portuguese *haver* is particularly interesting, in that it exhibits quite unique and revealing properties, clearly indicative of the fact that this predicate is currently undergoing a grammaticalization process, in the sense of e.g. Eckardt (2008: 6)

> Grammaticalization theory addresses all cases where an item (word, affix, phrase, construction) undergoes a change that affects its grammatical category and, potentially, also the morphosyntactic

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[7] References in the literature, comparing Italian *fare* (*fa*) and French *il y a* to prepositions, will be given below. As for Spanish *hacer*, see Fernandéz (1999: 3172), who states that, despite the possibility of inflecting *hacer* – a clear sign of its verbal character –, phrases with this predicate are closer in behaviour to prepositional phrases than to (adverbial) subordinate clauses.

structure of the sentence in which the item occurs. As one consequence, the item will also function differently in the semantic interpretation of the sentence. It contributes at a different place, can change its argument structure, take new items as arguments, or fill the argument slots of different operators.

This fact becomes particularly evident in the neutralization of verb form variations. For instance, in sentences with past temporal perspective points, like (11), *haver* can exhibit the regular simple past form *havia* ('there was') or the 'neutralized' simple present form *há* ('there is').

(i)   present TPpt (deictic value)

(10) O Hubble *está* em funcionamento *há* vinte anos.
        'the Hubble is in working there-is twenty years'

        [Hubble has been in operation for twenty years (now).]

(ii)   past TPpt (anaphoric value)

(11) Quando foi reparado pela primeira vez, o Hubble *estava* em funcionamento {*havia* / *há*} três anos.
        'when [it] was repaired for-the first time, the Hubble was in working {there-was / there-is} three years'

        [When it was repaired for the first time, Hubble had been in operation for three years.]

Contrariwise, the verb *fazer* ('to do') shows no sign of losing verbal properties in these contexts. Compare (11) with (13):

(12) O Hubble *está* em funcionamento *faz* (agora) vinte anos.
        'the Hubble is in working makes (now) twenty years'

(13) Quando foi reparado pela primeira vez, o Hubble *estava* em funcionamento {*fazia* (na altura) / **faz*} três anos.
        'when [it] was repaired for-the first time, the Hubble was in working {made (at-the time) / *makes} three years'

In the remainder of this section, I will try to evaluate the current situation of the ongoing grammaticalization process of *haver* by looking at its morphosyntactic – verbal and non-verbal – properties in more detail. At the same time, brief comparative notes concerning the behaviour of its Romance counterparts will be made at the relevant points.

2.1. Verbal properties of haver *in temporal phrases*

In Modern European Portuguese, *haver* exhibits at least three morphological and/or syntactic verbal properties[8]:

A. sensitivity to TPpt variation, conveyed via the opposition *há* ('there is'), for present TPpt *vs. havia* ('there was'), for past TPpt;

B. possibility of marking modal epistemic values in the verb via inflection + sensitivity to TPpt variation, conveyed via the opposition *haverá* ('there will be'), for present TPpt *vs. haveria* ('there would be'), for past TPpt;

C. possibility of using adverbial operators inside the temporal phrase, namely: *já* ('already'), *não* ('not'), *nem* ('not even').

The first property has already been discussed, a propos sentence (11), and consists in preserving sensitivity to TPpt variation, encoded in the opposition *há* ('there is'), for present TPpt, as in (10), and *havia* ('there was'), for past TPpt, as in (11). The second property is also predominantly a morphological one and consists in the possibility of marking modal epistemic values in the verb, via inflection, as is generally possible in Portuguese with verbs (cf. (14)). Furthermore, this modal construction also evinces sensitivity to TPpt variation, as observed in (15) *vs.* (16):

(14) O Pedro *terá* uns vinte anos. [modal future in Portuguese]
      'the Pedro *will-have* some twenty years'

      [Pedro is probably twenty years old.]

(15) O Pedro chegou *haverá* uns dez minutos. (present TPpt)
      'the Pedro arrived *there-will-be* some ten minutes'

      [Pedro arrived probably some ten minutes ago.]

(16) O Pedro tinha chegado ao escritório *haveria* uns dez minutos, quando foi chamado pelo presidente. (past TPpt)
      'the Pedro had arrived to-the office *there-would-be* some ten minutes, when [he] was called by-the president'

      [Pedro had been at the office for probably ten minutes, when he was summoned by the president.]

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[8] Brazilian Portuguese is slightly different, since it appears to be at a more advanced stage of grammaticalization, but I will not consider it here.

Finally, a third verbal – syntactic – property consists in the possibility of using adverbial operators inside the temporal phrase, namely the counterpart of *already* and negative operators.

(17) O Pedro tirou a carta {há *já* / *já* há / *ainda não* há / *ainda nem* há} dois anos.
      'the Pedro took the licence {there-is *already* / *already* there-is / *still not* there-is / *still not-even there-is*} two years'

[{It's / It hasn't} been two years since Pedro got his driving licence.]

In what concerns the verbal properties of the Romance counterparts of *haver* in Table 1, Italian *fare* stands out, as it only occurs with a present TPpt (in the form *fa*), and does not exhibit properties B and C. Symptomatically, many school grammars and dictionaries already classify *fa* as a preposition (cf. e.g. Devoto & Oli 2000: 778) or, at least, as a 'cristallized' form (cf. e.g. Cortelazzo & Zolli 1980: 411). All the other verbs in Table 1 seem to have the properties discussed in section 2.1 (except possibly B for French); for a relatively extended analysis of the Spanish constructions with *hacer*, cf. Fernández (1999: 3170-3176), who notes properties A and B for this verb.

2.2. Verb-unlike properties of *haver* in temporal phrases (signs of grammaticalization as a preposition-like connective)

Now, let us consider the properties of *haver* in temporal phrases that might be considered verb-unlike, so to speak. As we will see, *haver* exhibits at least four morphological and/or syntactic properties which set it apart from other regular verbs, and – as said – can be taken as signs of an ongoing grammaticalization process:

D.   possible loss of sensitivity to TPpt variation [property opposite to A above];

D1. use of *há* ('there is') instead of *havia* ('there was'), with a past TPpt;

D2. inexistence (or non-use) of other theoretically possible forms, like *haverá* ('there will be'), with a future TPpt;

E.   incompleteness of the inflection paradigm, viz. inexistence of subjunctive mood forms;

F.   occurrence (of *haver*-phrases) in nominal positions;

G. [for the time-denotation/location deictic value] compatibility with the postpositional expression *atrás* ('behind') + possible omission of *haver* (in these contexts).

The first of these four properties is in fact the opposite of A, above, and consists in the now widespread loss of sensitivity to TPpt variation, which can be verified in two ways. In sentences with a past TPpt: in the use of *há* ('there is') instead of *havia* ('there was'). As I already said, when discussing sentence (11), both possibilities are available. However, a search made in a huge corpus of a Portuguese modern newspaper (Corpus CETEMPúblico 1.7 v. 4.0, ca. 190 million words) reveals that there is only around 1% of past *havia* in contexts with past TPpt, i.e. a loss of sensitivity in 99% of instances (cf. Móia 2011b). In other words, neutralization is overwhelmingly predominant, even in written formal Portuguese, despite prescriptions in normative grammars (cf. e.g. Mendes de Almeida 1999: 534). In sentences with a future TPpt, neutralization to *há* ('there is') is mandatory, since the expectable future form *haverá* ('there will be') is simply not used:

(18) Quando o Pedro chegar ao escritório, a Ana já lá *estará* {*há* / ^{??}*haverá*} mais de duas horas.
'when the Pedro arrive_{FUTURE (SUBJUNCTIVE)} to-the office, the Ana already there will-be {there-is / ^{??}there-will-be} more than two hours'

[When Pedro arrives at the office, Ana will have been there for more than two hours.]

As regards this property, *haver* seems to be quite unique among the Romance verbs of Table 1. In fact, no other verb appears to exhibit this type of systematic neutralization[9] – cf. e.g. Fernández (1999: 3172) for examples with *hacer*, which necessarily changes its form, in accordance with the perspective point: *hace* ('makes'), for present TPpt, *hacía* ('made'), for past TPpt, *hará* ('will make'), for future TPpt.

The second property (E) regards the incompleteness of the inflection paradigm, in particular, the inexistence of subjunctive mood forms, observable in (20), where, in a syntactic context in which subjunctive would be expected

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[9] Italian *fare* cannot be considered here, since – as said – it seems never to occur with a non-present TPpt. My informants gave me some conflicting information regarding the acceptability of *il y a* with non-present TPpt's, but some categorically rejected this possibility.

(cf. (19)), it is again the (indicative present) form *há* ('there is') which occurs.

(19) O Pedro talvez *venha*. [*talvez*: subjunctive trigger in Portuguese]
'the Pedro perhaps come_SUBJUNTIVE-PRESENT'

[Pedro may come.]

(20) O Pedro mora em Lisboa talvez {*há* / ??*haja*} dez anos.
'the Pedro lives in Lisbon perhaps {there-is /
??there-be_SUBJUNTIVE-PRESENT} ten years'

[Pedro has been living in Lisbon for perhaps ten years (now).]

Fernandéz (1999: 3173) also notes the impossibility of using the subjunctive *haga* in comparable Spanish constructions.[10]

The third property (F), a syntactic one, is particularly interesting. It regards the possibility of using temporal *haver*-phrases in nominal positions, which undoubtedly sets *haver* apart from other regular verbs. This possibility involves both the duration and the time-denotation values, and a vast array of syntactic nominal positions, which are illustrated in (21)-(25) (cf. also (7)-(8) above).

(i) duration value

− (unprepositioned) complement position of verbs like *durar* ('to last')

(21) A guerra *dura há* dez anos.
'the war lasts there-is ten years'

[The war has been going on for ten years (now).]

(ii) time-denotation value

− (prepositioned) complement position of verbs like *datar* ('to date back to')

(22) O problema *data de há* dez anos.
'the problem dates from there-is ten years'

[The problems dates back ten years.]

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[10] The author admits the form *haga* in sentence-initial adjuncts followed by *que* (cf. note 4) – *no puedo creer que **haga** mas de un año que nos conocemos* ('[I] not can believe that hacer_SUBJUNCTIVE.3SG more than one year that [we] know-each-other'). The comparable forms in Portuguese – *não acredito que **haja** mais de um ano que nos conhecemos* –, though not totally unacceptable, are somewhat unnatural. Symptomatically, no example of this subjunctive (*haja*) was found in the corpus CETEMPúblico 1.7 v. 4.0 (ca. 190 million words).

– complement of temporal prepositions, e.g. *até* ('until'), *desde* ('since')

(23) O Pedro viveu em Lisboa *até há* dez anos.
     'the Pedro lived in Lisbon until there-is ten years'

     [Pedro lived in Lisbon until ten years ago.]

(24) O Pedro vive em Lisboa *desde há* mais de dez anos.
     'the Pedro lives in Lisbon since there-is more than ten years'

     [Pedro has been living in Lisbon for more than ten years (now).]

– complement of a preposition introducing a nominal modifier, *de* ('of')

(25) Os computadores *de há* dez anos eram bem mais lentos do que os actuais.
     'the computers of there-is ten years were well more slow than the present-day'

     [The computers of ten years ago were much slower than present-day computers.]

As said at the beginning of section 2, Portuguese *fazer* is very different from *haver* in this respect. In fact, it is ungrammatical in all the contexts (21)-(25) above. As far as I can see, it is only fully acceptable in structures like (26), a context similar to (25), but where the temporal phrase: (i) modifies an eventive noun and (ii) includes an adverb specifying the TPpt – *hoje* ('today'). I will leave the analysis of these particular structures – which indicate a tendency towards grammaticalization as well – for future research.

(26) O jogo *de faz* hoje oito dias foi fantástico.
     'the match of makes today eight days was awesome'

     [The match of eight days ago was awesome.]

As regards property F, all Romance verbs in Table 1 seem to have this property to a greater or lesser extent, with some restrictions regarding the different positions involved (that require further investigation), that is, they all seem to show signs of grammaticalization, in some way or other. Portuguese *fazer*, as said above, and apparently also French *(ça/cela) faire*, seems to be particularly restrictive with respect to this property. All other verbs can head phrases occurring in nominal positions, a fact that has been occasionally noted in the literature: e.g. Grevisse (1993: 573) observes that *il y a* behaves like a preposition when it is preceded by another preposition, as in *mon instinct d'il*

11

y a trente-six ans ('my instinct of-there is thirty-six years'), or *jusqu'il y a cinq minutes* ('until there is five minutes'); Fernández (1999: 3171) mentions the possibility of using *hacer*-phrases as complements of the prepositions *desde* ('desde') and *de* ('of').

Finally, let us consider the fourth property (G), which only applies to the time-denotation deictic value, and consists in the possibility of adding to the temporal phrase a postpositional element *atrás* ('behind'). This is done in sentence (27), and could be done in any sentence from (22) to (25), forming the sequence *há dez anos atrás* ('there-is ten years behind'), perfectly equivalent to *há dez anos* ('there-is ten years').

(27) O Pedro acabou o curso $\varnothing_{em}$ *(há) dez anos atrás.*
     'the Pedro finished the course $\varnothing_{at}$ (there-is) ten years behind'

     [Pedro graduated ten years ago.]

Furthermore, and quite interestingly, in the presence of this (redundant) postpositional element, *haver* may be dropped, mainly in Brazilian Portuguese (not quite so much, in European Portuguese – cf. Móia and Alves 2004). The result is the simple verbless sequence – *dez anos atrás* ('ten years behind') – syntactically parallel to English phrases with *ago* and parallel to those structures with a past TPpt that do not resort to verbs, like the regular phrases with Port./Sp. *antes*, Fr. *avant*, It. *prima*, or Engl. *before*. This construction where *haver* is dropped could perhaps be viewed as an ultimate stage of grammaticalization (for the pertinent subtype of temporal phrases). As regards property G, only Spanish *hacer* seems compatible with the relevant kind of postpositional element (Sp. *atrás*), which can also be associated – in this language (like in Brazilian Portuguese) – with dropping of the verb.

2.3. *Coexistence of verbal and non-verbal properties (in temporal phrases with* haver*)*

Intriguingly, and quite significantly, both types of properties (verbal and non-verbal) may coexist in the same construction (cf. Móia 2011b)[11]. This seems to confirm the hypothesis that a genuine process of grammaticalization is what

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[11] Of course, there are impossible combinations: e.g. A+D; A+G, D+G (since *atrás* requires a present TPpt, incompatible with *havia*).

is at stake here, since – as expected in grammaticalization – not all the relevant properties are affected simultaneously.

The observable combinations in (European) Portuguese involve mainly:

(i) the possibility of using the adverb *já* ('already'), which indicates a verbal behaviour, in contexts where other grammaticalization signs have emerged: neutralization of *havia* to *há*, as in (28), possibility of occurrence in nominal positions, as in (29) and (30), or both, as in (31):

(28) O Hubble *estava* em funcionamento *há já* três anos. [C+D]
the Hubble was in working there-is already three years'

(29) A guerra *dura há já* dez anos. [C+F]
'the war lasts there-is already ten years'

(30) O Pedro vive em Lisboa *desde há já* mais de dez anos. [C+F]
'the Pedro lives in Lisbon since there-is already more than ten years'

(31) A guerra *durava há já* dois anos. [C+D/F]
'the war lasted there-is already two years'

Furthermore, there is the possibility of using the adverb *já* ('already') in combination with the postpositional element *atrás* ('behind'), be it in adverbial or in nominal position, as in (32) and (33), respectively; considering native speakers' intuitions and low frequency numbers in the consulted corpora, though, this possibility appears to be somewhat marginal:[12]

(32) ?O Pedro teve um acidente *há já* dez anos *atrás*. [C+G]
'the Pedro had an accident there-is already ten years behind'

(33) ?O Pedro vive em Lisboa *desde há já* mais de dez anos *atrás*. [C+F/G]
'the Pedro lives in Lisbon since there-is already more than ten years behind'

(ii) the possibility of using non-neutralized (past tense) *havia* ('there was'), which indicates a verbal behaviour, in strictly nominal positions, with or without *já* ('already'), as in (34) and (35); this combination also has low

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[12] Omitting the verb (in the presence of *atrás*) and keeping *já* leads to extreme oddity/ungrammaticality in European Portuguese:
(i) ??/*O Pedro teve um acidente *já* dez anos *atrás*.
'the Pedro had an accident already ten years behind'
(ii) ??/*O Pedro vive em Lisboa *desde já* mais de dez anos *atrás*.
'the Pedro lives in Lisbon since already more than ten years behind'

frequency numbers in the consulted corpora, though most speakers don't have any problems with them:

(34) A guerra *durava havia* (*já*) dois anos. [A(/C) + F]
       'the war lasted there-was (already) two years'

(35) O Pedro vivia em Lisboa *desde havia* (*já*) mais de dez anos. [A(/C) + F]
       'the Pedro lived in Lisbon since there-was (already) more than ten years'

3. Conclusions and future research

In this paper, a movement of the temporal verb *haver* ('there be') towards a grammaticalized invariable preposition-like connective in Modern Portuguese was described. This movement parallels similar grammaticalization processes affecting comparable verbs in other Romance languages, though it presents interesting specificities. On further thought, such transformations do not strike us as unexpected, especially if we take into account the meaning subsystems which are at stake (and that were briefly described in section 1): time denotation, temporal location and (time-anchored) duration. In fact, from a denotational point of view, these phrases – though originally verbal or sentential in nature – end up having a meaning that is typically expressed via prepositional phrases (or comparable structures), in many languages, Portuguese included: e.g. (i) (time-anchored) duration is expressable in English via the preposition *for* (together with *now* or *then*, or not); (ii) time-denotation or temporal location dependent on the utterance time is conveyable in English via de postpositional element *ago* (itself a form derived from a verb); (iii) time-denotation or temporal location dependent on other perspective points is conveyable – including in Portuguese – via the different counterparts of the preposition *before*. Formal analyses of *haver*-phrases which encode their no longer truly verbal behaviour can easily be integrated in the language of Discourse Representation Theory (cf. Móia 2011a, 2011b). As those analyses show, the discussed grammaticalization mechanism poses interesting questions about automatic natural language processing and compositionality, given the complex relations between form (morphology and syntax) and semantics it bears witness to. Note, for instance, that *haver* cannot be

automatically processed either by the regular rule affecting verb predicates or by the rules of regular prepositions.

Finally, just a short note to mention that future research aiming at an overall description of the grammatical issues under scrutiny in this paper might require taking into account the close semantic relations between not only *haver* and *fazer* but also other (typically ungrammaticalized) temporal verbs, like *passar / decorrer* ('to pass') or *completar-se* ('to complete').

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